



**AIR CONDITIONING AND REFRIGERATION**  
SYSTEMS AND INSTRUMENTS

**2022**  
**2023**





**AIR CONDITIONING AND REFRIGERATION**  
SYSTEMS AND INSTRUMENTS

**2022**  
2023

INTRODUCTION

A long history  
**since 1976**

Castel San Niccolò (Italia)

**Our company  
at your disposal**

DESIGN  
PRODUCTION  
SALE  
TRAINING  
CERTIFICATIONS  
TECHNICAL SUPPORT  
REPAIRS SERVICE



Consult our website with your  
mobile phone QR



Wigam



Wigam S.p.a.



Cert. Nr. 50 100 3770

**OUR CATALOGUES**

**REFRIGERATION AND  
AIR CONDITIONING  
Catalogue**



**AUTOMOTIVE  
Catalogue**



Milano (Italia)



## Environmentally friendly technics and equipments

Since 1976, year of its establishment, Wigam has been a structure specialized in the equipment for refrigeration and air-conditioning for the civil and automotive sector.

Wigam has always paid a very particular attention to issues related to environmental protection. The continuous innovation brought to the solutions for the handling of the various refrigerants, with a particular attention to the new low environmental impact mixtures and natural refrigerants, goes hand in hand with the training activities provided for the professionals of the sector.

Following this ideal, Wigam encourages the professionals to operate with the utmost respect to the ecosystem thanks to quality and avant-garde solutions.

In 2021 Wigam undertook the expansion of its Italian production site in Castel San Niccolò with an additional 6000 square metres of covered space.

Valencia (Spagna)





## Design vocation and search for quality

The design and creative vocation of the firm, and its continuous search for quality have made Wigam a reference Company, where highly qualified personnel develop, manufacture and control instruments and equipment of high technology.

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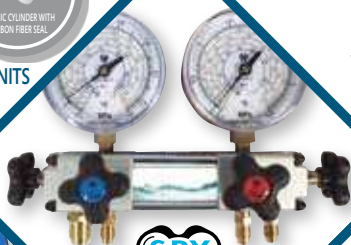
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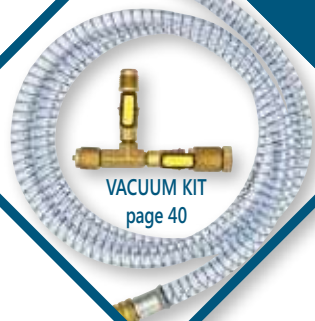
new with the best  
quality



CONDENSATE  
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HC AND CO<sub>2</sub>  
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AUTOMATIC  
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LEAK DETECTORS  
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# CALIBRATION

## Issue of calibration report or renewal for equipment already purchased

The company that carries out installation, maintenance or repair of fixed systems of refrigeration, air-conditioning and heat pumps containing some fluorinated greenhouse gases (EC Regulation N° 303/2008) must obligatorily own a minimum list of instruments and equipment, in order to be certified by an organization. Furthermore, each organization demands the calibration of some of the products from the list. Warning: not all certification organizations require the same minimum equipment, nor the same products with calibration report. We kindly request you to ask for detailed information to your certification organization regarding the minimum list of instruments and equipment you must own and the products for which the calibration certificate is requested. Calibration is an additional service against payment and is necessary even if the product is new.

Wigam offers a service of calibration/check for the instruments that are necessary to the operators who are part of the CE 303/2008 regulations, by means of a metrology laboratory equipped with certified primary samples, controlled environmental conditions and following procedures pertaining to the quality system of the company. The skilled workers, who are highly qualified and constantly updated, operate with the most modern data processing systems, with digital storage of all the metrological documents.

*Wigam SpA does not provide full or partial copies of the calibration certificates of the primary tools used to write its calibration reports, but it provides, the univocal numerical reference of the document and of the laboratory that issued it.*

## Categories subjected to calibration

|                         |              |
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| Manifolds and gauges    | page 56-67   |
| Nitrogen kit            | page 32-36   |
| Digital manifolds       | page 50-53   |
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| Scales                  | page 110-112 |
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# RECYCLING AND RECOVERY SYSTEMS

## F-GAS REGULATION - PHASE DOWN

From 2018 onwards, the EU F-Gas Regulation (EU 517/2014) creates massive cuts in the available quantities of HFCs in the EU.

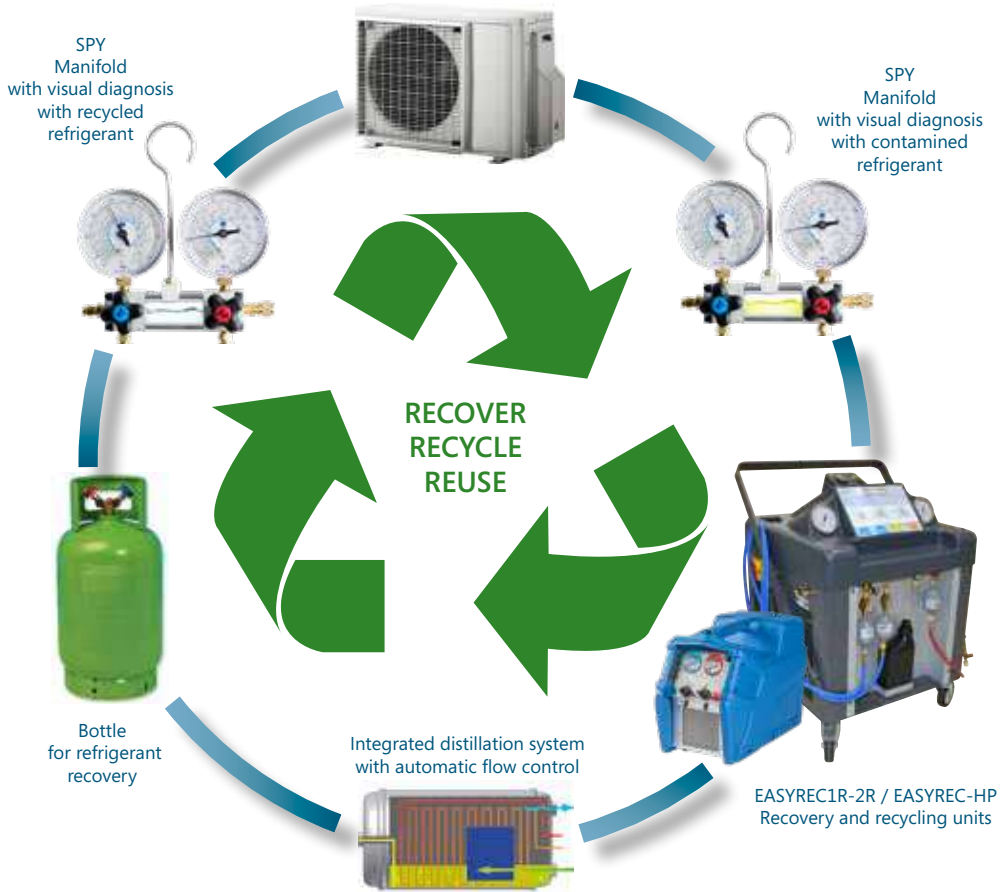
For the three-year period 2021-23 quantity reduced to 45% compared to 2015.



SAVE  
THE PLANET



SAVE  
MONEY



The higher the GWP of the refrigerant, the more it will come under pressure by the HFC phase-down, leading to likely **price increases and potential shortages**.

Pure HFOs, CO<sub>2</sub>, hydrocarbons, ammonia, reclaimed or recycled HFCs etc. do not fall under the phase-down.

**Recycled and reclaimed HFCs – even with a GWP > 2500 – can still be used for service until 2030.**



[www.wigam.com](http://www.wigam.com)



# RECOVERY AND RECYCLING UNITS



## RECOVERY-RECYCLING UNIT



### REGULATION UE-517/2014 -USAGE CONTROL

#### ARTICLE 13

**3. From 1 January 2020, the use of fluorinated greenhouse gases, with a global warming potential of 2500 or more, to service or maintain refrigeration equipment with a charge size of 40 tonnes of CO<sub>2</sub> equivalent or more, shall be prohibited.**

The prohibition referred to in the first subparagraph shall not apply to the following categories of fluorinated greenhouse gases until 1 January 2030:

b) recycled fluorinated greenhouse gases with a global warming potential of 2500 or more used for the maintenance or servicing of existing refrigeration equipment provided they have been recovered from such equipment. Such recycled gases may only be used by the undertaking which carried out their recovery as part of maintenance or servicing or the undertaking for which the recovery was carried out as part of maintenance or servicing.

In (UE) N. 517/2014 Article 2 Definitions: (15) 'recycling' means the reuse of a recovered fluorinated greenhouse gas following a basic cleaning process.

### EASYREC-1R

Recovery and recycling unit suitable for CFC, HCFC, HFC and HFO (included R32 and R1234ze)

- Compact design with integrated distiller.
- Distillation device with liquid refrigerant flow check, which allows to separate oil/impurities/dyes very efficiently.
- Self-evacuation system (PURGE) which allows to change the type of refrigerant easily.
- Automatic stop of the unit when there is no refrigerant available in the system.
- Signal LED (green/cycle performed successfully - red/alarm).
- Safety device for maximum pressure.
- Two cut-off valves to prevent refrigerant discharge.
- "Pulse free" gauges with regulation screw.
- Ceramic cylinder with carbon fiber seal.
- Sight glass and filter included.
- Wide graphics with quick functioning instructions.

| Code     | Model      | Dimensions         | Weight  |
|----------|------------|--------------------|---------|
| 13001020 | EASYREC-1R | 545 x 300 x 395 mm | 18,9 kg |



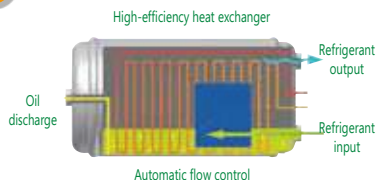
### Technical features

|                           |                                                   |  |  |
|---------------------------|---------------------------------------------------|--|--|
| Refrigerant               | CFC, HCFC, HFC and HFO (included R32 and R1234ze) |  |  |
| Power supply              | 220 - 240V AC 50 - 60 Hz                          |  |  |
| Motor power               | 550W                                              |  |  |
| Maximal current draw      | 4A                                                |  |  |
| Compressor                | Piston-type and oil less                          |  |  |
| Automatic safety shut-off | 38.5 bar/3850 kPa (558 psi)                       |  |  |
| Operating temperature     | 0 - 40 °C                                         |  |  |

| Recovery rate               | R12-R134a | R22-R407C | R404A-R410A-R507-R32 |
|-----------------------------|-----------|-----------|----------------------|
| Vapour                      | 14 kg/h   | 15 kg/h   | 16 kg/h              |
| Liquid (recovery)           | 96 kg/h   | 108 kg/h  | 132 kg/h             |
| Liquid (recovery-recycling) | 16 kg/h   | 17 kg/h   | 18 kg/h              |
| Push-pull                   | 276 kg/h  | 336 kg/h  | 378 kg/h             |



### Integrated distillation system



- HIGH heat exchange between "warm" refrigerant and "cold" refrigerant, that allows to optimize the distillation procedure
- Automatic flow control system
- Max filling up control
- Distillation device which allows to separate oil/impurities/dyes very efficiently

## EASYREC-1

Recovery unit suitable for CFC, HCFC, HFC and HFO (included R32 and R1234ze)

- Self-evacuation system (PURGE) which allows to change the type of refrigerant easily.
- Automatic stop of the unit when there is no refrigerant available in the system.
- Signal LED (green/cycle performed successfully - red/alarm).
- Safety device for maximum pressure.
- Two cut-off valves to prevent refrigerant discharge.
- "Pulse free" gauges with regulation screw.
- Ceramic cylinder with carbon fiber seal.
- Sight glass and filter included.
- Wide graphics with quick functioning instructions.

| Code     | Model     | Dimensions         | Weight  |
|----------|-----------|--------------------|---------|
| 13001019 | EASYREC-1 | 545 x 300 x 395 mm | 15,5 kg |



## Technical features

|                           |                                                   |
|---------------------------|---------------------------------------------------|
| Refrigerant               | CFC, HCFC, HFC and HFO (included R32 and R1234ze) |
| Power supply              | 220 - 240V AC 50 - 60 Hz                          |
| Motor power               | 550W                                              |
| Maximal current draw      | 4A                                                |
| Compressor                | Piston-type and oil less                          |
| Automatic safety shut-off | 38.5 bar/3850 kPa (558 psi)                       |
| Operating temperature     | 0 - 40 °C                                         |

| Recovery rate     | R12-R134a | R22-R407C | R404A-R410A-R507-R32 |
|-------------------|-----------|-----------|----------------------|
| Vapour            | 14 kg/h   | 15 kg/h   | 16 kg/h              |
| Liquid (recovery) | 96 kg/h   | 108 kg/h  | 132 kg/h             |
| Push-pull         | 276 kg/h  | 336 kg/h  | 378 kg/h             |



## Spare parts and accessories



| Ref | Code        | Model        | Description                                               | Dimensions       | Weight  |
|-----|-------------|--------------|-----------------------------------------------------------|------------------|---------|
| A   | 14015008    | MG-111       | Drier filter (1/4" SAE M-M)                               | 100 x 40 x 40 mm | 0,28 kg |
| A   | 14015041    | MG-111-A     | Drier filter (1/4" SAE M-M) with allumina                 | 100 x 40 x 40 mm | 0,28 kg |
| B   | 14015013    | XH412        | "High capacity" drier filter (1/4" SAE M-M)               | 250 x 80 x 80 mm | 1,10 kg |
| B   | 14015042    | XH412-A      | "High capacity" drier filter (1/4" SAE M-M) with allumina | 250 x 80 x 80 mm | 1,10 kg |
| C   | 14020014001 | G19020-WIG   | Kit 10 gaskets for 1/4" SAE flexible hoses                | 160 x 90 x 10 mm | 0,02 kg |
| D   | 06071013003 | GYSS/4-4/6/Y | Connection hose for filter 1/4" SAE 150 mm                | 250 x 50 x 50 mm | 0,16 kg |
| E   | 13008026    | REC026       | Sight glass                                               | 90 x 40 x 50 mm  | 0,17 kg |

## RECOVERY-RECYCLING UNIT



### REGULATION UE-517/2014 -USAGE CONTROL

#### ARTICLE 13

**3. From 1 January 2020, the use of fluorinated greenhouse gases, with a global warming potential of 2500 or more, to service or maintain refrigeration equipment with a charge size of 40 tonnes of CO<sub>2</sub> equivalent or more, shall be prohibited.**

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In (UE) N. 517/2014 Article 2 Definitions: (15) 'recycling' means the reuse of a recovered fluorinated greenhouse gas following a basic cleaning process.

### EASYREC-2R

Recovery and recycling unit suitable for CFC, HCFC, HFC and HFO (included R32 and R1234ze)

- Dual piston unit for higher speed and recovery.
- Compact design with integrated distiller.
- Distillation device with liquid refrigerant flow check, which allows to separate oil/impurities/dyes very efficiently.
- Self-evacuation system (PURGE) which allows to change the type of refrigerant easily.
- Automatic stop of the unit when there is no refrigerant available in the system.
- Signal LED (green/cycle performed successfully - red/alarm).
- Safety device for maximum pressure.
- Two cut-off valves to prevent refrigerant discharge.
- "Pulse free" gauges with regulation screw.
- Ceramic cylinder with carbon fiber seal.
- Sight glass and filter included.
- Wide graphics with quick functioning instructions.

| Code     | Model      | Dimensions         | Weight  |
|----------|------------|--------------------|---------|
| 13001022 | EASYREC-2R | 545 x 300 x 395 mm | 19,6 kg |



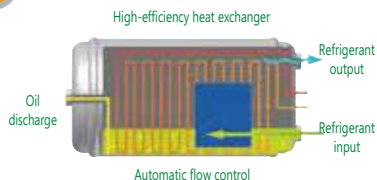
### Technical features

|                           |                                                   |
|---------------------------|---------------------------------------------------|
| Refrigerant               | CFC, HCFC, HFC and HFO (included R32 and R1234ze) |
| Power supply              | 220 - 240V AC 50 - 60 Hz                          |
| Motor power               | 750W                                              |
| Maximal current draw      | 5A                                                |
| Compressor                | Piston-type and oil less                          |
| Automatic safety shut-off | 38.5 bar/3850 kPa (558 psi)                       |
| Operating temperature     | 0 - 40 °C                                         |

| Recovery rate               | R12-R134a | R22-R407C | R404A-R410A-R507-R32 |
|-----------------------------|-----------|-----------|----------------------|
| Vapour                      | 28 kg/h   | 30 kg/h   | 32 kg/h              |
| Liquid (recovery)           | 168 kg/h  | 198 kg/h  | 198 kg/h             |
| Liquid (recovery-recycling) | 32 kg/h   | 34 kg/h   | 36 kg/h              |
| Push-pull                   | 450 kg/h  | 510 kg/h  | 570 kg/h             |



### Integrated distillation system



- HIGH heat exchange between "warm" refrigerant and "cold" refrigerant, that allows to optimize the distillation procedure
- Automatic flow control system
- Max filling up control
- Distillation device which allows to separate oil/impurities/dyes very efficiently

## EASYREC-2

Recovery unit suitable for CFC, HCFC, HFC and HFO (included R32 and R1234ze)

- Dual piston unit for higher speed and recovery.
- Self-evacuation system (PURGE) which allows to change the type of refrigerant easily.
- Automatic stop of the unit when there is no refrigerant available in the system.
- Signal LED (green/cycle performed successfully - red/alarm).
- Safety device for maximum pressure.
- Two cut-off valves to prevent refrigerant discharge.
- "Pulse free" gauges with regulation screw.
- Wide graphics with quick functioning instructions.

| Code     | Model     | Dimensions         | Weight  |
|----------|-----------|--------------------|---------|
| 13001021 | EASYREC-2 | 545 x 300 x 395 mm | 16,2 kg |



## Technical features

|                                |                                                   |
|--------------------------------|---------------------------------------------------|
| Refrigerant                    | CFC, HCFC, HFC and HFO (included R32 and R1234ze) |
| Power supply                   | 220 - 240V AC 50 - 60 Hz                          |
| Motor power                    | 750W                                              |
| Maximal current draw           | 5A                                                |
| Compressor                     | Piston-type and oil less                          |
| Blocco automatico di sicurezza | 38,5 bar/3850 kPa (558 psi)                       |
| Operating temperature          | 0 - 40 °C                                         |

| Recovery rate     | R12-R134a | R22-R407C | R404A-R410A-R507-R32 |
|-------------------|-----------|-----------|----------------------|
| Vapour            | 28 kg/h   | 30 kg/h   | 32 kg/h              |
| Liquid (recovery) | 168 kg/h  | 198 kg/h  | 198 kg/h             |
| Push-pull         | 450 kg/h  | 510 kg/h  | 570 kg/h             |



## Spare parts and accessories



| Ref | Code        | Model        | Description                                                | Dimensions       | Weight  |
|-----|-------------|--------------|------------------------------------------------------------|------------------|---------|
| A   | 14015008    | MG-111       | Drier filter (1/4" SAE M-M)                                | 100 x 40 x 40 mm | 0,28 kg |
| A   | 14015041    | MG-111-A     | Drier filter (1/4" SAE M-M) with allumina                  | 100 x 40 x 40 mm | 0,28 kg |
| B   | 14015013    | XH412        | "Hight capacity" drier filter (1/4" SAE M-M)               | 250 x 80 x 80 mm | 1,10 kg |
| B   | 14015042    | XH412-A      | "Hight capacity" drier filter (1/4" SAE M-M) with allumina | 250 x 80 x 80 mm | 1,10 kg |
| C   | 14020014001 | G19020-WIG   | Kit 10 gaskets for 1/4" SAE flexible hoses                 | 160 x 90 x 10 mm | 0,02 kg |
| D   | 06071013003 | GYSS/4-4/6/Y | Connection hose for filter 1/4" SAE 150 mm                 | 250 x 50 x 50 mm | 0,16 kg |
| E   | 13008026    | REC026       | Sight glass                                                | 90 x 40 x 50 mm  | 0,17 kg |

## “HIGH PERFORMANCE” RECOVERY - RECYCLING UNIT



HIGH PERFORMANCE



### EASYREC-HP

The ideal recovery-recycling unit for large refrigeration systems with high quantities of refrigerant

- Suitable for CFC-HCFC, HFC and HFO (included R32 and R1234ze).
- Distillation device with automatic refrigerant flow check, which allows to separate oil/impurity/dyes very efficiently.
- Self evacuation system (PURGE) which allows to change the type of refrigerant easily.
- Automatic stop system at the end of the recovery-recycling cycle (green light on).
- Safety pressure switch (red light on – alarm).
- Cut-off valves to prevent refrigerant discharge.
- Ø80 pulse free gauges with adjustment screw.
- Flexible hoses 1500mm with valves.
- Two filters in suction side and one filter in pressure side.
- Sight glasses in suction side.
- Large panel with quick functioning instructions.

| Code     | Model      | Dimensions         | Weight |
|----------|------------|--------------------|--------|
| 13001025 | EASYREC-HP | 605 x 570 x 800 mm | 65 kg  |



### Technical features

|                           |                                                   |
|---------------------------|---------------------------------------------------|
| Refrigerant               | CFC, HCFC, HFC and HFO (included R32 and R1234ze) |
| Power supply              | 230/1/50                                          |
| Motor power               | 1800W                                             |
| Maximal current draw      | 8A                                                |
| Compressor                | With oil                                          |
| Automatic safety shut-off | 37 bar                                            |
| Operating temperature     | 10 ÷ 50 °C                                        |

### Recovery rate

|                    |          |
|--------------------|----------|
| Recovery-recycling | 60 kg/h  |
| Push-pull          | 660 kg/h |



### Spare parts and accessories

| Code        | Model          | Description                                               | Min. Qty |
|-------------|----------------|-----------------------------------------------------------|----------|
| 14015008    | MG-111         | Drier filter (1/4" SAE M-M)                               | -        |
| 14015041    | MG-111-A       | Drier filter (1/4" SAE M-M) with allumina                 | -        |
| 14015013    | XH412          | "High capacity" drier filter (1/4" SAE M-M)               | -        |
| 14015042    | XH412-A        | "High capacity" drier filter (1/4" SAE M-M) with allumina | -        |
| 13008026    | REC026         | Sight glass                                               | -        |
| 06077002001 | V/GYSS/4-4/60B | Blue flexible hose 1500 mm with valve                     | -        |
| 06077002002 | V/GYSS/4-4/60R | Red flexible hose 1500 mm with valve                      | -        |
| 06077002003 | V/GYSS/4-4/60Y | Yellow flexible hose 1500 mm with valve                   | -        |
| 06071013003 | GYSS/4-4/6/Y   | Filter connection tube 1/4" SAE 150 mm                    | -        |
| 12002017    | W68            | Ester oil 1000 cc                                         | 9 pz     |

## MF4/KK

### Rotary vane type high flow pump

Usable with all refrigerants in liquid phase.

Positive displacement, volumetric gear pump.

New gear in KK material (can work dry for a few time).

| Ref | Code     | Model   | Description      |
|-----|----------|---------|------------------|
| A   | 02041015 | MF-4/KK | High vane pump   |
| B   | 15014001 | 71/4F-M | Motor for MF4/KK |

| Ref | Code     | Dimensions         | Weight |
|-----|----------|--------------------|--------|
| A   | 02041015 | 100 x 140 x 175 mm | 1,6 kg |
| B   | 15014001 | 240 x 140 x 180 mm | 7 kg   |



### Technical features

|                             | MF4/KK       | 71/4F-M  |
|-----------------------------|--------------|----------|
| Flow rate with 20 cPs fluid | 3 ÷ 4 l/min. | -        |
| Flow rate with lubricant    | 4 ÷ 5 l/min. | -        |
| Max. Δ pressure             | 15 bar       | -        |
| Viscosity cPs               | 1 ÷ 60       | -        |
| Connections                 | 3/8" GAS     | -        |
| Power supply                |              | 230/1/50 |
| Motor power                 |              | 350W     |

## RECOVERY BOTTLES W2 SERIES

12.5 and 40 liters refillable bottles with double valve (liquid/vapour).

Ideal for storing refrigerants recovered/recycled from refrigeration systems.

| Ref | Code     | Model        | Capacity | Min. Qty |
|-----|----------|--------------|----------|----------|
| A   | 11001062 | W2-WR10K/44  | 12,5 lt  | 2        |
| B   | 11001124 | W2-WR9K/48/5 | 12,5 lt  | 2        |
| C   | 11001059 | W2-WR40K/49  | 40 lt    | -        |

| Ref | Code     | Weight | Connections |
|-----|----------|--------|-------------|
| A   | 11001062 | 5,9 kg | 1/4" SAE    |
| B   | 11001124 | 5,9 kg | 5/16" SAE   |
| C   | 11001059 | 21 kg  | 1/4" SAE    |



### Spare parts

| Code     | Model        | Suitable for bottle |
|----------|--------------|---------------------|
| 05002016 | RF2-1/4"     | W2-WR10K/44         |
| 05002032 | RF2-5/16"    | W2-WR9K/48/5        |
| 05002022 | RF2-40K-1/4" | W2-WR40K/49         |



### Hydrocarbons recovery R600a-R290-R1270

R-ECOPUMP is the system specifically designed for the recovery/transfer/charge of flammable Refrigerants, such as R600a-R290-R1270 (HC).

R-ECOPUMP allows you to quickly recover HCs (R290-R600) with simplicity and full safety, reaching a vacuum level of -0.8 relative bars.



SEE  
PAGE 103

## REFRIGERANT VISUAL DIAGNOSIS



### SERIE SPY

#### New SPY manifold family (in 2 or 4 ways version)

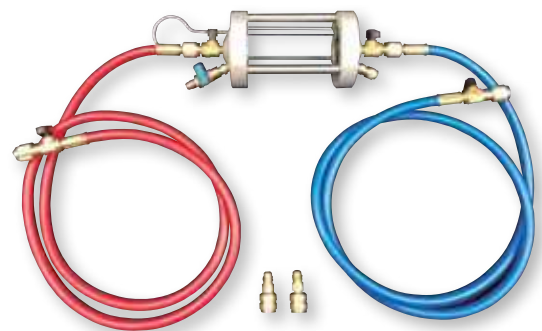
The information currently provided by the gauge manifolds on the market is limited to pressures and temperatures. Important but incomplete information, since the visor (indicator) traditionally incorporated does not allow us, or barely, to guess the passage of the refrigerant, its phase (liquid or vapor) and its quality.

The innovative SPY WIGAM manifolds, in order to support technicians in their daily work, are equipped with an integrally transparent central body and represent the new frontier of these service equipment.

Here are some of the indications that can be obtained quickly and easily using SPY:

- Show clearly if we are working with refrigerant in liquid or vapour phase.
- Show clearly the presence of contaminants in the refrigerant.
- Show the state of miscibility of the refrigerant with oil.
- Assist visual diagnosis with chemical analysis thanks to the oil sample collection procedure.

Through the EASYREC-R and SPY it will be possible to "view" the quality of refrigerant before recovery and after recycling.



### INSPECTOR HVAC

#### Diagnosis instrument for checking the HVAC systems refrigerant and oil quality

The diagnosis instrument INSPECTOR-HVAC enables to check the "health" of your HVAC system, simply by connecting to the high and low pressure connections.

The oil and the oil/refrigerant mixture will be easily visible inside the glass cylinder. Oil miscibility with refrigerant, oil quality and possible water content or contaminating particles can be analyzed visually, so that you can take actions.

The discharge valve, thanks to its considerable internal section, enables to drain easily the possible contaminants.

Furthermore, INSPECTOR-HVAC allows to take oil samples for analysis.

By means of the recovery and recycling system EASYREC-R/HP and INSPECTOR, it will be possible to "inspect" the recovered and recycled refrigerant.

Equipped with:

- 2 flexible hoses 1500 mm (blue and red) with valve.
- Sturdy plastic case.



#### Technical features

|                            |        |
|----------------------------|--------|
| Length                     | 240 mm |
| Diameter cylindrical glass | 50 mm  |
| Maximum pressure           | 40 bar |
| Maximum temperature        | 50 °C  |
| Capacity                   | 150 ml |

| Code     | Model          |
|----------|----------------|
| 13006039 | INSPECTOR HVAC |



# FLUSHING



## FLUSHING UNITS



HIGHER FLOW RATE AND PUMP  
HEAD FOR BETTER WASHING  
EFFECTIVENESS



### Technical features

|                                    | FLUSH&DRY          | FLUSH1-PLUS        |
|------------------------------------|--------------------|--------------------|
| Pump flow rate                     | 26 l/min           | 26 l/min           |
| Pump max. pressure                 | 0,45 MPa           | 0,45 MPa           |
| Nitrogen regulator output pressure | 0,50 MPa           | -                  |
| Pump motor power                   | 0,6 kW             | 0,6 kW             |
| Power supply                       | 230-240/1/50-60 Hz | 230-240/1/50-60 Hz |



### Spare parts and accessories

| Code     | Model      | Description                | Min. Qty |
|----------|------------|----------------------------|----------|
| 11001060 | BN2/1-TPED | Nitrogen bottle 950 cc     | 12       |
| 14015027 | F1-CART    | Mechanical filter          | -        |
| 14015026 | F1-FILT    | Complete filter for FLUSH1 | -        |

## FLUSH&DRY - FLUSH1-PLUS

### Flushing and fluxing station

FLUSH-1-PLUS and FLUSH&DRY allow the flushing of any refrigeration circuit, even of large dimensions (10 l integrated container with possible extra tank connection).

- Indispensable for repairs and retrofit of refrigeration circuits in complete safety.
- Removal of all solid residues caused by compressor or filter breakage.
- Complete removal of oil residues from HVAC systems.

To be used with non-flammable SUPER-FLUSH flushing fluid.

Units equipped with:

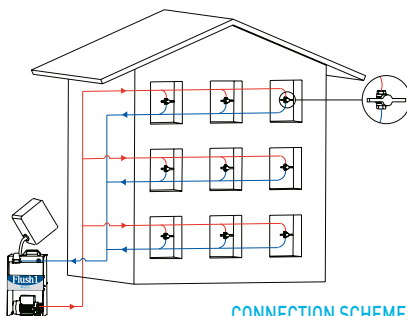
- Pump, specially designed for flushing, with PTFE mechanical seal and gaskets.
- 10 l integrated tank and connection for extra container
- Mechanical suction filter.
- Flexible hoses with interchangeable connections from 1/4" SAE, 3/8" SAE and 1/2" SAE.
- Connection for external nitrogen bottle.

FLUSH&DRY allows the fluxing of the system thanks to the nitrogen regulator and the 950cc cartridge included in the kit (only FLUSH & DRY version).

| Ref | Code        | Model            |
|-----|-------------|------------------|
| A   | 13005037001 | FLUSH1-PLUS-HVAC |
| B   | 13005037002 | FLUSH&DRY-HVAC   |

| Ref | Code        | Dimensions         | Weight |
|-----|-------------|--------------------|--------|
| A   | 13005037001 | 300 x 220 x 550 mm | 13 kg  |
| B   | 13005037002 | 300 x 220 x 550 mm | 14 kg  |



CONNECTION SCHEME

## FLUSH-HP

### Flushing station for large volume circuits

- Ideal for large-capacity HVAC systems and refrigeration units (30 l integrated tank)
- Indispensable for repairs and retrofit of refrigeration circuits in complete safety.
- Removal of all solid residues caused by compressor or filter breakage and oil residues.

To be used with non-flammable SUPER-FLUSH flushing fluid.

Unit equipped with:

- Specially designed pump with PTFE mechanical seal and fittings.
- 30 liters capacity tank.
- Inspectionable mechanical filter.
- 2 flexible hoses 5m with connections 1/2G F.
- Connection for external nitrogen bottle.
- Valves with PTFE seals.

| Code     | Model    | Dimensions          | Weight |
|----------|----------|---------------------|--------|
| 13005044 | FLUSH-HP | 580 x 450 x 1060 mm | 22 kg  |

HIGH CAPACITY  
30 L TANK



### Spare parts and accessories

| Code     | Model   | Description       |
|----------|---------|-------------------|
| 02041006 | B1-PUMP | Pump for FLUSH-HP |
| 14015034 | B1-FILT | Mechanical filter |



### Technical features

|                    |                    |
|--------------------|--------------------|
| Pump flow rate     | 51 l/min           |
| Pump max. pressure | 0,83 MPa           |
| Pump motor power   | 1,20 kW            |
| Tank               | 30 l               |
| Power supply       | 230-240/1/50-60 Hz |

## SUPER-FLUSH

### Flushing fluid

Non-flammable flushing fluid in 20kg or 6kg cans.

Compatible with metals usually used HVAC systems and with most plastic material. Does not leave any residue.

For flushing stations (FLUSH&DRY, FLUSH1-PLUS and FLUSH-HP) and pressurized flushing sets (A/CF-P-H).

| Ref | Code     | Model          | Description          | Min. Qty |
|-----|----------|----------------|----------------------|----------|
| A   | 13005048 | SUPER-FLUSH/20 | Flushing fluid 20 kg | -        |
| B   | 13005030 | SUPER-FLUSH/6  | Flushing fluid 6 kg  | 4        |



A



B

## FLUSHING SET



### A/CF-P-H

#### Flushing set

It allows to remove totally impurities and oils by injecting the flushing fluid inside the system in both directions alternatively. It must be used combined with a cylinder and a nitrogen professional regulator with pressure between 0,5 - 0,7 MPa.

Properties:

- Total removal of metal fragments, impurities and oils.
- Does not leave any residue.
- Very easy to use.
- Economic.
- Practical and fast to use.

To be used with FF1 or SUPER-FLUSH flushing fluids.

Complete set in solid box containing:

- Fluid injection system (1 liter), with pressure gauge, hook and valve for nitrogen connection.
- 5 litres tank for collection of used fluid.
- Flexible hose for connecting the injection system to the HVAC system.
- Flexible hose for connecting the HVAC system to the waste fluid collection tank.
- Kit of fittings for connection 1/4 "SAE, 3/8" SAE, 1/2 "SAE.

| Code        | Model    | Dimensions         | Weight |
|-------------|----------|--------------------|--------|
| 13005007001 | A/CF-P-H | 550 x 330 x 360 mm | 4,3 kg |



### FF1

#### Flushing fluid

Easy evaporation flushing fluids, for HVAC-R systems, in 1 liter cans. Does not leave any residue.

Usable only with pressure systems (A/CF-P-H).

| Code     | Model | Min. Qty | Dimensions         | Weight  |
|----------|-------|----------|--------------------|---------|
| 13005006 | FF1   | 12       | 350 x 270 x 250 mm | 10,5 kg |



### F1-PASS

#### Kit of adapters for flushing systems

The kit is meant for the bridge connection of two refrigerant hoses, allowing to perform the cooling system flushing.

The kit includes:

- 1 flexible hose 300 mm 1/4" SAE M x 1/4" SAE M.
- 4 adapters 1/4" SAE F x 3/8" SAE M.
- 4 adapters 1/4" SAE F x 1/2" SAE M.
- 4 adapters 1/4" SAE F x 5/8" SAE M.
- 100 copper gaskets 1/4" SAE mod. B2-4.
- 100 copper gaskets 1/2" SAE mod. B2-8.

| Code     | Model   | Dimensions        | Weight |
|----------|---------|-------------------|--------|
| 05108042 | F1-PASS | 440 x 170 x 50 mm | 1,5 kg |

## FLASH-FLUSH-FORMULA

### Pressurized flushing fluid

Ready for use flushing fluid pressurized with nitrogen at 40bar. FLASH-FLUSH/FORMULA enables to perform circuit flushing and fluxing in 4 easy operations.

FLASH-FLUSH/FORMULA must be completed with a connecting kit, KIT-FLASH-HVAC.

### KIT-FLASH-HVAC

The kit, allowing the simple connection of FLASH-FLUSH-FORMULA to the circuit, includes:

- 1 flexible hose 900 mm mod. V/GYSS/4-4/36.
- 1 adapter 1/4" SAE x 1/4" SAE.
- 1 adapter 1/4" SAE x 3/8" SAE.
- 1 adapter 1/4" SAE x 1/2" SAE.

| Ref | Code        | Model               | Description                    | Min. Qty |
|-----|-------------|---------------------|--------------------------------|----------|
| A   | 13005050    | FLASH-FLUSH-FORMULA | Pressurized flushing fluid     | 6        |
| B   | 13005043002 | KIT-FLASH-HVAC      | Connecting kit for HVAC system | -        |

| Ref | Code        | Dimensions         | Weight |
|-----|-------------|--------------------|--------|
| A   | 13005050    | 280 x 200 x 300 mm | 9,6 kg |
| B   | 13005043002 | 240 x 145 x 40 mm  | 0,4 kg |



# Formula

**DOES NOT CONTAIN FLAMMABLE PRODUCTS!**  
**DOES NOT CONTAIN TOXIC SUBSTANCES!**  
**DOES NOT CONTAIN HARMFUL PRODUCTS!**  
**POSSIBLE RESIDUES ARE COMPATIBLE WITH THE FLUIDS INSIDE THE SYSTEM**

## SAFE CONNECTION? CHOOSE THE WIGAM SOLUTION



Connecting



Fastening



Turning upside down



Flushing and fluxing

## FLUSHING UNITS



### ETO-4

#### Electric oil transfer and flushing pump

- Suitable for all the common refrigeration oils.
- Suitable for the charge of the oil in HVAC systems.
- Suitable for the removal of the oils from the HVAC systems.
- Complete with suction hose and a pressure hose with adapters.
- Suitable for the flushing of the systems using FORMULA fluid and the connecting kit KIT-ETO-HVAC.

#### KIT-ETO-HVAC

The KIT-ETO-HVAC is the completion and connection kit that transforms the ETO unit into a flushing system in combination with the FORMULA fluid.

The kit includes:

- 1 piping of 4 m with filter.
- 1 RG180/6-4 swivel 3/8 SAE F x 1/4 SAE M.
- Tank capacity 5 l.
- Adapters kit for HVAC system.

| Ref      | Code     | Model        | Description        |
|----------|----------|--------------|--------------------|
| <b>A</b> | 02041028 | ETO-4        | Electric pump      |
| <b>B</b> | 13006067 | KIT-ETO-HVAC | Connection kit     |
| <b>C</b> | 13005054 | FORMULA/5    | Flushing fluid 5 l |
| <b>D</b> | 14029016 | BP           | Plastic case       |

| Ref      | Description | Dimensions         | Weight  |
|----------|-------------|--------------------|---------|
| <b>A</b> | 02041028    | 290 x 200 x 275 mm | 7 kg    |
| <b>B</b> | 13006067    | 267 x 150 x 250 mm | 2 kg    |
| <b>C</b> | 13005054    | 260 x 165 x 145 mm | 5,5 kg  |
| <b>D</b> | 14029016    | 520 x 290 x 340 mm | 1,85 kg |



#### Technical features

|              |                             |
|--------------|-----------------------------|
| Rate         | 4 l/min                     |
| Power        | 180W with thermal-protector |
| Max pressure | 20 bar                      |
| Voltage      | 230 V-50/60 Hz              |
| Self priming | Yes                         |
| Connection   | 1/4 SAE                     |

## Formula

DOES NOT CONTAIN FLAMMABLE PRODUCTS!  
DOES NOT CONTAIN TOXIC SUBSTANCES!  
DOES NOT CONTAIN HARMFUL PRODUCTS!  
POSSIBLE RESIDUES ARE COMPATIBLE WITH  
THE FLUIDS INSIDE THE SYSTEM



RECOVERY-RECYCLING  
FLUSHING-SANIFICATION  
PRESSURIZATION  
TEST SYSTEMS  
VACUUM-CHARGE  
CO (LPM)  
HC (MCM)  
INSTRUMENTS  
TOOLS-VALVES  
FITTINGS  
CONDENSATION  
WATER PUMPS  
WELDING  
CONSUMABLES

# WASHING AND SANIFICATION OF INDOOR AND OUTDOOR UNITS



## INDOOR UNITS SANIFICATION

SIMPLE AND CLEAN  
SOLUTION



### EVA-WASH-KIT

#### Kit for washing of indoor air-conditioning units

In Europe there is a huge park of indoor units (split, fancoil). From the cleaning and sanitizing service of which the quality of the air we breathe in our homes and in many businesses such as offices, hospitality and health facilities depends significantly.

In the same guidelines against legionellosis it is highlighted how they go periodically:

- Clean and disinfect the condensate collection tanks.
- Clean and disinfect the finned surfaces with the removal of organic and inorganic dirt.
- Cleaned and periodically replaced the filters in compliance with the manufacturer's specifications.

A professional service of cleaning and sanitizing of the internal units (split / fancoil) allows the customer to breathe healthy air, save money and give longevity to the system.

**EVA-WASH-KIT** is the "simple and clean" solution for washing and sanitizing internal units (split and fancoil) which allows:

- Dress the evaporator of the unit to be treated with the EVA-SPLIT protection cover (2pcs included).
- Treat the evaporator, the filters and the condensate collection tank with the handy spray pump (2l) and the specific detergent (included).
- Finally, wash the evaporator and plastic parts using the special evaporating pressure washer.

Standard equipment:

- EVA-PUMP Professional cleaning pump.
- EVA-SPLIT cleaning cover for split units (2 pcs).
- PSP2 Sprinkling pump.
- EVA-CLEANER Detergent 5 kg.

| Code     | Model        | Dimensions         | Weight |
|----------|--------------|--------------------|--------|
| 13005065 | EVA-WASH-KIT | 520 x 290 x 340 mm | 12 kg  |



### Technical features of EVA-PUMP

|                  |              |
|------------------|--------------|
| Flow rate        | 4 l/min      |
| Power            | 80W          |
| Working pressure | 0.7÷1MPa     |
| Power supply     | 220V-50/60Hz |
| Weight           | 5 kg         |



### Spare parts and accessories

| Code     | Description                        |
|----------|------------------------------------|
| 13006069 | Kit 2 tubes (suction and delivery) |
| 13006070 | Replacement gun                    |



## EVA-PUMP

Cleaning pump for indoor air conditioning units

| Code     | Model    | Dimensions         | Weight |
|----------|----------|--------------------|--------|
| 13005062 | EVA-PUMP | 278 x 180 x 280 mm | 5 kg   |



## Technical features

|                      |              |
|----------------------|--------------|
| Flow rate            | 4 l/min      |
| Power                | 80W          |
| Working pressure     | 0.7÷1MPa     |
| Power supply         | 220V-50/60Hz |
| Suction hose length  | 1,5 m        |
| Delivery pipe length | 5 m          |

## EVA-CASSETTE - EVA-SPLIT

Cleaning covers for indoor units

| Ref | Code     | Model        | Description                               |
|-----|----------|--------------|-------------------------------------------|
| A   | 13005064 | EVA-CASSETTE | Cleaning cover for ceiling cassette units |
| B   | 13005063 | EVA-SPLIT    | Cleaning cover for wall split             |



## EVA-CLEANER

Concentrated liquid detergent for indoor units

EVA-CLEANER is suitable for the cleaning and the sanification of the finned batteries and filters of the indoor units of the HVAC systems. In addition to its detergent action, it makes also a disinfectant and deodorant actions. To be diluted in water (from 25 to 30%).

| Code     | Model       | Capacity | Dimensions         | Weight |
|----------|-------------|----------|--------------------|--------|
| 13005057 | EVA-CLEANER | 5 kg     | 370 x 170 x 150 mm | 5,5 kg |



## PSP2

Professional sprinkling pump

2 litre high-density polyethylene tank.

Recommended detergent EVA-CLEANER.

| Code     | Model | Dimensions         | Weight |
|----------|-------|--------------------|--------|
| 13005061 | PSP2  | 310 x 220 x 130 mm | 0,8 kg |



## DETERGENTS - SANITIZERS



### EFC

#### Detergent for evaporators and unit heaters

Spray packaging.  
Crumbles dirt.  
Sticks even to vertical surfaces.  
Remove bad smells.

| Code     | Model | Min. Qty | Capacity | Dimensions         | Weight Pack |
|----------|-------|----------|----------|--------------------|-------------|
| 13005018 | EFC   | 12       | 650 ml   | 270 x 210 x 250 mm | 7,4 kg      |



### CLEAN-AIR

#### Sanitizer for air conditioning systems

Spray packaging.  
Remove bad smells.  
Rapidly and safely sanitizes.

| Code     | Model     | Min. Qty | Capacity | Dimensions         | Weight Pack |
|----------|-----------|----------|----------|--------------------|-------------|
| 13005014 | CLEAN-AIR | 12       | 400 ml   | 270 x 210 x 210 mm | 5,1 kg      |



### GREEN TABS

#### Conditioner cleaning treatment

Helps eliminate odors.  
Prevents water damage.  
Non corrosive and non toxic.  
Easy to install.  
Contents 200 tablets.

| Code     | Model      | Min. Qty | Dimensions         | Weight Pack |
|----------|------------|----------|--------------------|-------------|
| 12099005 | GREEN TABS | 12       | 230 x 310 x 160 mm | 5,9 kg      |



### SANICARE

#### Multi-surface sanitiser - 80% alcohol

Ready-to-use ethyl alcohol-based aerosol  
Sanitises surfaces and equipment that are frequent touched.

| Code     | Model    | Min. Qty | Capacity | Dimensions  | Weight Pack |
|----------|----------|----------|----------|-------------|-------------|
| 13005071 | SANICARE | 12       | 500 ml   | 270x210x250 | 7,4 kg      |

## LOVAIR-PRO

### OZONE (O<sub>3</sub>) GENERATOR

LOVAIR-PRO has been designed to support the treatment of passenger compartments and environments thanks to the reactivity of ozone (O<sub>3</sub>) in oxidizing the vast majority of organic and inorganic particles, and the consequent odors, even in difficult places to reach.

#### LOVAIR-PRO advantages:

- Take advantage of a natural principle without the need for chemicals consumables.
- Effective in critical points that would otherwise be unreachable
- Widespread action thanks to the ability of ozone to penetrate tissues, ...
- Automatic operation.
- Intervention times selectable according to areas and treatment
- Timer up to 180 min.
- Double power supply connection 220V-50/60Hz and 12DVC.
- More than 10, 000 half-hour treatments without using consumables.

### HOW DOES OZONE WORKS?

Ozone is a molecule of three oxygen atoms bound together (O<sub>3</sub>), with negative electric. In nature, ozone is produced by some physical reactions. The most well-known example is of course the ozone layer, where ozone is produced from the sun's UV rays. But ozone is also produced at thunderstorms and waterfalls. The special "fresh and clean spring rain" smell is a result of nature-produced ozone. Ozone derives from the Greek word "ozein" which means "to smell".

After fluorine, ozone is the strongest oxidant found in nature. The ozone operates according to the principle of oxidation. When the static ozone molecule (O<sub>3</sub>) contacts with something "able to oxidize", the charge of the ozone molecule will directly flow over. This is because ozone is very unstable and tends to turn back to its original form (O<sub>2</sub>).

| Code     | Model      | Dimensions         | Weight |
|----------|------------|--------------------|--------|
| 09019008 | LOVAIR PRO | 200 x 150 x 150 mm | 2,5 kg |



### Technical features

|                  |                      |
|------------------|----------------------|
| Ozone production | 4.000 mg/h           |
| Power input      | 40W                  |
| Power supply     | 220V-50/60Hz e 12DVC |
| Dimensions       | 20 x 15 x 15 cm      |
| Weight           | 2,5 kg               |



### Spare parts and accessories

| Code     | Description                |
|----------|----------------------------|
| 09019004 | Power supply 230V-50Hz     |
| 09019005 | Adapter for lighter socket |



### Suggested time in min\* for rooms\*\* based on square meters

|                         |                |
|-------------------------|----------------|
| Up to 15 m <sup>2</sup> | 15 - 30 min.   |
| Up to 30 m <sup>2</sup> | 30 - 60 min.   |
| Up to 50 m <sup>2</sup> | 60 - 90 min.   |
| Up to 65 m <sup>2</sup> | 90 - 120 min.  |
| Up to 80 m <sup>2</sup> | 120 - 180 min. |

\* Read the manual carefully before using the equipment.

\*\* Based on height 3 m.

### Suggested time in min\* for vehicle

|                             |               |
|-----------------------------|---------------|
| Small / Medium cars         | 15 - 30 min.  |
| Sedan / SW / SUV            | 30 - 45 min.  |
| Camper / Roulotte / Minivan | 45 - 60 min.  |
| Minibus                     | 60 - 90 min.  |
| Autobus / Train             | 90 - 180 min. |

\* Read the manual carefully before using the equipment.

## WASHING AND PROTECTION OF OUTDOOR UNITS

**NEW**


### COIL-PUMP-FLEX

#### Compact high-pressure cleaner with adjustable pressure 10-40 bar

The COIL-PUMP-FLEX high-pressure cleaner, especially designed for refrigeration specialists and installers who want to offer a professional maintenance on exchangers and units, features:

- **EXTREME FLEXIBILITY**, thanks to its regulator that can adapt the pressure to any need between 10 and 40 bar, and the possibility of direct supply from the water mains or from a tank (as it is self-priming).
- **Great COMPACTNESS**, thanks to its small size, low weight, ergonomics and the possibility of storing all accessories in their respective compartments and in the handy elastic side pockets.
- **EASE OF USE** thanks to the accessories that can be easily connected via high-performance quick couplers. In just a few seconds, the gun can be connected to the extensions and to the adjustable nozzle and get ready for the best cleaning of the units, and therefore of the exchangers, from the inside of the condenser to the outside.

Main accessories supplied:

- High-pressure delivery hose (7 mt) with quick couplers
- Gun with quick coupler for nozzles and lances.
- 2 extension lances (40 cm).
- Suction hose (2 mt) with adapters
- Regulator with pressure gauge to check the working pressure
- Cleaner Kit (optional) for the suction of the cleaning liquid (1:3) and specific tip.

| Ref | Code     | Model          | Dimensions         | Weight |
|-----|----------|----------------|--------------------|--------|
| A   | 13005073 | COIL-PUMP-FLEX | 400 x 300 x 320 mm | 8 kg   |
| B   | 13006076 | CLEANER-KIT    | 120 x 60 x 60 mm   | 0,5 kg |



### Technical features

|                  |                   |
|------------------|-------------------|
| Power supply     | 220V~/50-60Hz     |
| Working pressure | 1-4MPa / 10-40bar |
| Flow rate        | 6 l/min           |
| Power            | 750W              |

### COIL-CLEANER

#### Concentrated liquid detergent for outdoor units

Concentrated degreasing detergent for the cleaning of different components of the outdoor units (finned exchangers, air condensers, convectors, etc...) To be diluted in water (from 10% to 20%).



| Code     | Model        | Capacity | Min. Qty |
|----------|--------------|----------|----------|
| 13005015 | COIL-CLEANER | 5 kg     | 4        |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 13005015 | 370 x 170 x 150 mm | 5,5 kg |

## PSP6

### Professional sprinkling pump

5 liter high density polyethylene tank with UV protection and safety valve.  
Pump with steel rod and handle with lance support.  
1.20 m PVC hose and brass nozzle with adjustable jet.  
Recommended detergent COIL-CLEANER.

| Code     | Model | Capacity | Dimensions         | Weight |
|----------|-------|----------|--------------------|--------|
| 13005013 | PSP6  | 5 l      | 610 x 200 x 200 mm | 2 kg   |



### Technical features

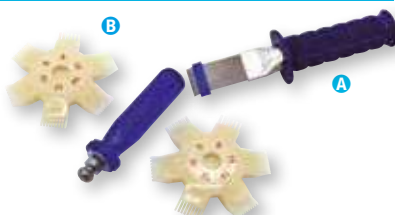
|              |                    |
|--------------|--------------------|
| Max pressure | 3 bar (0,3 MPa)    |
| Safety valve | 3.5 bar (0,35 MPa) |

## PA11-PA6

### Fin comb

Tool suitable for the cleaning and aligning of fins of any type of finned exchanger.

| Ref | Code     | Model | Dimensions        | Weight  |
|-----|----------|-------|-------------------|---------|
| A   | 08008051 | PA11  | 280 x 100 x 40 mm | 0,14 kg |
| B   | 08008007 | PA6   | 130 x 160 x 40 mm | 0,10 kg |



## HOT-BLOWER

### Hot blower

Suitable to dry finned batteries (condensers-evaporators).  
Ideal to warm up the refrigerant during the transfer operations (from bottle to bottle and during recovery).

| Code     | Model      | Dimensions         | Weight |
|----------|------------|--------------------|--------|
| 14019019 | HOT-BLOWER | 195 x 170 x 190 mm | 1,6 kg |



### Technical features

|                    |                         |
|--------------------|-------------------------|
| Power supply       | 230V-50/60Hz            |
| Power              | 550 W                   |
| Wind rate          | 2.7 m³/min              |
| Max. temperature   | 45 °C                   |
| Thermal cut-out    | Yes                     |
| Power switch       | On/Off with lock button |
| Power cable length | 1.8 m                   |

## CLIMA-CAP

### Protective covers for external units

Optimized dimensions for the main R32 units.

| Code     | Model         | Dimensions         | Suitable for                 |
|----------|---------------|--------------------|------------------------------|
| 16010010 | CLIMA-CAP-M/D | 550 x 860 x 340 mm | Mono 20-35 / Multi 2-R32     |
| 16010011 | CLIMA-CAP-MUL | 735 x 980 x 400 mm | Mono 42-60 / Multi 3-4-5-R32 |





# TRUST YOUR EYES!

## NEW SPY 4WAYS MANIFOLD

SPY turns the manifold into an instrument of visual diagnosis of the refrigerant fluid, thanks to the completely transparent cylinder body





# PRESSURIZATION TEST SYSTEMS



## PRESSURIZATION - NITROGEN TEST



### K-AZ200-50/BN2

#### Nitrogen kit

Suitable for:

- Testing for leaks in pressure of HVAC systems.
- Flushing of HVAC systems.
- Fluxing during soldering in HVAC systems.
- Pressure switches and gauges calibration.

Kit includes:

- Nitrogen regulator serie AZ200-50 with dual integrated connection for cartridges and bottles.
- Ø80 gauge, class 1.0 with defined sectors, positioning indicator and calibration screw.
- Flexible hose 1/4" SAE, 900 mm + 200 mm.
- Nitrogen bottle 950 cc- 110 bar - TPED.
- 1 adapter RG180/5-4 (5/16" SAE F x 1/4" SAE M).
- Sturdy plastic carrying case.

| Code        | Model            | Country | Cylinder connection | Standard reference | Cartridge connection |
|-------------|------------------|---------|---------------------|--------------------|----------------------|
| 13005017001 | K-AZ200-50/BN2   | IT      | W 21.7 x 1/14" M    | UN 11144-5         | M10x1                |
| 13005017005 | K-AZ200-50/BN2-D | F-B-P-E | Ø 21.7 x 1.814 F    | NF E 29-650/C      | M10x1                |
| 13005017008 | K-AZ200-50/BN2-E | GB      | G 5/8" M            | BS 341 nr.3        | -                    |
| 13005017009 | K-AZ200-50/BN2-C | D       | W 24.32 x 1/14" F   | DIN 477 nr.10      | M10x1                |



COMMISSION REGULATION (EC) NO. 1516/2007

#### ARTICLE 8 - Repair of leakage

1. The operator shall ensure that the repair is carried out by personnel certified to undertake that specific activity. Prior to repair, a pump-down or recovery shall be carried out, where necessary.

2. The operator shall ensure that a leakage test with Oxygen Free Nitrogen (OFN) or another suitable pressure testing and drying gas is carried out where necessary, followed by evacuation, recharge and leakage test. Prior to pressure testing with Oxygen Free Nitrogen (OFN) or another suitable pressure testing gas, fluorinated greenhouse gases shall be recovered from the whole application where necessary.



#### Technical features

|                          |                    |
|--------------------------|--------------------|
| Regulator inlet pressure | 20 MPa             |
| Max output pressure      | 4,8 MPa            |
| Connections              | 1/4" SAE           |
| Dimensions               | 360 x 320 x 120 mm |
| Weight                   | 4,5 kg             |
| Comply to                | CE n. 1516 2007    |



#### Calibration

| Code        | Model             | Description                                         |
|-------------|-------------------|-----------------------------------------------------|
| 09053011    |                   | Calibration report ref. Accredia for checking gauge |
| 13005017016 | K-AZ200-50/BN2/RT | Nitrogen kit with calibration report                |

### NITROGEN CARTRIDGES AND CYLINDERS

| Ref | Code     | Model      | Capacity          |
|-----|----------|------------|-------------------|
| A   | 11001060 | BN2/1-TPED | Disposable 950 cc |
| B   | 11003011 | BAZ50/1    | Rechargeable 5 l  |

| Rif | Code     | Min. Qty | Dimensions         | Weight   |
|-----|----------|----------|--------------------|----------|
| A   | 11001060 | 12       | 320 x 250 x 330 mm | 15,50 kg |
| B   | 11003011 | -        | 550 x 150 x 150 mm | 8,80 kg  |



### SPRAY LEAK DETECTOR

| Code     | Model       | Capacity | Min. Qty |
|----------|-------------|----------|----------|
| 09001080 | GAS CONTROL | 400 ml   | 10       |

| Dimensions         | Weight |
|--------------------|--------|
| 340 x 140 x 220 mm | 4,8 Kg |



## K-AZ200-50/BAZ50

### Nitrogen kit 5 liters

Suitable for:

- Testing for leaks in pressure of HVAC systems.
- Flushing of HVAC systems.
- Fluxing during soldering in HVAC systems.
- Pressure switches and gauges calibration.

Kit includes:

- Nitrogen regulator serie AZ200-50 with dual integrated connection for cartridges and bottles.
- Ø80 gauge, class 1.0 with defined sectors, positioning indicator and calibration screw.
- Flexible hose 1/4" SAE , 2500 mm + 220 mm.
- Nitrogen bottle 5 l - TPED - full (20 MPa).
- Adapter Rg180/5-4 (5/16" SAE Fx 1/4" SAE M).

| Code        | Model            | Country | Cylinder connection | Standard reference | Cartridge connection |
|-------------|------------------|---------|---------------------|--------------------|----------------------|
| 13005022001 | K-AZ200-50/BAZ50 | IT      | W 21.7 x 1/14" M    | UN 11144-5         | M10x1                |



### Technical features

|                          |                    |
|--------------------------|--------------------|
| Regulator inlet pressure | 20 MPa             |
| Max output pressure      | 4,8 MPa            |
| Connections              | 1/4" SAE           |
| Dimensions               | 700 x 430 x 280 mm |
| Weight                   | 14,6 kg            |

## AZ200

### "Heavy duty" nitrogen regulator for cartridges and cylinders

Heavy duty professional nitrogen regulator with dual integrated connection for cartridges and cylinders (no external adapter required) and "High Performance" safety valve.

| Code     | Model      | Country | Cylinder connection | Standard reference | Cartridge connection |
|----------|------------|---------|---------------------|--------------------|----------------------|
| 10002017 | AZ200-50   | IT      | W 21.7 x 1/14" M    | UN 11144-5         | M10x1                |
| 10002019 | AZ200-50/D | F-B-P-E | Ø21.7 x 1.814F      | NF E 29-650/C      | M10x1                |
| 10002018 | AZ200-50/E | GB      | G 5/8" M            | BS 341 nr.3        | -                    |
| 10002020 | AZ200-50/C | D       | W 24.32 x 1/14" F   | DIN 477 nr.10      | M10x1                |



### Technical features

|                     |                    |
|---------------------|--------------------|
| Inlet pressure      | 20 MPa             |
| Max output pressure | 4,8 MPa            |
| Connections         | 1/4" SAE           |
| Dimensions          | 380 x 200 x 130 mm |
| Weight              | 1,8kg              |



## PRESSURIZATION - AZOIDRO TEST

DUAL INTEGRATED  
CONNECTION

AZOIDRO  
N<sub>2</sub>-H<sub>2</sub>

NEW DIAL WITH N<sub>2</sub>-H<sub>2</sub>



SPARE PARTS  
AND  
ACCESSORIES  
PAGE 36



VIEW  
VOYAGER  
PAGE 115



### TOTAL-TEST-HVAC

#### Leak detection kit with AZOIDRO (N<sub>2</sub>-H<sub>2</sub>)

It enables to detect and locate leaks in HVAC system in compliance with Regulation (EC) n.1516/2007.

The pressure reducer and the control pressure gauge in class 1 enable to pressurize the system to the necessary value with the AZOIDRO mixture; the system can then be checked by means of the leak detector VOYAGER.

The new VOYAGER leak detector with heated diode makes this kit the total leak detection solution. In fact, VOYAGER detects AZOIDRO mixture (N<sub>2</sub>-H<sub>2</sub>) and also all halogenated HFC, CFC, HCFC refrigerants and their mixtures and HC hydrocarbons (such as R290-R600a).

Kit includes:

- Pressure regulator serie AZ200-50 with dual integrated connection for cartridges and bottles.
- Control gauge Ø80, class 1 with positioning indicator and calibration screw.
- Flexible hose 1/4" SAE, 1500 mm + 200 mm.
- Swivel adapter RG180/5-4 (5/16" SAE F x 1/4" SAE M).
- AZOIDRO cartridge 1 l - 110 bar.
- VOYAGER leak detector.
- Sturdy plastic carrying case.

| Code        | Model             | Country | Cylinder connection | Standard reference | Cartridge connection |
|-------------|-------------------|---------|---------------------|--------------------|----------------------|
| 13005072005 | TOTAL-TEST-HVAC   | IT      | W 21.7 x 1/14" M    | UN 11144-5         | M10x1                |
| 13005072006 | TOTAL-TEST-HVAC-D | F-B-P-E | Ø21.7 x 1.814F      | NF E 29-650/C      | M10x1                |
| 13005072007 | TOTAL-TEST-HVAC-C | D       | W 24.32 x 1/14" F   | DIN 477 nr.10      | M10x1                |
| 13005072008 | TOTAL-TEST-HVAC-E | GB      | G 5/8" M            | BS 341 nr.3        |                      |



#### Technical features

|                          |                    |
|--------------------------|--------------------|
| Regulator inlet pressure | 20 MPa             |
| Max output pressure      | 4,8 MPa            |
| Connections              | 1/4" SAE           |
| Dimensions               | 360 x 320 x 120 mm |
| Weight                   | 5,0 kg             |



#### COMMISSION REG. (EC) NO. 1516/2007

#### ARTICLE 8 - Repair of leakage

1. The operator shall ensure that the repair is carried out by personnel certified to undertake that specific activity. Prior to repair, a pump-down or recovery shall be carried out, where necessary.
2. The operator shall ensure that a leakage test with Oxygen Free Nitrogen (OFN) or another suitable pressure testing and drying gas is carried out where necessary, followed by evacuation, recharge and leakage test. Prior to pressure testing with Oxygen Free Nitrogen (OFN) or another suitable pressure testing gas, fluorinated greenhouse gases shall be recovered from the whole application where necessary.

### AZOIDRO (N<sub>2</sub>-H<sub>2</sub>) CARTRIDGES AND CYLINDERS

Bottle containing 95% Nitrogen and 5% Hydrogen which allows to pressurize the system and then to find the leak source by means of ELD-A and VOYAGER leak detectors.

| Ref | Code     | Model                  | Capacity | Min. Qty | Dimensions pack    | Weight pack |
|-----|----------|------------------------|----------|----------|--------------------|-------------|
| A   | 11001112 | AZOIDRO disposable     | 1 l      | 12       | 320 x 250 x 330 mm | 15,5 kg     |
| B   | 11003020 | AZOIDRO/5 rechargeable | 5 l      | -        | 550 x 150 x 150 mm | 8,80 kg     |

## TOTAL-TEST-HVAC-ELD-A

### Leak detection kit with AZOIDRO (N<sub>2</sub>-H<sub>2</sub>)

It enables to detect and locate leaks in HVAC system in compliance with Regulation (EC) n.1516/2007.

The pressure reducer and the control pressure gauge in class 1 enable to pressurize the system to the necessary value with the AZOIDRO mixture; the system can then be checked by means of the leak detector ELD-A.

Kit includes:

- Pressure regulator serie AZ200-50 **with dual integrated connection** for cartridges and bottles.
- Control gauge Ø80, class 1 with positioning indicator and calibration screw.
- Flexible hose 1/4" SAE, 1500 mm + 200 mm.
- Swivel adapter RG180/5-4 (5/16" SAE F x 1/4" SAE M).
- AZOIDRO cartridge 1 l - 110 bar.
- ELD-A leak detector.
- Sturdy plastic carrying case.

| Code        | Model                   | Country | Cylinder connection | Standard reference | Cartridge connection |
|-------------|-------------------------|---------|---------------------|--------------------|----------------------|
| 13005046014 | TOTAL-TEST-HVAC-ELD-A   | IT      | W 21.7 x 1/14" M    | UN 11144-5         | M10x1                |
| 13005046015 | TOTAL-TEST-HVAC-ELD-A-D | F-B-P-E | Ø21.7 x 1.814F      | NF E 29-650/C      | M10x1                |
| 13005046016 | TOTAL-TEST-HVAC-ELD-A-C | D       | W 24.32 x 1/14" F   | DIN 477 nr.10      | M10x1                |
| 13005046017 | TOTAL-TEST-HVAC-ELD-A-E | GB      | G 5/8" M            | BS 341 nr.3        | -                    |



### Technical features

|                          |                    |
|--------------------------|--------------------|
| Regulator inlet pressure | 20 MPa             |
| Max output pressure      | 4,8 MPa            |
| Connections              | 1/4" SAE           |
| Dimensions               | 360 x 320 x 120 mm |
| Weight                   | 5,0 kg             |

## K-AZ200-50/AZOIDRO5

### Azoidro kit 5 liters

It enables to detect and locate leaks in HVAC system in compliance with Regulation (EC) n.1516/2007. The pressure reducer and the control pressure gauge in class 1 enable to pressurize the system to the necessary value with the AZOIDRO mixture; the system can then be checked by means of the ELD-A and VOYAGER leak detectors (not included in the kit).

Kit includes:

- Pressure regulator serie AZ200-50 **with dual integrated connection** for cartridges and bottles.
- Ø80 gauge, class 1.0 with defined sectors, positioning indicator and calibration screw.
- Flexible hose 1/4" SAE , 2500 mm + 220 mm.
- Azoidro bottle 5 l - TPED - full (20 MPa).
- Adapter RG180/5-4 (5/16" SAE Fx 1/4" SAE M).

| Code     | Model               | Country | Cylinder connection | Standard reference | Cartridge connection |
|----------|---------------------|---------|---------------------|--------------------|----------------------|
| 13005068 | K-AZ200-50/AZOIDRO5 | IT      | W 21.7 x 1/14" M    | UN 11144-5         | M10x1                |



### Technical features

|                          |                    |
|--------------------------|--------------------|
| Regulator inlet pressure | 20 MPa             |
| Max output pressure      | 4,8 MPa            |
| Connections              | 1/4" SAE           |
| Dimensions               | 700 x 430 x 280 mm |
| Weight                   | 14,6 kg            |

## PARTS AND ACCESSORIES - TEST SYSTEMS



### WN2-60

#### Nitrogen regulator

Regulator with connection for refillable Nitrogen or AZOIDRO cylinders.

| Code     | Model    | Country | Connections bottle | Standard reference |
|----------|----------|---------|--------------------|--------------------|
| 10002035 | WN2-60   | IT      | W 21.7 x 1/14" M   | UN 11144-5         |
| 10002037 | WN2-60/D | F-B-P-E | Ø21.7 x 1.814F     | NF E 29-650/C      |
| 10002036 | WN2-60/E | GB      | G 5/8" M           | BS 341 nr.3        |
| 10002038 | WN2-60/C | D       | W 24.32 x 1/14" F  | DIN 477 nr.10      |

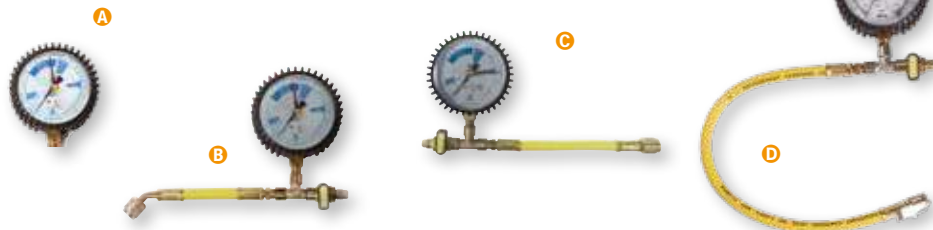


#### Technical features

|                          |                    |
|--------------------------|--------------------|
| Regulator inlet pressure | 20 MPa             |
| Max output pressure      | 6,0 MPa            |
| Connections              | 1/4" SAE           |
| Dimensions               | 220 x 180 x 110 mm |
| Weight                   | 1,7 kg             |



#### Spare parts and accessories



| Ref | Code        | Model                     | Description                                                                                  |
|-----|-------------|---------------------------|----------------------------------------------------------------------------------------------|
| A   | 07121016    | PF80/53R1/TEST            | ø 80 test gauge, class 1,0 with defined sectors, positioning indicator and calibration screw |
| B   | 05015003    | V/GYSA/1M-4/6Y/PF80/N2-K1 | Flexible hose 1/4" SAE with ø80 test gauge, class 1.0 with connection 1/4" SAE 45°           |
| B   | 05015010    | V/GYSA/1M-5/6Y/PF80/N2-K1 | Flexible hose 1/4" SAE with ø80 test gauge, class 1.0 with connection 5/16" SAE 45°          |
| C   | 05015016    | V/GYSS/1M-4/8Y/PF80/N2-K1 | Flexible hose 1/4" SAE with ø80 test gauge, class 1.0 with connection 1/4" SAE straight      |
| C   | 05015017    | V/GYSA/1M-5/8Y/PF80/N2-K1 | Flexible hose 1/4" SAE with ø80 test gauge, class 1.0 with connection 5/16" SAE straight     |
| D   | 05015011    | V/GYSS/4M-VE/Y/PF80/10/K1 | Terminal for checking expansion vessel of boilers                                            |
|     | 05059023001 | RG180/5-4-WIG             | Adapter 5/16" F x 1/4" M                                                                     |
|     | 06071001003 | GYSS/4-4/36/Y             | Flexible hose 900 mm for nitrogen kit 1 lt. - 1/4" SAE                                       |
|     | 06071025003 | GYSS/4-4/98Y              | Flexible hose 2500 mm for nitrogen kit 5 lt. - 1/4" SAE                                      |
|     | 14020084001 | 95514K-WIG                | Kit 10 gaskets for nitrogen regulator AZ200-50 and WN2-60 (cylinders connection side)        |
|     | 14020083001 | OR-AZ/K-WIG               | Kit 10 o-ring for nitrogen regulator for AZ200-50 (cartridge connection side 950 cc)         |
|     | 10010037    |                           | Replacement HP gauge-315 bar for AZ200-50 - 1/4" G                                           |
|     | 10010038    |                           | Replacement LP gauge-100 bar for AZ200-50 - 1/4" G                                           |
|     | 14029064    | VP/B16                    | Plastic carrying case for 1 liter nitrogen/azoidro kits                                      |



# VACUUM - CHARGE



## DOUBLE STAGE HIGH VACUUM PUMPS

### Double stage high vacuum pumps PROFESSIONAL LINE

- Designed and produced according to the most advanced criteria.
- High reliability.
- High performance.
- Lightweight.
- Protection index IP54.
- Incombustibility (R32-R1234yf).

Their incombustibility, in order to be able to use them with R32 and R1234yf, is guaranteed by the particular manufacturing of the stator/rotor components,

which even in the worst working conditions or in case of failure prevent re-aching ignition temperatures.

- With carrying handle and gas ballast valve to evacuate condensable gases (gas ballast).
- Single packaging with one bottle of mineral oil.
- E/V models are equipped with Ø80 vacuum gauge, solenoid valve to prevent air/oil from flushing back when the pump is turned off, connection 1/4" SAE M and 2 adapters 1/4"SAE F x 3/8"SAE M e 1/4"SAE F x 5/16"SAE M.
- RS3D-EX and RS3DE/V-EX are ATEX certified and are specifically designed to work with hydrocarbons (HC) such as R290 and R600a.



Packaging: 267 x 150 x 250 mm - 6,4 kg

Packaging: 267 x 150 x 250 mm - 6,9 kg

Packaging: 390 x 230 x 350 mm - 10,5 kg

| Ref | Code     | Model      | Swept volume | Ultimate vacuum         | Power supply**  | Nominal power | Protection degree | Oil charge | Connections           | Solenoid valve (E) Vacuum gauge (V) |
|-----|----------|------------|--------------|-------------------------|-----------------|---------------|-------------------|------------|-----------------------|-------------------------------------|
| A   | 02002044 | RS3D       | 46 lt/min    | 1x10 <sup>-2</sup> mbar | 220-240/1/50-60 | 120 W         | IP54              | 300 cc     | 1/4" NPT-F            | -                                   |
| B   | 02099024 | RS3DE/V    | 46 lt/min    | 1x10 <sup>-2</sup> mbar | 220-240/1/50-60 | 120 W         | IP54              | 300 cc     | 1/4"-5/16"-3/8"       | EV                                  |
| C   | 02002052 | RS3D-EX    | 46 lt/min    | 1x10 <sup>-2</sup> mbar | 220-240/1/50-60 | 120 W         | IP54              | 300 cc     | 1/4" NPT-F - 1/4" SAE | -                                   |
| C   | 02099036 | RS3DE/V-EX | 46 lt/min    | 1x10 <sup>-2</sup> mbar | 220-240/1/50-60 | 120 W         | IP54              | 300 cc     | 1/4"-5/16"-3/8"       | EV                                  |

\*\*Other voltages and frequencies, on demand.



Packaging: 285 x 150 x 260 mm - 10 kg

Packaging: 285 x 150 x 260 mm - 10,5 kg

| Ref | Code     | Model      | Swept volume | Ultimate vacuum         | Power supply**  | Nominal power | Protection degree | Oil charge | Connections     | Solenoid valve (E) Vacuum gauge (V) |
|-----|----------|------------|--------------|-------------------------|-----------------|---------------|-------------------|------------|-----------------|-------------------------------------|
| A   | 02002020 | DIP 402    | 90 lt/min    | 1x10 <sup>-2</sup> mbar | 220-240/1/50-60 | 240 W         | IP54              | 300 cc     | 1/4" NPT-F      | -                                   |
| B   | 02099013 | DIP 402E/V | 90 lt/min    | 1x10 <sup>-2</sup> mbar | 220-240/1/50-60 | 240 W         | IP54              | 300 cc     | 1/4"-5/16"-3/8" | EV                                  |

\*\*Other voltages and frequencies, on demand.

## Double stage high vacuum pumps PROFESSIONAL LINE

- Designed and produced according to the most advanced criteria
- High reliability.
- High performance.
- Lightweight.
- Protection index IP54.
- Incombustibility (R32-R1234yf).
- Their incombustibility, in order to be able to use them with R32 and R1234yf, is guaranteed by the particular manufacturing of the stator/rotor components, which even in the worst working conditions or in case of failure prevent reaching ignition temperatures.

- With carrying handle and gas ballast valve to evacuate condensable gases (gas ballast).
- Single packaging with one bottle of mineral oil.
- RS9DE/V models is equipped with Ø80 vacuum gauge, solenoid valve to prevent air/oil from flushing back when the pump is turned off , connection 1/4" SAE M and 2 adapters 1/4"SAE F x 3/8"SAE M e 1/4"SAE F x 5/16"SAE M.
- RS15DE model is equipped with solenoid valve to prevent air from flushing back when the pump is turned off, double connections 3/8"SAE M and 1/4" SAE M with caps and 2 additional adapters 1/4"SAE F x 3/8"SAE M e 1/4"SAE F x 5/16"SAE M.
- The RS15-NH3 model is specially designed for ammonia systems and is complete with dual connections with a shut-off valve.



**A**

Packaging: 350 x 150 x 280 mm - 12 kg



**B**

Packaging: 350 x 150 x 280 mm - 12,5 kg

| Ref      | Code     | Model   | Swept volume | Ultimate vacuum         | Power supply** | Nominal power | Protection degree | Oil charge | Connections     | Solenoid valve (E) Vacuum gauge (V) |
|----------|----------|---------|--------------|-------------------------|----------------|---------------|-------------------|------------|-----------------|-------------------------------------|
| <b>A</b> | 02002029 | RS9D    | 180 lt/min   | 1x10 <sup>-2</sup> mbar | 230/1/50-60    | 370 W         | IP54              | 450 cc     | 1/4" NPT-F      | -                                   |
| <b>B</b> | 02099020 | RS9DE/V | 180 lt/min   | 1x10 <sup>-2</sup> mbar | 230/1/50-60    | 370 W         | IP54              | 450 cc     | 1/4"-5/16"-3/8" | FV                                  |

**\*\*Other voltages and frequencies, on demand.**



Packaging: 350 x 180 x 280 mm - 16 kg



®

Packaging: 350 x 180 x 280 mm - 17 kg



Packaging: 350 x 180 x 280 mm - 16 kg

| Ref      | Code     | Model      | Swept volume | Ultimate vacuum         | Power supply**  | Nominal power | Protection degree | Oil charge | Connections     | Solenoid valve (E) Vacuum gauge (V) |
|----------|----------|------------|--------------|-------------------------|-----------------|---------------|-------------------|------------|-----------------|-------------------------------------|
| <b>A</b> | 02002036 | RS15D      | 250 lt/min   | 1x10 <sup>-2</sup> mbar | 220-240/1/50-60 | 550 W         | IP54              | 400 cc     | 3/8" NPT F      | -                                   |
| <b>B</b> | 02002037 | RS15DE*    | 250 lt/min   | 1x10 <sup>-2</sup> mbar | 220-240/1/50-60 | 550 W         | IP54              | 400 cc     | 1/4"-5/16"-3/8" | E                                   |
| <b>C</b> | 02002060 | RS15D-NH3* | 250 lt/min   | 1x10 <sup>-2</sup> mbar | 220-240/1/50-60 | 550 W         | IP54              | 400 cc     | 1/4" SAE        | -                                   |

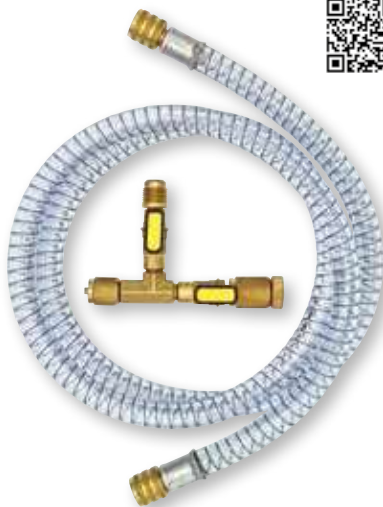
\* Pump with dual connections 3/8" and 1/4" (RS15DE) and 2 x 1/4" (RDS15D-NH3).

**\*\*Other voltages and frequencies, on demand.**

## IPERVAC KIT



See brochure:



### IPERVAC KIT - HIGH-SPEED VACUUM KIT

The IPERVAC kit reduces the time you need for evacuation by over 50%

The IperVAC kits, for 1/4" or 5/16" service ports, optimize the connection of the vacuum pump to the air conditioning / refrigeration unit, and consists of:

- The new EW4900 core removal access solution with double connections and valves for IperVAC hose and Vacuum gauge.

EW4900 enables to remove the valve core, and then open the way to its two integrated SAE M 3/8" and 1/4" (or 5/16") connections equipped with valves. 3/8" port designed for coupling with the IperVAC hose and 1/4" port for vacuum gauge, charging hose or manifold.

- The 1500mm new IperVAC hose, with internal diameter 10mm and 3/8" connections.

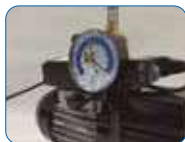
The IperVAC hose, specifically designed for vacuum, pulls a vacuum much faster compared to standard 1/4" hoses. The IperVAC hose is optimal in directly connecting the vacuum pump with the EW4900 or the vacuum pump with the VAC port of the 4-way manifold.

| Code     | Model     | Description                       | Female connection | Male connections    | Hose Length | Dimensions (mm) | Weight (kg) |
|----------|-----------|-----------------------------------|-------------------|---------------------|-------------|-----------------|-------------|
| 02090009 | IPERVAC-4 | Vacuum kit for 1/4" service port  | 1/4" SAE          | 3/8" SAE + 1/4" SAE | 1500 mm     | 240 x 220 x 70  | 0,6         |
| 02090010 | IPERVAC-5 | Vacuum kit for 5/16" service port | 5/16" SAE         | 3/8" SAE + 1/4" SAE | 1500 mm     | 240 x 220 x 70  | 0,6         |



### Application examples

①



Connection with vacuum pump

②



Mechanism extraction

③



Vacuum with VG64-LX digital gauge

④



Charge



### Spare parts and accessories

| Code        | Model            | Description                                            | Female connection | Male connections    | Dimensions (mm) | Weight (kg) |
|-------------|------------------|--------------------------------------------------------|-------------------|---------------------|-----------------|-------------|
| 08008060002 | EW 4900          | 1/4" core removal solution with double connections     | 1/4" SAE          | 3/8" SAE + 1/4" SAE | 100 x 175 x 30  | 0,25        |
| 08008060003 | EW 4900/5        | 5/16" core removal solution with double connections    | 5/16" SAE         | 3/8" SAE + 1/4" SAE | 100 x 175 x 30  | 0,25        |
| 06140002    | IVSS/6-6/60      | IperVAC hose 1500 mm                                   | 2 x 3/8" SAE      | -                   | 240 x 220 x 70  | 0,30        |
| 06140001    | IVSS/6-6/36      | IperVAC hose 900 mm                                    | 2 x 3/8" SAE      | -                   | 240 x 220 x 70  | 0,25        |
| 05053012001 | MG4-4/WIG        | Swivel coupling for vacuum connection                  | 2 x 1/4" SAE      | -                   | -               | -           |
| 06071013003 | GYSS/4-4/6/Y     | Flexible tube 150 mm for gauge connection              | 2 x 1/4" SAE      | -                   | -               | -           |
| 14020097    | G-LV/T-WIG       | Gaskets kit 5pcs for EW4900                            | -                 | -                   | -               | -           |
| 08008059    | LOCK-VALVE-CARE  | Gaskets replacement tool for Lock valve, EW and hoses  | -                 | -                   | -               | -           |
| 14020015001 | G19030           | Gaskets kit(10pcs) for 3/8"SAE hoses                   | -                 | -                   | -               | -           |
| 05108043001 | M1/4"-R134a/V-RK | Kit 10 pcs Internal core for HFC (R134a-R410A, R32...) | -                 | -                   | -               | -           |
| 05108152001 | EV-KIT/K         | Vacuum pump adapter kit                                | 1/4" SAE          | 3/8" SAE + 5/16"SAE | -               | -           |

## WHV20/M

### High performance vacuum pump

- High reliability
- Excellent performance
- Up to 4 ways connections thanks to CLT4/6-4 accessory.

Professional dual stage high vacuum pumps with solenoid valve to prevent air from flushing back when the pump is turned off.

Equipped with a forced oil circulation system.

It is recommended to use the pump with the oil filter **A** and the 4 ways suction collector **B** equipped with up to IPERVAC tubes **C** and connection devices such as EW4900 **D** or 121RG **E**.



| Code     | Model   | Dimensions         | Weight |
|----------|---------|--------------------|--------|
| 02002058 | WHV20/M | 750 x 250 x 420 mm | 41 kg  |



### Technical features

|                   |                         |
|-------------------|-------------------------|
| Swept volume      | 330 lt/min              |
| Ultimate vacuum   | 1x10 <sup>-3</sup> mbar |
| Power supply      | 230V/1/50-60Hz          |
| Nominal power     | 750 W                   |
| Protection degree | IP44                    |
| Oil charge        | 900 - 1500 cc           |
| Connections       | KF25                    |



### Application examples

Connection of the CLT4/6-4 collector, W-VAC-SMART vacuum gauge and IPERVAC hose.



### Spare parts and accessories



| Ref      | Code        | Model       | Description                                                                      | Female connection | Male connections    | Dimensions (mm) | Weight (kg) |
|----------|-------------|-------------|----------------------------------------------------------------------------------|-------------------|---------------------|-----------------|-------------|
| <b>A</b> | 14015035    | WVF-20      | Oil separator for WHV20/M and RV-25B                                             | -                 | -                   | 150 x 140 x 160 | 0,8         |
| <b>B</b> | 04003004    | CLT4/6-4    | 4-ways 3/8"SAE collector with and 1/4" SAE revolving attachment for vacuum gauge | 1/4" SAE          | 4x3/8" SAE          | -               | -           |
| <b>C</b> | 06140002    | IVSS/6-6/60 | IperVAC hose 1500 mm                                                             | 2 x 3/8" SAE      | -                   | -               | -           |
| <b>C</b> | 06140001    | IVSS/6-6/36 | IperVAC hose 900 mm                                                              | 2 x 3/8" SAE      | -                   | -               | -           |
| <b>D</b> | 08008060002 | EW 4900     | 1/4" core removal solution with double connections                               | 1/4" SAE          | 3/8" SAE + 1/4" SAE | 100 x 175 x 30  | 0,25        |
| <b>D</b> | 08008060003 | EW 4900/5   | 1/4" core removal solution with double connections                               | 5/16" SAE         | 3/8" SAE + 1/4"SAE  | 100 x 175 x 30  | 0,25        |
| <b>E</b> | 05001007001 | 121RG4-6    | 121RG valve with depressor                                                       | 1/4" SAE          | 3/8" SAE            | 140 x 100 x 20  | 0,1         |
| <b>E</b> | 05001041001 | 121RG5-6    | 121RG valve with depressor                                                       | 5/16" SAE         | 3/8" SAE            | 140 x 100 x 20  | 0,1         |
|          | 05108152001 | EV-KIT/K    | Vacuum pump adapter kit                                                          | 1/4" SAE          | 3/8" SAE + 5/16"SAE | -               | -           |
|          | 53001032    | WRK-20      | WHV20/M repair kit                                                               | -                 | -                   | -               | -           |

## DOUBLE STAGE HIGH VACUUM PUMPS

### Double stage high vacuum pumps

- High performance.
- Lightweight.
- Single packaging with one bottle of mineral oil.

- WP3DE/V e WP8DE/V models are equipped with Ø80 vacuum gauge, solenoid valve to prevent air/oil from flushing back when the pump is turned off, connection 1/4" SAE M and 2 adapters 1/4"SAE F x 3/8"SAE M and 1/4"SAE F x 5/16"SAE M.
- WP14DE model is equipped with solenoid valve to prevent air/oil from flushing back when the pump is turned off, double connections 3/8" SAE M and 1/4" SAE M with caps and 2 adapters for 1/4"SAE F x 3/8"SAE M and 1/4"SAE F x 5/16"SAE M.

SUGGESTED  
R32



Packaging: 255 x 105 x 202 mm - 6,3 kg

| Code     | Model   | Swept volume | Ultimate vacuum         | Power supply**  | Nominal power | Oil charge | Connections     | Solenoid valve (E)<br>Vacuum gauge (V) |
|----------|---------|--------------|-------------------------|-----------------|---------------|------------|-----------------|----------------------------------------|
| 02099033 | WP3DE/V | 42 lt/min    | $2 \times 10^{-2}$ mbar | 220-240/1/50-60 | 150 W         | 150 cc     | 1/4"-5/16"-3/8" | EV                                     |

*\*\*Other voltages and frequencies, on demand.*

SUGGESTED  
R32



Packaging: 338 x 138 x 244 mm - 12,4 kg

| Code     | Model   | Swept volume | Ultimate vacuum         | Power supply**  | Nominal power | Oil charge | Connections     | Solenoid valve (E)<br>Vacuum gauge (V) |
|----------|---------|--------------|-------------------------|-----------------|---------------|------------|-----------------|----------------------------------------|
| 02099034 | WP8DE/V | 128 lt/min   | $2 \times 10^{-2}$ mbar | 220-240/1/50-60 | 368 W         | 325 cc     | 1/4"-5/16"-3/8" | EV                                     |

*\*\*Other voltages and frequencies, on demand.*

SUGGESTED  
R32



Packaging: 470 x 240 x 390 mm - 18 kg

| Code     | Model   | Swept volume | Ultimate vacuum         | Power supply** | Nominal power | Oil charge | Connections     | Solenoid valve (E)<br>Vacuum gauge (V) |
|----------|---------|--------------|-------------------------|----------------|---------------|------------|-----------------|----------------------------------------|
| 02099035 | WP14DE* | 230 lt/min   | $2 \times 10^{-2}$ mbar | 230V 50/60Hz   | 750 W         | 560 cc     | 1/4"-5/16"-3/8" | E                                      |

*\* Pump with dual connections 3/8" and 1/4".*

*\*\*Other voltages and frequencies, on demand.*



## Spare parts and accessories



### VACUUM PUMP OIL

| Code     | Model | Viscosity | Capacity | Type     | Min. Qty | Dimensions         | Weight |
|----------|-------|-----------|----------|----------|----------|--------------------|--------|
| 12002003 | K1L   | 46        | 1000 cc  | Minerale | 12       | 110 x 160 x 250 mm | 1 kg   |
| 12002017 | W68   | 68        | 1000 cc  | Esteri   | 9        | 50 x 50 x 70 mm    | 1 kg   |

To keep the pump performances unaltered, we suggest to replace the oil every 3 months.

### COMPRESSOR OIL

| Code     | Model | Viscosity | Capacity | Type  | Min. Qty | Dimensions       | Weight |
|----------|-------|-----------|----------|-------|----------|------------------|--------|
| 12002006 | SW32  | 32        | 1000 cc  | Ester | -        | 80 x 80 x 230 mm | 1 kg   |
| 12002017 | W68   | 68        | 1000 cc  | Ester | 9        | 50 x 50 x 70 mm  | 1 kg   |

### RACCORDI PER POMPE PER VUOTO PER DIP-RS

| Rif      | Code        | Model       | Description                                         |                  |
|----------|-------------|-------------|-----------------------------------------------------|------------------|
|          | 05108152001 | EV-KIT/K    | Kit of adapter for vacuum pumps with solenoid valve | <b>E + F</b>     |
|          | 05108153001 | RDR-KIT/K   | Kit of fittings for DIP-RS3-RS9                     | <b>A + E + F</b> |
|          | 05108154001 | RRS15-KIT/K | Kit of fittings for RS15D                           | <b>C + E + F</b> |
| <b>A</b> | 05052011    | 48 F4       | 1/4" SAE x 1/4" NPT                                 | 100              |
| <b>B</b> | 05052012    | 48 F6       | 3/8" SAE x 1/4" NPT                                 | 50               |
| <b>D</b> | 05060001    | PG 1/4" NPT | Portagomma Ø 10 x 1/4" NPT                          | -                |
| <b>E</b> | 05055100    | W404/6      | 1/4" SAE F x 3/8" SAE M                             | 100              |
| <b>E</b> | 05108069001 | 404/6K      | 1/4" SAE F x 3/8" SAE M                             | <b>2</b>         |
| <b>F</b> | 05055099    | W404/5      | 1/4" SAE F x 5/16" SAE M                            | 100              |
| <b>F</b> | 05108022001 | 404/5K      | 1/4" SAE F x 5/16" SAE M                            | <b>2</b>         |
| <b>G</b> | 05055008    | 46F         | 1/4" SAE M x 1/8" NPT F                             | 100              |
| <b>G</b> | 0510814001  | 46F/K       | 1/4" SAE M x 1/8" NPT F                             | <b>10</b>        |



### VACUUM PUMPS PLASTIC CASE

Plastic case with internal space for vacuum pump, manifold, electronic scale and flexible hoses.

| Code     | Model | Description              |
|----------|-------|--------------------------|
| 14029019 | BP/PD | DIP and RS3 plastic case |
| 14029020 | BP/MV | RS9 plastic case         |

| Code     | Dimensions         | Weight  |
|----------|--------------------|---------|
| 14029019 | 520 x 290 x 340 mm | 1,85 kg |
| 14029020 | 520 x 290 x 340 mm | 1,85 kg |



VACUUM GAUGES

VACUUM GAUGES

- Different type of gauges are available, such as vacuum gauge, 1-way or 3-way manifold vacuum gauges.
- With calibration screw, red pointer and are "Pulse-Free".
- Scale 0 ÷ 1.000 mbar (0 ÷ 1.00 kPa).
- Dial size Ø 80 mm.



| Ref | Code     | Model       | Description                                             | Connections                       | Dimensions        | Weight  |
|-----|----------|-------------|---------------------------------------------------------|-----------------------------------|-------------------|---------|
| A   | 07041003 | PF80/VR1    | Radial connection vacuum gauge                          | 1/8"NPT                           | 110 x 90 x 40 mm  | 0,20 kg |
| B   | 04001003 | W1VPF80/4   | 1-way manifold vacuum gauge, with safety valve and hook | 1/4"SAE M                         | 240 x 150 x 55 mm | 0,40 kg |
| C   | 04003001 | W3VPF80     | 3-way manifold vacuum gauge, with ball valve            | 1/4"SAE M x 3/8"SAE F x 3/8"SAE M | 240 x 150 x 55 mm | 0,40 kg |
| D   | 07041005 | PF80/VC1    | Rear connection vacuum gauge                            | 1/8"NPT                           | 90 x 90 x 60 mm   | 0,20 kg |
| E   | 07131011 | BL80/VR1/K1 | "Blondelle" vacuum gauge, oil filled, radial connection | 1/8"NPT                           | 125 x 95 x 40 mm  | 030 kg  |



Calibration

| Code     | Description                                                  |
|----------|--------------------------------------------------------------|
| 09053032 | Calibration report ref. Accredia for analogical vacuum gauge |

COMPLETE KIT WITH SOLENOID VALVE, VACUUM GAUGE AND WIRING



| Code     | Model    | Connections          | Description                                    | Suitable for           | Dimensions        | Weight  |
|----------|----------|----------------------|------------------------------------------------|------------------------|-------------------|---------|
| 02090001 | K-EVC    | 1/4"-3/8"-5/16"SAE M | Complete kit with vacuum gauge                 | RS3-RS9-DIP402-WP3-WP8 | 130 x 240 x 70 mm | 0,35 kg |
| 02090004 | K-EC15   | 1/4"-3/8"-5/16"SAE M | Kit with 1 solenoid valve without vacuum gauge | RS15                   | 230 x 140 x 80 mm | 1,10 kg |
| 07041005 | PF80/VC1 | 1/8 NPT              | Vacuum gauge                                   | RS3-RS9-DIP402-WP3-WP8 | 90 x 90 x 60 mm   | 0,20 kg |

## VG64-LX

Digital vacuum gauge

| Code     | Model   | Dimensions        | Weight  |
|----------|---------|-------------------|---------|
| 09003020 | VG64-LX | 240 x 120 x 50 mm | 0,26 kg |



### Technical features

|                       |                                                   |
|-----------------------|---------------------------------------------------|
| Displayed units       | Microns, Pascal, millibar, Torr, milliTorr        |
| Vacuum range          | 0 – 19,000 microns (2530 Pa, 25,30 mBar, 19 mmHg) |
| Accuracy vacuum       | ±10% (50-2000 Microns)                            |
| Vacuum resolution     | 0,5 Micron (0-140 microns)                        |
| Maximum overpressure  | 800 PSI                                           |
| Power supply          | 3x Alkaline batteries AA                          |
| Operating temperature | -17°C ÷ 65°C                                      |
| Connections           | 2 x 1/4"SAE M                                     |



### Calibration

| Code        | Model      | Description                                    |
|-------------|------------|------------------------------------------------|
| 09053027    | -          | Calibration report ref. Accredia               |
| 09003020001 | VG64-LX/RT | Vacuum gauge complete with calibration reports |



## W-VAC-SMART

Digital vacuum gauge

| Ref | Code        | Model       | Description                           |
|-----|-------------|-------------|---------------------------------------|
| A   | 09003018    | W-VAC-SMART | Digital vacuum gauge                  |
| B   | 05001047    | 121RG4-T4   | In-line connection / exclusion system |
| C   | 05053012001 | MG4-4/WIG   | Swivel coupling                       |
| D   | 05053013001 | MG4-6/WIG   | Swivel coupling                       |

| Ref | Code        | Male connection | Female connection   | Dimensions       | Weight  |
|-----|-------------|-----------------|---------------------|------------------|---------|
| A   | 09003018    | 1/4" SAE        | -                   | 110 x 33 x 25 mm | 0,10 kg |
| B   | 05001047    | 2 x 1/4" SAE    | 1/4" SAE            | -                | -       |
| C   | 05053012001 | -               | 2 x 1/4" SAE        | -                | -       |
| D   | 05053013001 | -               | 3/8" SAE x 1/4" SAE | -                | -       |



### Technical features

|                       |                                                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Displayed units       | Microns (milliTorr), Pascal, millibar, mmHG                                                                                   |
| Vacuum range          | 0 – 25,000 Microns (3330 Pa, 33.3 mBar, 25 mmHg)                                                                              |
| Accuracy vacuum       | ±5% of Reading ± 5 Microns                                                                                                    |
| Vacuum resolution     | 1 Micron and less than 1000 Microns-10 Microns between 1,000 and 10,000 Microns-100 Microns between 10,000 and 25,000 Microns |
| Maximum overpressure  | 35 bar (500 PSI)                                                                                                              |
| Warm-Up time          | instant                                                                                                                       |
| Response time         | instant                                                                                                                       |
| Power supply          | 2 x Alkaline batteries AAA                                                                                                    |
| Battery life          | Up to 100 hours                                                                                                               |
| Operating temperature | -12°C ÷ 50°C                                                                                                                  |
| Connection            | 1/4"SAE M                                                                                                                     |



### Calibration

| Code        | Model                            |
|-------------|----------------------------------|
| 09053027    | Calibration report ref. Accredia |
| 09003018001 | W-VAC-SMART/RT                   |

## iDO - THE 4.0 ROBOT GROUP

NEW

EXCLUSIVE  
INNOVATION

## iDO

## 4.0 digital automatic portable unit

The digital manifold turns into your compact 4.0 Robot. Thanks to its electronics and its large LCD Touchscreen, iDO not only displays information and measurements, but also [manages the various integrated](#) or connected equipment in order to carry out autonomous operations, such as recovery, pressing, vacuum and charge, or cycles of operations, verifying the results with appropriate [test phases and reports](#).

With multiple advantages ranging from time saving to certified quality of the work performed, it is possible to assign tasks or cycles of tasks to the iDO portable unit, with the certainty that they will be carried out, checked and certified through reports. The large touchscreen makes the unit extremely easy to use, while the [interconnection](#) on the Service Portal, accessible via PC and Smartphone, allows remote management and exchange of information in real time.

iDO meets the requirements for Impresa 4.0 benefits



Wi-Fi 4.0  
Ready Interconnection



Transparent integrated  
diagnosis manifold



Large digital control  
touchscreen display



Management of  
PRESSURIZATION and TEST



Management of  
VACUUM and Test



Management of  
CHARGE

AUTOMATIC CYCLES



## iDO

### 4.0 digital automatic portable unit

The iDO range is available in the following versions:

- iDO HFC: in several solutions for HFC (A2L included) with or without integrated vacuum pump.
- iDO ATEX: suitable also for HC (R290, R600).

Unit iDO features:

- Large digital control touchscreen display.
- 2 pressure sensors (Low and High).
- Built-in electronic precision vacuum gauge (mTorr, Pa, mbar,...).
- 3 temperature sensors (Low, High, Ambient), Subcooling and Superheating.
- Compatibility with all K-type temperature probes (2 x TK109 included).
- Built-in and backlit visual diagnosis SPY manifold.
- 35kg removable scale with fittings and adapters for different cylinders.
- Housing for 950cc Nitrogen/Azoidro cylinders and connection for external cylinder.
- Controlled power supply port for activation of the recovery system.
- USB port for data transfer and report.
- Integrated Wi-Fi kit for 4.0 ready Interconnection.
- Wigam Service Portal, accessible via PC and Smartphone for management information exchange and report.
- Refrigerant database that can be updated from the portal.
- Database that can be updated with the charging data of the manufacturers.
- Versions with dual stage 46, 90 or 180 l/min pump, or version without pump if the user already has one.

| Code        | Model   | Vacuum pump    | Packaging dimensions | Weight   |
|-------------|---------|----------------|----------------------|----------|
| 01090035004 | iDO     | Prepared       | 650 x 400 x 380 mm   | 12,80kg  |
| 01090035001 | iDO-46  | RS3-46l/min    | 650 x 400 x 380 mm   | 19,80 kg |
| 01090035002 | iDO-90  | DIP402-90l/min | 650 x 400 x 380 mm   | 21,50 kg |
| 01090035003 | iDO-180 | RS9-180l/min   | 650 x 400 x 380 mm   | 23,00kg  |



### Technical features

|                         |                                              |
|-------------------------|----------------------------------------------|
| Refrigerant             | CFC,HCFC,HFC,HFO -A2L included               |
| Dual stage vacuum pump  | 46, 90,180l/min                              |
| Scale                   | 35 kg                                        |
| Empty range             | 1-350 Pa                                     |
| Charge accuracy         | ±10g <10kg (detachment mode)                 |
| Power supply            | 230V 50/60Hz                                 |
| High/Low hoses          | 2,5m 1/4" SAE with LockValve 1/4"e 5/16" SAE |
| Bearings for cyclinders | 1/4" SAE, 5/16"SAE, 1/2" 16 ACME Sx          |

NEW

4.0  
READY

INCLUDED  
R32



### Automatic functions:



- PRESSURIZATION and TEST to check for leaks
- AUTOMATIC REFRIGERANT RECOVERY MANAGEMENT (recovery system not included)
- VACUUM and VACUUM TEST with rising check
- REFRIGERANT CHARGE internal vehicles database
- USER-ADJUSTABLE AUTOMATIC CYCLES



### Calibration

| Codice   | Modello                    |
|----------|----------------------------|
| 09053054 | Calibration report for iDO |

### INTERCONNECTION: iDO meets the technical requirements for Impresa 4.0 benefits



4.0  
READY

## FOX - DIGITAL MANIFOLD


**FOX**
**DIAGNOSIS**
**N2 TEST**
**FOX and FOX-ONE**

The range of professional 4-ways digital solutions for installation, maintenance and diagnosis that meets the needs of today and tomorrow.

Diagnosis of the system. Measurement of the pressure and temperature parameters, with indication of the vacuum level reached.

Test with nitrogen ( $N_2$ ), with simultaneous evaluation of the pressure variation on the HIGH and LOW side.

Vacuum measurement thanks to the INTEGRATED electronic vacuum gauge.  
Possibility to display all the possible units of measurement for the vacuum (mTorr, micron, Pa, etc...)

Recording on integrated memory of all measured data from internal probes and connected wireless devices.

Quantification and registration of the charged and/or recovered refrigerant with wireless SCALE-ONE.

Analysis and registration of the electrical parameters of the system with wireless clamp meter CLAMP-ONE.

APP for diagnosis, reports and new refrigerants.


**FOX-ONE**
**DIAGNOSIS**
**N2 TEST**
**VACUUM MEASUREMENT**
**INTEGRATED MEMORY**
**REFRIGERANT QUANTIFICATION**
**ANALYSIS OF ELECTRICAL PARAMETERS**
**MANAGEMENT APP**

## ALL IN FOX-ONE

Pressures, temperature, **vacuum**, electrical current and refrigerant charge...  
all in Fox-One.

FOX-ONE manages all the informations of its built-in probes (...Vacuum meter included!) and of the connected wireless instruments, clamp and scale included.

With the **Wigam APP** it is possible to analyze, customize and share reports and records, as well as **manage new refrigerants**. And if your mobile is out of batteries, no problem...it is all in FoxOne (*Integrated memory!*)

EXCLUSIVE  
INNOVATION



High Accuracy built-in  
electronic vacuum gauge



Wireless  
connected Dial

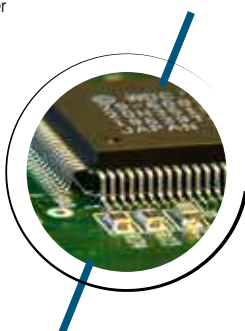


Wireless connected clamp  
meter



FOX-ONE APP  
APP of control, diagnosis and report

Integrated memory



## FOX-ONE - DIGITAL MANIFOLD



- A** Built-in electronic vacuum gauge
- B** Wireless clamp meter (only SC version)
- C** Scale up to 100 Kg, resolution 5 g (only SC version)
- D** Possibility to use all K probes
- E** App for control, diagnosis and report



## Spare parts and accessories

| Ref      | Code     | Model     | Description           | Dimensions         | Weight  |
|----------|----------|-----------|-----------------------|--------------------|---------|
| <b>A</b> | 09013027 | SCALE-ONE | Wireless scale 100 kg | 290 x 290 x 80 mm  | 3,5 kg  |
| <b>B</b> | 09006008 | CLAMP-ONE | Wireless clamp meter  | 260 x 130 x 160 mm | 0,6 kg  |
| <b>C</b> | 14029048 | VP/B8     | Suitcase for Fox      | 360 x 320 x 120 mm | 0,75 kg |

See the CLAMP-ONE features on page 131.



## FOX-ONE

## 4 ways digital manifold

- 4-way piston manifold with 3 x 1/4" SAE connections (LOW-HIGH-REF) and 1 x 3/8" SAE connection (VAC).
- Database with more than 50 refrigerants.
- Possibility to manage new refrigerants simply through Wigam FOXApp.
- 1 ambient temperature probe.
- Integrated data logger.
- High precision built-in electronic vacuum gauge (0-600 Pa).
- 2 temperature probes Type K (Range -99.9 - 200°C), 3 m cable.
- 2 pressure transducers (Range -0.99 - +49.90 bar).
- Max operating pressure 56 bar.
- Class of precision better than 1% FS.
- "ZERO PLUS" recalibration function.
- Temperature range: -99.9 - 400 °C.
- Digital display (with back-lighting).
- Extractable hook to help fixing the manifold in every condition.
- Soft-Touch covering.
- Test with nitrogen (N2), with simultaneous evaluation of the pressure.
- Wireless scale, capacity 0-100 kg, resolution 5g (only SC version).
- Wireless Clamp Meter (only SC version).
- 230V-50/60Hz feeder included



## Calibration

| Code     | Model                                           |
|----------|-------------------------------------------------|
| 09053049 | Calibration report ref. Accredia for Fox-One    |
| 09053050 | Calibration report ref. Accredia for Fox-One/SC |



## Readings displayed

Low pressure side (LOW)  
 High pressure side (HIGH)  
 Vacuum measure (milliTorr, micron, Pa,...)  
 Temperature T1  
 Temperature T2  
 Ambient temperature  
 Refrigerant saturation temperature (LOW)  
 Refrigerant saturation temperature (HIGH)  
 Calculating the temperature difference T2 - T1  
 Subcooling  
 Superheating  
 Refrigerants type





## FOX-ONE-100

Digital manifold in suitcase.

Equipped with:

- 2 probes TK109.

| Code        | Model       | Dimensions         | Weight  |
|-------------|-------------|--------------------|---------|
| 04080009001 | FOX-ONE-100 | 310 x 370 x 130 mm | 2,10 kg |

NEW CONNECTION  
"VAC" 3/8" SAE



## FOX-ONE-300

Digital manifold in suitcase.

Equipped with:

- 2 probes TK109.
- 2 flexible hoses 1500 mm with intermediate valve - blue and red.
- 1 flexible hose 1500 mm with final valve - yellow.
- 1 flexible hose for vacuum IPERVAC 900 mm 3/8" SAE.
- 2 swivel adapter RG180/5-4 - 5/16" SAE F x 1/4" SAE M.

| Code        | Model       | Dimensions         | Weight |
|-------------|-------------|--------------------|--------|
| 04080009003 | FOX-ONE-300 | 310 x 370 x 130 mm | 3,3 kg |

NEW CONNECTION  
"VAC" 3/8" SAE



## FOX-ONE-100/SC

Digital manifold in suitcase.

Equipped with:

- 2 probes TK109
- 1 wireless electronic scale 100 kg.
- 1 wireless clamp meter.

| Code       | Model          | Dimensions         | Weight |
|------------|----------------|--------------------|--------|
| 0408010001 | FOX-ONE-100/SC | 480 x 400 x 130 mm | 6,6 kg |

NEW CONNECTION  
"VAC" 3/8" SAE



## FOX-ONE-300/SC

Digital manifold in suitcase.

Equipped with:

- 2 probes TK109.
- 1 wireless electronic scale 100 kg.
- 1 wireless clamp meter.
- 2 flexible hoses 1500 mm with intermediate valve - blue and red.
- 1 flexible hose 1500 mm with final valve - yellow.
- 1 flexible hose for vacuum IPERVAC 900 mm 3/8" SAE.
- 2 swivel adapter RG180/5-4 - 5/16" F x 1/4" SAE M.

| Code       | Model          | Dimensions         | Weight |
|------------|----------------|--------------------|--------|
| 0408010003 | FOX-ONE-300/SC | 480 x 400 x 130 mm | 7,8 kg |

NEW CONNECTION  
"VAC" 3/8" SAE



## FOX - DIGITAL MANIFOLD

**FOX**
**NEW**

 INCLUDED  
R32

 INCLUDED  
R1234ze

### Reading displayed

Low pressure side (LOW)

High pressure side (HIGH)

Temperature T1

Temperature T2

Ambient temperature

Refrigerant saturation temperature (LOW)

Refrigerant saturation temperature (HIGH)

Calculating the temperature difference T2 -T1

Subcooling

Superheating

Refrigerants type

## FOX

### 4 ways digital manifold

The FOX range is renewed with a new control logic that optimises its ease of use.

The quality and sturdiness guaranteed by the Made in Italy is combined with the possibility of simply recalibrating the pressure transducers using the convenient "ZERO PLUS" function.

- 4-way piston manifold with 3 x 1/4" SAE connections (LOW-HIGH-REF) and 1 x 3/8" SAE connection (VAC).
- Database with more than 50 refrigerants (CFC, HCFC, HFC, Hydrocarbons and HFO).
- 1 ambient temperature probe.
- 2 temperature probes Type K (Range -99.9 ÷ 200°C), 3 m cable.
- 2 pressure transducers (Range -0.99 ÷ +49.90 bar).
- Max operating pressure 56 bar.
- Class of precision better than 1% FS.
- "ZERO PLUS" recalibration function.
- Temperature range: -99.9 ÷ 400 °C.
- Digital display (with back-lighting).
- Extractable hook to help fixing the manifold in every condition.
- Soft-Touch covering.



### Calibration

| Code     | Model                                           |
|----------|-------------------------------------------------|
| 09053049 | Calibration report ref. Accredia for Fox        |
| 09053050 | Calibration report ref. Accredia for Fox-One/SC |



### FOX and FOX-ONE refrigerant list

 R134a  
 R407C  
 R410A  
 R404A  
 R507  
 R152a  
 R290 (Propano)  
 R600a (isobutano)  
 R22

 R502  
 R1234ze  
 R1234yf  
 R407A  
 R407D  
 R407F  
 R407H  
 R32  
 R236fa

 R245fa  
 R417A  
 R422A  
 R422B  
 R422D  
 R424A  
 R426A  
 R427A  
 R428A

 R434A  
 R437A  
 R438A  
 R442A  
 R448A  
 R449A  
 R450A  
 R452A  
 R452B

 R453A  
 R454B  
 R454C  
 R455A  
 R466A  
 R508A  
 R513A  
 R1270

## FOX

### FOX-100

Digital manifold in suitcase.

Equipped with:

- 2 probes TK109.

| Code        | Model   | Dimensions         | Weight  |
|-------------|---------|--------------------|---------|
| 04080001001 | FOX-100 | 310 x 370 x 130 mm | 2,00 kg |

NEW CONNECTION  
"VAC" 3/8" SAE



## FOX

### FOX-300

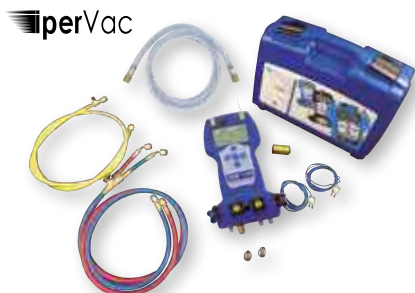
Digital manifold in suitcase.

Equipped with:

- 2 probes TK109.
- 2 flexible hoses 1500 mm with intermediate valve - blue and red.
- 1 flexible hose 1500 mm with final valve.
- 1 flexible hose for vacuum IPERVAC 900 mm 3/8" SAE.
- 2 swivel adapter RG180/5-4 - 5/16" F x 1/4" SAE M.

| Code        | Model   | Dimensions         | Weight  |
|-------------|---------|--------------------|---------|
| 04080001003 | FOX-300 | 310 x 370 x 130 mm | 3,00 kg |

NEW CONNECTION  
"VAC" 3/8" SAE



## FOX

### FOX-400

Digital manifold in suitcase.

Equipped with:

- 2 probes TK109.
- 1 flexible hose 1500 mm with final yellow valve.
- 2 flexible hoses 1500 mm - blue and red.
- 1 flexible hose for vacuum IPERVAC 900 mm 3/8" SAE.
- 1 adapter RG180/5-4 5/16" SAE F x 1/4" SAE M
- 2 LOCK VALVE 1/4" SAE F x 1/4" SAE M.
- 2 LOCK VALVE 5/16" SAE F x 1/4" SAE M.

| Code        | Model   | Dimensions         | Weight  |
|-------------|---------|--------------------|---------|
| 04080001007 | FOX-400 | 310 x 370 x 130 mm | 3,20 kg |

NEW CONNECTION  
"VAC" 3/8" SAE



## Spare parts and accessories

| Ref | Code        | Model       | Description                | Dimensions (mm) | Weight  |
|-----|-------------|-------------|----------------------------|-----------------|---------|
| A   | 09012013    | TK109       | Universal probe            | 100 x 80 x 10   | 0,02 kg |
| B   | 09012037    | TK109-STRIP | Universal probe with strip | 100 x 80 x 10   | 0,03 kg |
| C   | 09012019    | TK104       | Ambient probe              | 380 x 100 x 10  | 0,12 kg |
| D   | 09012020    | TK105       | Surface probe              | 380 x 100 x 10  | 0,14 kg |
| E   | 09012016    | TK106       | Insertion probe            | 380 x 100 x 10  | 0,09 kg |
| F   | 09012017    | TK107       | Clamp-on probe             | 230 x 100 x 10  | 0,16 kg |
| G   | 04111011    | PWR         | Complete piston            | -               | -       |
| H   | 14021013001 | PWKG-L      | LOW knob kit               | -               | -       |
| H   | 14021014001 | PWKG-H      | HIGH knob kit              | -               | -       |
| H   | 14021015001 | PWKG-R      | REF knob kit               | -               | -       |
| H   | 14021016001 | PWKG-V      | VAC knob kit               | -               | -       |
|     | 14029048    | VP/B8       | Suitcase for Fox           | 360 x 320 x 120 | 0,75 kg |





## SPY SERIES - VISUAL DIAGNOSIS MANIFOLD

### The new STANDARD!



### Why?

The information provided to date by the existing manifold on the market is based on pressures and temperatures. Important but incomplete information, since the standard sightglass does not allow us or only partially, to guess the passage of the refrigerant, its phase (liquid or vapour) and its quality.

How many times, after having a problem on a unit, have we questioned?

... what if I could have observed the presence of water or moisture before?

... what if I could have observed the state of the oil and its mixture with the refrigerant?

... what if I could have seen the presence of contaminants in the refrigerant?

The standard sightglass, incorporated in traditional manifolds, does not help us to obtain useful indications in this sense, and consequently do not help us in making a more complete diagnosis about the "health" of the system.



standard sightglass



## How can SPY help us?

The ever-increasing importance of indications on the state of refrigerant and oils has led to design the new SPY WIGAM manifolds.

The innovative SPY diagnostic manifolds, in order to help technicians in daily working, are equipped with a fully transparent central body representing the new frontier of these service equipment.

Here are some of the indications that can be obtained quickly and easily using SPY:

- Clearly show if we are working with refrigerant in the liquid or steam phase.
- Clearly show the presence of contaminants in the refrigerant.
- Show the miscibility state of the refrigerant with oil.



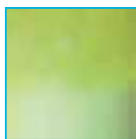
Cleaned refrigerant



Oil and refrigerant with good miscibility



Oil, additives and refrigerant with good miscibility



Bad refrigerant oil miscibility



Refrigerant and additive contaminated by water



Compressor burned

- Combine visual diagnosis with chemical analysis by taking oil samples.

SPY is now available  
also in the 4-ways version  
See pag. 56



Look at SPY VIDEO!



## TRUST YOUR EYES!



## PISTON MANIFOLD



## DIAPHRAGM MANIFOLD



## "PULSE FREE" GAUGES



## OIL FILLED GAUGES



## DRY GAUGES



Read the WIGAM model

| DIAPHRAGM      | PISTON       | GAUGE                   | REFRIGERANT                        | CONNECTIONS  | PRECISION CLASS |
|----------------|--------------|-------------------------|------------------------------------|--------------|-----------------|
| W1L - 1 way LP | PF2 - 2 ways | PF80 - PULSE FREE       | A4 - R410A-R32                     | 4 - 1/4"SAE  | K1 - Class 1    |
| W1H - 1 way HP | PW4 - 4 ways | MS80 - Dry              | A6 - R22-R134a-R404A-R407C         | 5 - 5/16"SAE |                 |
| F2 - 2 ways    |              | ML80 - Liquid           | A2 - R507-R404A-R134a-R407liq      | 6 - 3/8"SAE  |                 |
| W4 - 4 ways    |              | BL60 - Blondelle liquid | A3 - R600a                         |              |                 |
| W5 - 5 ways    |              |                         | D6 - R600a-R290-R1270              |              |                 |
|                |              |                         | D5 - R744                          |              |                 |
|                |              |                         | D9 - R448A-R449A-R452A-R513A       |              |                 |
|                |              |                         | E1 - R404A-R448A-R449A-R134a-R452A |              |                 |

PW4

ML80

A4

5

K1

Piston manifold 4-ways "pulse free", liquid diam gauges. 80, for R410a/R32, connections 5/16"SAE, class 1

## SPY 4-WAYS KIT



### REFRIGERANTS DIALS

A4

R410A-R32

A6

R22-R134a-R404A-R407C



### K-SPY4PFA6-4-GYSS60-LV K-SPY4PFA4-5-GYSS60-LV

4 ways manifold kit SPY series with hoses

Sturdy plastic suitcase containing:

- 1 manifold SPY 4 ways with gauges Ø80mm "Pulse free", Class 1.
- 2 flexible hoses, GY series 1500mm, red and blue.
- 1 flexible hose, GY series 1500mm, yellow, with final valve.
- 1 IPERVAC flexible hose 900mm 3/8" SAE.
- 2 access valves LOCK-VALVE.

| Code     | Model                  | Dial | Connection               |
|----------|------------------------|------|--------------------------|
| 04101135 | K-SPY4PFA6-4-GYSS60-LV | A6   | 3x 1/4"SAE + 1x 3/8"SAE  |
| 04101136 | K-SPY4PFA4-5-GYSS60-LV | A4   | 3x 5/16"SAE + 1x 3/8"SAE |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101135 | 360 x 320 x 120 mm | 2,5 kg |
| 04101136 | 360 x 320 x 120 mm | 2,5 kg |



### K-SPY4PFA6-4 / K-SPY4PFA4-5

4 ways manifold kit SPY series without hoses

Sturdy plastic suitcase containing:

- 1 manifold SPY 4 ways with gauges Ø80mm "Pulse free", Class 1.

| Code     | Model        | Dial | Connection               |
|----------|--------------|------|--------------------------|
| 04101137 | K-SPY4PFA6-4 | A6   | 3x 1/4"SAE + 1x 3/8"SAE  |
| 04101138 | K-SPY4PFA4-5 | A4   | 3x 5/16"SAE + 1x 3/8"SAE |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101137 | 360 x 320 x 120 mm | 1,5 kg |
| 04101138 | 360 x 320 x 120 mm | 1,5 kg |



### Calibration

| Code     | Model                                                      |
|----------|------------------------------------------------------------|
| 09053010 | Calibration report ref. Accredia for 2-4 ways manifold kit |


**REFRIGERANTS DIALS**

|           |           |           |                       |
|-----------|-----------|-----------|-----------------------|
| <b>A4</b> | R410A-R32 | <b>A6</b> | R22-R134a-R404A-R407C |
|-----------|-----------|-----------|-----------------------|

**K-SPY2PFA6-4-GYSS60-LV**  
**K-SPY2PFA4-5-GYSS60-LV**

2 ways manifold kit SPY series with hoses

Sturdy plastic suitcase containing:

- 1 manifold SPY (2 ways), with gauges Ø80mm "Pulse free", Class 1.
- 2 flexible hoses, GY series 1500mm, red and blue.
- 2 flexible hoses, GY series 1500mm, yellow, with final valve.
- 2 access valves LOCK-VALVE.

| Code     | Model                  | Dial      | Connection |
|----------|------------------------|-----------|------------|
| 04101124 | K-SPY2PFA6-4-GYSS60-LV | <b>A6</b> | 1/4" SAE   |
| 04101125 | K-SPY2PFA4-5-GYSS60-LV | <b>A4</b> | 5/16" SAE  |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101124 | 360 x 320 x 120 mm | 2,5 kg |
| 04101125 | 360 x 320 x 120 mm | 2,5 kg |


**K-SPY2PFA6-4 / K-SPY2PFA4-5**

2 ways analysis "transparent" manifold kit SPY series without hoses

Sturdy plastic suitcase containing:

- 1 "transparent" manifold SPY (2 ways), with gauges Ø80mm "Pulse free", Class 1.

| Code     | Model        | Dial      | Connection |
|----------|--------------|-----------|------------|
| 04101133 | K-SPY2PFA6-4 | <b>A6</b> | 1/4" SAE   |
| 04101134 | K-SPY2PFA4-5 | <b>A4</b> | 5/16" SAE  |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101133 | 360 x 320 x 120 mm | 1,5 kg |
| 04101134 | 360 x 320 x 120 mm | 1,5 kg |


**Calibration**

| Code     | Model                                                      |
|----------|------------------------------------------------------------|
| 09053010 | Calibration report ref. Accredia for 2-4 ways manifold kit |

## KIT 4 WAYS

### REFRIGERANTS DIALS

**A4** R410A-R32 **A6** R22-R134a-R404A-R407C

### 4-WAYS MANIFOLD KIT IN CARRYING CASE WITH FLEXIBLE HOSES

Sturdy plastic case containing:

1 pc. 4-ways manifold

3 pcs. flexible hoses 1500 mm with or without ball valve

1 pc. flexible hose 900 mm

On request, the kit may be supplied with any combination



### 4-WAYS WITH DRY GAUGE Ø80 CLASS 1

3 flexible hoses 1500 mm with valve

1 flexible hose 900 mm 3/8" SAE

| Code     | Model            | Dial      | Connections          |
|----------|------------------|-----------|----------------------|
| 04101109 | K-W4MSA6-4-CSA60 | <b>A6</b> | 3x1/4" + 1x3/8" SAE  |
| 04101110 | K-W4MSA4-5-CSA60 | <b>A4</b> | 3x5/16" + 1x3/8" SAE |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101109 | 360 x 320 x 120 mm | 2,5 kg |
| 04101110 | 360 x 320 x 120 mm | 2,5 kg |

**iperVac**



### 4-WAYS WITH "PULSE FREE" GAUGE Ø80 CLASS 1

3 flexible hoses 1500 mm with ball valve.

1 IperVac flexible hose 900 mm 3/8" SAE.

| Code     | Model               | Dial      | Connections          |
|----------|---------------------|-----------|----------------------|
| 04101112 | K-W4PFA6-4-GYSA56V4 | <b>A6</b> | 3x1/4" + 1x3/8" SAE  |
| 04101114 | K-W4PFA4-5-GYSA56V4 | <b>A4</b> | 3x5/16" + 1x3/8" SAE |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101112 | 360 x 320 x 120 mm | 2,5 kg |
| 04101114 | 360 x 320 x 120 mm | 2,5 kg |

**iperVac**



**SUGGESTED  
R32**

### 4 -WAYS PISTON WITH "PULSE FREE" GAUGE Ø80 CLASS 1 WITH 2 LOCK-VALVE

3 flexible hoses, 1500 mm with 2 supplied LOCK-VALVE.

1 IperVac flexible hose 900 mm 3/8" SAE.

| Code     | Model                 | Dial      | Connections          |
|----------|-----------------------|-----------|----------------------|
| 04101122 | K-PW4PFA6-4-GYSS60-LV | <b>A6</b> | 3x1/4" + 1x3/8" SAE  |
| 04101123 | K-PW4PFA4-5-GYSS60-LV | <b>A4</b> | 3x5/16" + 1x3/8" SAE |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101122 | 360 x 320 x 120 mm | 2,5 kg |
| 04101123 | 360 x 320 x 120 mm | 2,5 kg |



### Calibration

| Code     | Model                                                      |
|----------|------------------------------------------------------------|
| 09053010 | Calibration report ref. Accredia for 2-4 ways manifold kit |

### PLASTIC CASE FOR MANIFOLDS

| Code     | Model  | Dimensions         | Weight  |
|----------|--------|--------------------|---------|
| 14029060 | VP/B13 | 360 x 320 x 120 mm | 0,75 kg |

**REFRIGERANTS DIALS**

|           |           |           |                       |
|-----------|-----------|-----------|-----------------------|
| <b>A4</b> | R410A-R32 | <b>A6</b> | R22-R134a-R404A-R407C |
|-----------|-----------|-----------|-----------------------|

**2-WAYS MANIFOLD KIT IN CARRYING CASE WITH FLEXIBLE HOSES**

Sturdy plastic case containing:

1 pc. 2-ways manifold

3 pcs. flexible hoses 1500 mm with or without ball valve

On request, the kit may be supplied with any combination


**2-WAYS WITH DRY GAUGE Ø80 CLASS 1**

Flexible hoses 1500 mm without ball valve.

| Code     | Model            | Dial      | Connections |
|----------|------------------|-----------|-------------|
| 04101101 | K-F2MSA6-4-CSA60 | <b>A6</b> | 3x1/4"      |
| 04101106 | K-F2MSA4-5-CSA60 | <b>A4</b> | 3x5/16"     |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101101 | 360 x 320 x 120 mm | 2,5 kg |
| 04101106 | 360 x 320 x 120 mm | 2,5 kg |

**2-WAYS WITH "PULSE FREE" GAUGE Ø80 CLASS 1**

Flexible hoses 1500 mm with ball valve.

| Code     | Model               | Dial      | Connections |
|----------|---------------------|-----------|-------------|
| 04101107 | K-F2PFA6-4-GYSA56V4 | <b>A6</b> | 3x1/4"      |
| 04101108 | K-F2PFA4-5-GYSA56V4 | <b>A4</b> | 3x5/16"     |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101107 | 360 x 320 x 120 mm | 2,5 kg |
| 04101108 | 360 x 320 x 120 mm | 2,5 kg |


**2-WAYS PISTON WITH "PULSE FREE" GAUGE Ø80 CLASS 1 WITH 2 LOCK VALVE**

Blu and red flexible hoses, 1500 mm with 2 supplied LOCK-VALVE.

Yellow flexible hose with ball valve.

| Code     | Model                 | Dial      | Connections |
|----------|-----------------------|-----------|-------------|
| 04101120 | K-PF2PFA6-4-GYSS60-LV | <b>A6</b> | 3x1/4"      |
| 04101121 | K-PF2PFA4-5-GYSS60-LV | <b>A4</b> | 3x5/16"     |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101120 | 360 x 320 x 120 mm | 2,5 kg |
| 04101121 | 360 x 320 x 120 mm | 2,5 kg |


**PLASTIC CASE FOR MANIFOLDS**

| Code     | Model  | Dimensions         | Weight  |
|----------|--------|--------------------|---------|
| 14029060 | VP/B13 | 360 x 320 x 120 mm | 0,75 kg |



**Calibration**

| Code     | Model                                                      |
|----------|------------------------------------------------------------|
| 09053010 | Calibration report ref. Accredia for 2-4-ways manifold kit |

## 4 WAYS PISTON

### REFRIGERANTS DIALS

**A3** R600a **A4** R410A-R32 **A6** R22-R134a-R404A-R407C **D6** R600a-R290-R1270 **D9** R448A-R449A-R452A-R513A

On request with different refrigerants scales and diameters



### WITH PRESSURE GAUGES Ø80 CLASS 1 "PULSE-FREE" WITH REGULATION SCREW

| Code     | Model           | Dial      | Connections              | Dimensions        | Weight |
|----------|-----------------|-----------|--------------------------|-------------------|--------|
| 04024040 | PW4PF80/A3/4/K1 | <b>A3</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |
| 04024024 | PW4PF80/A4/5/K1 | <b>A4</b> | 3x5/16" SAE + 1x3/8" SAE | 240 x 220 x 70 mm | 0,9 kg |
| 04024025 | PW4PF80/A6/4/K1 | <b>A6</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |
| 04024051 | PW4PF80/D6/4/K1 | <b>D6</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |
| 04024053 | PW4PF80/D9/4/K1 | <b>D9</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |



### WITH PRESSURE GAUGES Ø80 CLASS 1 DRY WITH REGULATION SCREW

| Code     | Model           | Dial      | Connections              | Dimensions        | Weight |
|----------|-----------------|-----------|--------------------------|-------------------|--------|
| 04004064 | PW4MS80/A4/5/K1 | <b>A4</b> | 3x5/16" SAE + 1x3/8" SAE | 240 x 220 x 70 mm | 0,9 kg |
| 04004058 | PW4MS80/A6/4/K1 | <b>A6</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |



### WITH PRESSURE GAUGES Ø80 CLASS 1 OIL-FILLED WITH REGULATION SCREW

| Code     | Model           | Dial      | Connections              | Dimensions        | Weight |
|----------|-----------------|-----------|--------------------------|-------------------|--------|
| 04024038 | PW4ML80/A4/5/K1 | <b>A4</b> | 3x5/16" SAE + 1x3/8" SAE | 240 x 220 x 70 mm | 1,1 kg |
| 04024043 | PW4ML80/A6/4/K1 | <b>A6</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 1,1kg  |
| 04024039 | PW4ML80/D6/4/K1 | <b>D6</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 1,1kg  |



### WITH PRESSURE GAUGES Ø60 CLASS 1 OIL-FILLED WITH REGULATION SCREW - BLONDELLE

| Code     | Model           | Dial      | Connections              | Dimensions        | Weight |
|----------|-----------------|-----------|--------------------------|-------------------|--------|
| 04024037 | PW4BL60/A4/5/K1 | <b>A4</b> | 3x5/16" SAE + 1x3/8" SAE | 240 x 220 x 70 mm | 1,1 kg |
| 04024032 | PW4BL60/A6/4/K1 | <b>A6</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 1,1kg  |



### Calibration

| Code     | Model                                                      |
|----------|------------------------------------------------------------|
| 09053010 | Calibration report ref. Accredia for 2-4-ways manifold kit |

### WITHOUT PRESSURE GAUGES

| Code     | Model   | Connections              |
|----------|---------|--------------------------|
| 04044014 | PW4SM/4 | 3X1/4" SAE + 1X3/8" SAE  |
| 04044017 | PW4SM/5 | 3X5/16" SAE + 1X3/8" SAE |

### REFRIGERANTS DIALS

|           |       |           |           |           |                       |           |      |           |                  |           |                         |
|-----------|-------|-----------|-----------|-----------|-----------------------|-----------|------|-----------|------------------|-----------|-------------------------|
| <b>A3</b> | R600a | <b>A4</b> | R410A-R32 | <b>A6</b> | R22-R134a-R404A-R407C | <b>D5</b> | R744 | <b>D6</b> | R600a-R290-R1270 | <b>D9</b> | R448A-R449A-R452A-R513A |
|-----------|-------|-----------|-----------|-----------|-----------------------|-----------|------|-----------|------------------|-----------|-------------------------|

On request with different refrigerants scales and diameters

### WITH PRESSURE GAUGES Ø80 CLASS 1 "PULSE-FREE" WITH REGULATION SCREW

| Code     | Model           | Dial      | Connections | Dimensions        | Weight  |
|----------|-----------------|-----------|-------------|-------------------|---------|
| 04002070 | PF2PF80/A3/4/K1 | <b>A3</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |
| 04022031 | PF2PF80/A4/5/K1 | <b>A4</b> | 3x5/16" SAE | 240 x 220 x 70 mm | 0,85 kg |
| 04022032 | PF2PF80/A6/4/K1 | <b>A6</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |
| 04022074 | PF2PF80/D6/4/K1 | <b>D6</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |
| 04022076 | PF2PF80/D9/4/K1 | <b>D9</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |



### WITH PRESSURE GAUGES Ø80 CLASS 1 DRY WITH REGULATION SCREW

| Code     | Model           | Dial      | Connections | Dimensions        | Weight  |
|----------|-----------------|-----------|-------------|-------------------|---------|
| 04002063 | PF2MS80/A4/5/K1 | <b>A4</b> | 3x5/16" SAE | 240 x 220 x 70 mm | 0,85 kg |
| 04002050 | PF2MS80/A6/4/K1 | <b>A6</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |



### WITH PRESSURE GAUGES Ø80 CLASS 1 OIL-FILLED WITH REGULATION SCREW

| Code     | Model           | Dial      | Connections | Dimensions        | Weight  |
|----------|-----------------|-----------|-------------|-------------------|---------|
| 04022061 | PF2ML80/A4/5/K1 | <b>A4</b> | 3x5/16" SAE | 240 x 220 x 70 mm | 0,99 kg |
| 04022063 | PF2ML80/A6/4/K1 | <b>A6</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,99 kg |
| 04022062 | PF2ML80/D6/4/K1 | <b>D6</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,99 kg |
| 04022060 | PF2ML80/D5/4/K1 | <b>D5</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,99 kg |



### WITH PRESSURE GAUGES Ø60 CLASS 1 OIL-FILLED WITH REGULATION SCREW - BLONDELLE

| Code     | Model           | Dial      | Connections | Dimensions        | Weight  |
|----------|-----------------|-----------|-------------|-------------------|---------|
| 04022054 | PF2BL60/A4/5/K1 | <b>A4</b> | 3x5/16" SAE | 240 x 220 x 70 mm | 0,85 kg |
| 04022039 | PF2BL60/A6/4/K1 | <b>A6</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |



### WITHOUT PRESSURE GAUGES

| Code     | Model   | Connections |
|----------|---------|-------------|
| 04042013 | PF2SM/4 | 3x1/4" SAE  |
| 04042016 | PF2SM/5 | 3x5/16" SAE |



Calibration

| Code     | Model                                                      |
|----------|------------------------------------------------------------|
| 09053010 | Calibration report ref. Accredia for 2-4-ways manifold kit |

## 4 WAYS

### REFRIGERANTS DIALS

**A3** R600a **A4** R410A-R32 **A6** R22-R134a-R404A-R407C **D6** R600a-R290-R1270 **D9** R448A-R449A-R452A-R513A

On request with different refrigerants scales and diameters



### WITH PRESSURE GAUGES Ø80 CLASS 1 "PULSE-FREE" WITH REGULATION SCREW

| Code     | Model          | Dial      | Connections              | Dimensions        | Weight |
|----------|----------------|-----------|--------------------------|-------------------|--------|
| 04024042 | W4PF80/A3/4/K1 | <b>A3</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |
| 04024007 | W4PF80/A4/5/K1 | <b>A4</b> | 3x5/16" SAE + 1x3/8" SAE | 240 x 220 x 70 mm | 0,9 kg |
| 04024008 | W4PF80/A6/4/K1 | <b>A6</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |
| 04024052 | W4PF80/D6/4/K1 | <b>D6</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |
| 04024054 | W4PF80/D9/4/K1 | <b>D9</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |



### WITH PRESSURE GAUGES Ø80 CLASS 1 DRY WITH REGULATION SCREW

| Code     | Model          | Dial      | Connections              | Dimensions        | Weight |
|----------|----------------|-----------|--------------------------|-------------------|--------|
| 04004059 | W4MS80/A4/5/K1 | <b>A4</b> | 3x5/16" SAE + 1x3/8" SAE | 240 x 220 x 70 mm | 0,9 kg |
| 04004039 | W4MS80/A6/4/K1 | <b>A6</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |



### WITH PRESSURE GAUGES Ø60 CLASS 1 OIL-FILLED WITH REGULATION SCREW - BLONDELLE

| Code     | Model          | Dial      | Connections              | Dimensions        | Weight |
|----------|----------------|-----------|--------------------------|-------------------|--------|
| 04024036 | W4BL60/A4/5/K1 | <b>A4</b> | 3x5/16" SAE + 1x3/8" SAE | 240 x 220 x 70 mm | 0,9 kg |
| 04024020 | W4BL60/A6/4/K1 | <b>A6</b> | 3x1/4" SAE + 1x3/8" SAE  | 240 x 220 x 70 mm | 0,9 kg |



### Calibration

| Code     | Model                                                      |
|----------|------------------------------------------------------------|
| 09053010 | Calibration report ref. Accredia for 2-4-ways manifold kit |

### WITHOUT PRESSURE GAUGES

| Code     | Model  | Connections              |
|----------|--------|--------------------------|
| 04044003 | W4SM/4 | 3x1/4" SAE + 1x3/8" SAE  |
| 04044010 | W4SM/5 | 3x5/16" SAE + 1x3/8" SAE |

**REFRIGERANTS DIALS**

|           |       |           |           |           |                       |           |                  |           |                         |
|-----------|-------|-----------|-----------|-----------|-----------------------|-----------|------------------|-----------|-------------------------|
| <b>A3</b> | R600a | <b>A4</b> | R410A-R32 | <b>A6</b> | R22-R134a-R404A-R407C | <b>D6</b> | R600a-R290-R1270 | <b>D9</b> | R448A-R449A-R452A-R513A |
|-----------|-------|-----------|-----------|-----------|-----------------------|-----------|------------------|-----------|-------------------------|

On request with different refrigerants scales and diameters

**WITH PRESSURE GAUGES Ø80 CLASS 1 "PULSE-FREE"  
WITH REGULATION SCREW**

| Code     | Model          | Dial      | Connections | Dimensions        | Weight  |
|----------|----------------|-----------|-------------|-------------------|---------|
| 04002071 | F2PF80/A3/4/K1 | <b>A3</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |
| 04022006 | F2PF80/A4/5/K1 | <b>A4</b> | 3x5/16" SAE | 240 x 220 x 70 mm | 0,85 kg |
| 04022007 | F2PF80/A6/4/K1 | <b>A6</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |
| 04022075 | F2PF80/D6/4/K1 | <b>D6</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |
| 04022077 | F2PF80/D9/4/K1 | <b>D9</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |


**WITH PRESSURE GAUGES Ø80 CLASS 1 DRY  
WITH REGULATION SCREW**

| Code     | Model          | Dial      | Connections | Dimensions        | Weight  |
|----------|----------------|-----------|-------------|-------------------|---------|
| 04002033 | F2MS80/A4/5/K1 | <b>A4</b> | 3x5/16" SAE | 240 x 220 x 70 mm | 0,85 kg |
| 04002032 | F2MS80/A6/4/K1 | <b>A6</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |


**WITH PRESSURE GAUGES Ø60 CLASS 1 OIL-FILLED  
WITH REGULATION SCREW - BLONDELLE**

| Code     | Model          | Dial      | Connections | Dimensions        | Weight  |
|----------|----------------|-----------|-------------|-------------------|---------|
| 04022053 | F2BL60/A4/5/K1 | <b>A4</b> | 3x5/16" SAE | 240 x 220 x 70 mm | 0,85 kg |
| 04022025 | F2BL60/A6/4/K1 | <b>A6</b> | 3x1/4" SAE  | 240 x 220 x 70 mm | 0,85 kg |


**WITHOUT PRESSURE GAUGES**

| Code     | Model  | Connections |
|----------|--------|-------------|
| 04042001 | F2SM/4 | 3x1/4" SAE  |
| 04042005 | F2SM/5 | 3x5/16" SAE |


**Calibration**

| Code     | Model                                                      |
|----------|------------------------------------------------------------|
| 09053010 | Calibration report ref. Accredia for 2-4-ways manifold kit |

## 1 WAY

## REFRIGERANTS DIALS

A4 R410A-R32

A6 R22-R134a-R404A-R407C

D6 R600a-R290-R1270

D9

R448A-R449A-R452A-R513A


**WITH PRESSURE GAUGE Ø80 CLASS 1 "PULSE-FREE"  
WITH REGULATION SCREW**

| Code     | Model           | Dial | Connections | Pressure MPa | Dimensions        | Weight |
|----------|-----------------|------|-------------|--------------|-------------------|--------|
| 04021005 | W1LPF80/A4/5/K1 | A4   | 2x5/16" SAE | -0,1 ÷ 3,8   | 240 x 150 x 55 mm | 0,4 kg |
| 04021006 | W1LPF80/A6/4/K1 | A6   | 2x1/4"SAE   | -0,1 ÷ 1,5   | 240 x 150 x 55 mm | 0,4 kg |
| 04021012 | W1HPF80/A4/5/K1 | A4   | 2x5/16" SAE | -0,1 ÷ 5,3   | 240 x 150 x 55 mm | 0,4 kg |
| 04021013 | W1HPF80/A6/4/K1 | A6   | 2x1/4"SAE   | -0,1 ÷ 3,5   | 240 x 150 x 55 mm | 0,4 kg |
| 04021074 | W1LPF80/D6/4/K1 | D6   | 2x1/4"SAE   | -0,1 ÷ 1,8   | 240 x 150 x 55 mm | 0,4 kg |
| 04021075 | W1HPF80/D6/4/K1 | D6   | 2x1/4"SAE   | -0,1 ÷ 3,8   | 240 x 150 x 55 mm | 0,4 kg |
| 04021076 | W1LPF80/D9/4/K1 | D9   | 2x1/4"SAE   | -0,1 ÷ 1,8   | 240 x 150 x 55 mm | 0,4 kg |
| 04021077 | W1HPF80/D9/4/K1 | D9   | 2x1/4"SAE   | -0,1 ÷ 3,8   | 240 x 150 x 55 mm | 0,4 kg |


**WITH PRESSURE GAUGE Ø80 CLASS 1 DRY  
WITH REGULATION SCREW**

| Codice   | Modello         | Scala | Attacchi    | Pressioni MPa | Dimensioni        | Peso   |
|----------|-----------------|-------|-------------|---------------|-------------------|--------|
| 04001076 | W1LMS80/A4/5/K1 | A4    | 2x5/16" SAE | -0,1 ÷ 3,8    | 240 x 150 x 55 mm | 0,4 kg |
| 04001047 | W1LMS80/A6/4/K1 | A6    | 2x1/4"SAE   | -0,1 ÷ 1,5    | 240 x 150 x 55 mm | 0,4 kg |
| 04001077 | W1HMS80/A4/5/K1 | A4    | 2x5/16" SAE | -0,1 ÷ 5,3    | 240 x 150 x 55 mm | 0,4 kg |
| 04001048 | W1HMS80/A6/4/K1 | A6    | 2x1/4"SAE   | -0,1 ÷ 3,5    | 240 x 150 x 55 mm | 0,4 kg |


**WITH PRESSURE GAUGE Ø80 CLASS 1 OIL FILLED  
WITH REGULATION SCREW**

| Codice   | Modello         | Scala | Attacchi    | Pressioni MPa | Dimensioni        | Peso   |
|----------|-----------------|-------|-------------|---------------|-------------------|--------|
| 04001078 | W1LML80/A4/5/K1 | A4    | 2x5/16" SAE | -0,1 ÷ 3,8    | 240 x 150 x 55 mm | 0,5 kg |
| 04001079 | W1LML80/A6/4/K1 | A6    | 2x1/4"SAE   | -0,1 ÷ 1,5    | 240 x 150 x 55 mm | 0,5 kg |
| 04001080 | W1HML80/A4/5/K1 | A4    | 2x5/16" SAE | -0,1 ÷ 5,3    | 240 x 150 x 55 mm | 0,5 kg |
| 04001081 | W1HML80/A6/4/K1 | A6    | 2x1/4"SAE   | -0,1 ÷ 3,5    | 240 x 150 x 55 mm | 0,5 kg |


**WITH PRESSURE GAUGE Ø60 CLASS 1 OIL FILLED  
WITH REGULATION SCREW - BLONDELLE**

| Codice   | Modello         | Scala | Attacchi  | Pressioni MPa | Dimensioni        | Peso   |
|----------|-----------------|-------|-----------|---------------|-------------------|--------|
| 04021036 | W1LBL60/A6/4/K1 | A6    | 2x1/4"SAE | -0,1 ÷ 1,5    | 240 x 150 x 55 mm | 0,4 kg |
| 04021035 | W1HBL60/A6/4/K1 | A6    | 2x1/4"SAE | -0,1 ÷ 1,5    | 240 x 150 x 55 mm | 0,4 kg |

Available on request with A4 scale (R410A-R32).



## Calibration

| Code     | Model                                                         |
|----------|---------------------------------------------------------------|
| 09053033 | Rapporto Calibratio Ref Accredia per gruppi manometrici 1 way |

1 MPa=10 bar

## WITHOUT PRESSURE GAUGES

| Code     | Model   | Connections | Color |
|----------|---------|-------------|-------|
| 04041001 | W1LSM/4 | 2X1/4" SAE  | Blue  |
| 04041011 | W1LSM/5 | 2X5/16" SAE | Blue  |
| 04041002 | W1HSM/4 | 2X1/4" SAE  | Red   |
| 04041012 | W1HSM/5 | 2X5/16" SAE | Red   |

## REFRIGERANTS DIALS

**A4** R410A-R32 **A6** R22-R134a-R404A-R407C

## WITH PRESSURE GAUGES Ø80 CLASS 1 "PULSE-FREE" WITH REGULATION SCREW

| Code     | Model          | Dial      | Connections             | Dimensions         | Weight |
|----------|----------------|-----------|-------------------------|--------------------|--------|
| 04025006 | W5PF80/A4/5/K1 | <b>A4</b> | 3x5/16"SAE + 1x3/8" SAE | 340 x 230 x 130 mm | 1,3 kg |
| 04025007 | W5PF80/A6/4/K1 | <b>A6</b> | 3x1/4"SAE + 1x3/8" SAE  | 340 x 230 x 130 mm | 1,3 kg |



## Calibration

| Code     | Model                                                    |
|----------|----------------------------------------------------------|
| 09053039 | Calibration report ref. Accredia for 5-ways manifold kit |

## WITHOUT PRESSURE GAUGES

| Code     | Model  | Connections                   |
|----------|--------|-------------------------------|
| 04045002 | W5SM/4 | 3x1/4" SAE + 1x3/8" SAE       |
| 04045003 | W5SM/6 | 4x3/8" SAE                    |
| 04045004 | W5SM/A | 3x1/2" - 16 ACME + 1x3/8" SAE |
| 04045008 | W5SM/5 | 4x5/16" SAE                   |

## PLASTIC CASE FOR MANIFOLDS

Suitable for 1, 2, 4 ways manifolds.

| Code     | Model  | Dimensions         | Weight  |
|----------|--------|--------------------|---------|
| 14029060 | VP/B13 | 360 x 320 x 120 mm | 0,75 kg |



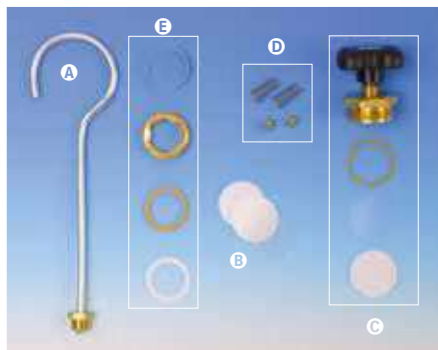
## Spare parts for piston manifolds

| Ref      | Code        | Model  | Description     |
|----------|-------------|--------|-----------------|
| <b>A</b> | 04111011    | PWP    | Complete piston |
| <b>B</b> | 14021013001 | PWKG-L | LOW snob kit    |
| <b>B</b> | 14021014001 | PWKG-H | HIGH snob kit   |
| <b>B</b> | 14021015001 | PWKG-R | REF snob kit    |
| <b>B</b> | 14021016001 | PWKG-V | VAC snob kit    |



## Spare parts for diaphragm manifolds

| Ref      | Code        | Model   | Description              |
|----------|-------------|---------|--------------------------|
| <b>A</b> | 04110011    | W004    | Hook for manifolds       |
| <b>B</b> | 14020011001 | WKG 04  | Kit of gaskets for knobs |
| <b>C</b> | 14021001001 | WKG07 H | HIGH snob kit            |
| <b>C</b> | 14021002001 | WKG07 L | LOW snob kit             |
| <b>C</b> | 14021003001 | WKG07 V | VAC snob kit             |
| <b>C</b> | 14021004001 | WKG07 R | REF snob kit             |
| <b>D</b> | 14020118001 | WKG 05  | Spring and brass kit     |
| <b>E</b> | 14020119001 | WKG 06  | Complete sightglass kit  |



## PRESSURE GAUGES

### REFRIGERANTS DIALS

**A3** R600a **A4** R410A-R32 **A6** R22-R134a-R404A-R407C **D5** R744 **D6** R600a-R290-R1270 **D9** R448A-R449A-R452A-R513A

On request with different refrigerants scales and diameters

### "PULSE-FREE" PRESSURE GAUGES Ø80 CLASS 1 RADIAL CONNECTION WITH REGULATION SCREW



| Code     | Model           | Dial | Connections | Pressure MPa | Dimensions       | Weight |
|----------|-----------------|------|-------------|--------------|------------------|--------|
| 07121008 | PF80/3R1/A3/K1  | A3   | 1/8" NPT    | -0,1 ÷ 0,3   | 100 x 90 x 40 mm | 0,2 kg |
| 07121018 | PF80/9R1/A3/K1  | A3   | 1/8" NPT    | -0,1 ÷ 1,0   | 100 x 90 x 40 mm | 0,2 kg |
| 07121001 | PF80/38R1/A4/K1 | A4   | 1/8" NPT    | -0,1 ÷ 3,8   | 100 x 90 x 40 mm | 0,2 kg |
| 07121002 | PF80/53R1/A4/K1 | A4   | 1/8" NPT    | -0,1 ÷ 5,3   | 100 x 90 x 40 mm | 0,2 kg |
| 07121012 | PF80/15R1/A6/K1 | A6   | 1/8" NPT    | -0,1 ÷ 1,5   | 100 x 90 x 40 mm | 0,2 kg |
| 07121013 | PF80/35R1/A6/K1 | A6   | 1/8" NPT    | -0,1 ÷ 3,5   | 100 x 90 x 40 mm | 0,2 kg |
| 07121024 | PF80/18R1/D6/K1 | D6   | 1/8" NPT    | -0,1 ÷ 1,8   | 100 x 90 x 40 mm | 0,2 kg |
| 07121025 | PF80/38R1/D6/K1 | D6   | 1/8" NPT    | -0,1 ÷ 3,8   | 100 x 90 x 40 mm | 0,2 kg |
| 07121026 | PF80/18R1/D9/K1 | D9   | 1/8" NPT    | -0,1 ÷ 1,8   | 100 x 90 x 40 mm | 0,2 kg |
| 07121027 | PF80/38R1/D9/K1 | D9   | 1/8" NPT    | -0,1 ÷ 3,8   | 100 x 90 x 40 mm | 0,2 kg |

### DRY PRESSURE GAUGES Ø80 CLASS 1



| Code     | Model           | Dial | Connections | Pressure MPa | Dimensions       | Weight |
|----------|-----------------|------|-------------|--------------|------------------|--------|
| 07101005 | MS80/38R1/A4/K1 | A4   | 1/8" NPT    | -0,1 ÷ 3,8   | 100 x 90 x 40 mm | 0,2 kg |
| 07101006 | MS80/53R1/A4/K1 | A4   | 1/8" NPT    | -0,1 ÷ 5,3   | 100 x 90 x 40 mm | 0,2 kg |
| 07101001 | MS80/15R1/A6/K1 | A6   | 1/8" NPT    | -0,1 ÷ 1,5   | 100 x 90 x 40 mm | 0,2 kg |
| 07101002 | MS80/35R1/A6/K1 | A6   | 1/8" NPT    | -0,1 ÷ 3,5   | 100 x 90 x 40 mm | 0,2 kg |

### PRESSURE GAUGES Ø80 CLASS 1 OIL-FILLED



| Code     | Model            | Dial | Connections | Pressure MPa | Dimensions       | Weight |
|----------|------------------|------|-------------|--------------|------------------|--------|
| 07113005 | ML80/38R1/A4/K1  | A4   | 1/8" NPT    | -0,1 ÷ 3,8   | 100 x 90 x 40 mm | 0,3 kg |
| 07113006 | ML80/53R1/A4/K1  | A4   | 1/8" NPT    | -0,1 ÷ 5,3   | 100 x 90 x 40 mm | 0,3 kg |
| 07113003 | ML80/15R1/A6/K1  | A6   | 1/8" NPT    | -0,1 ÷ 1,5   | 100 x 90 x 40 mm | 0,3 kg |
| 07113004 | ML80/35R1/A6/K1  | A6   | 1/8" NPT    | -0,1 ÷ 3,5   | 100 x 90 x 40 mm | 0,3 kg |
| 07113007 | ML80/18R1/D6/K1  | D6   | 1/8" NPT    | -0,1 ÷ 1,8   | 100 x 90 x 40 mm | 0,3 kg |
| 07113008 | ML80/38R1/D6/K1  | D6   | 1/8" NPT    | -0,1 ÷ 3,8   | 100 x 90 x 40 mm | 0,3 kg |
| 07113001 | ML80/100R1/D5/K1 | D5   | 1/8" NPT    | -0,1 ÷ 10    | 100 x 90 x 40 mm | 0,3 kg |
| 07113002 | ML80/160R1/D5/K1 | D5   | 1/8" NPT    | -0,1 ÷ 16    | 100 x 90 x 40 mm | 0,3 kg |

### PRESSURE GAUGES Ø60 CLASS 1 OIL-FILLED



| Code     | Model           | Dial | Connections | Pressure MPa | Dimensions       | Weight |
|----------|-----------------|------|-------------|--------------|------------------|--------|
| 07131032 | BL60/20R1/A4/K1 | A4   | 1/8" NPT    | -0,1 ÷ 2,0   | 125 x 95 x 40 mm | 0,3 kg |
| 07131033 | BL60/45R1/A4/K1 | A4   | 1/8" NPT    | -0,1 ÷ 4,5   | 125 x 95 x 40 mm | 0,3 kg |
| 07131012 | BL60/10R1/A6/K1 | A6   | 1/8" NPT    | -0,1 ÷ 1,0   | 125 x 95 x 40 mm | 0,3 kg |
| 07131013 | BL60/30R1/A6/K1 | A6   | 1/8" NPT    | -0,1 ÷ 3,0   | 125 x 95 x 40 mm | 0,3 kg |

### PRESSURE GAUGES Ø60 CLASS 1 OIL-FILLED



| Code     | Model           | Dial | Connections | Pressure MPa | Dimensions       | Weight |
|----------|-----------------|------|-------------|--------------|------------------|--------|
| 07131016 | BL60/10C4/A6/K1 | A6   | 1/4" SAE    | -0,1 ÷ 1,0   | 125 x 95 x 40 mm | 0,3 kg |
| 07131017 | BL60/30C4/A6/K1 | A6   | 1/4" SAE    | -0,1 ÷ 3,0   | 125 x 95 x 40 mm | 0,3 kg |

## REFRIGERANTS DIALS

|           |                        |           |           |           |                       |           |      |           |                               |
|-----------|------------------------|-----------|-----------|-----------|-----------------------|-----------|------|-----------|-------------------------------|
| <b>A2</b> | R507-R404A-R134a-R407C | <b>A4</b> | R410A-R32 | <b>A8</b> | R22-R404A-R134a-R407C | <b>D5</b> | R744 | <b>E1</b> | R404A-R448A-R449A-R134A-R452A |
|-----------|------------------------|-----------|-----------|-----------|-----------------------|-----------|------|-----------|-------------------------------|

On request with different refrigerants scales and diameters

## PRESSURE GAUGES Ø80 CLASS 1 OIL-FILLED

Rear connection mounting bracket and stainless steel case

| Code     | Model             | Dial      | Connections | Pressure MPa | Dimensions      | Weight |
|----------|-------------------|-----------|-------------|--------------|-----------------|--------|
| 07113009 | ML80/18C4S/A2/K1  | <b>A2</b> | 1/4" SAE    | -0,1 ÷ 1,8   | 90 x 90 x 70 mm | 0,3 kg |
| 07113010 | ML80/38C4S/A2/K1  | <b>A2</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 90 x 90 x 70 mm | 0,3 kg |
| 07113012 | ML80/38C4S/A4/K1  | <b>A4</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 90 x 90 x 70 mm | 0,3 kg |
| 07113013 | ML80/53C4S/A4/K1  | <b>A4</b> | 1/4" SAE    | -0,1 ÷ 5,3   | 90 x 90 x 70 mm | 0,3 kg |
| 07113014 | ML80/100C4S/D5/K1 | <b>D5</b> | 1/4" SAE    | -0,1 ÷ 10    | 90 x 90 x 70 mm | 0,3 kg |
| 07113015 | ML80/160C4S/D5/K1 | <b>D5</b> | 1/4" SAE    | 0,1 ÷ 16     | 90 x 90 x 70 mm | 0,3 kg |
| 07113011 | ML80/18C4S/U/K1   |           | 1/4" SAE    | -0,1 ÷ 1,8   | 90 x 90 x 70 mm | 0,3 kg |



## PRESSURE GAUGES Ø60 VCLASS 1.6 OIL-FILLED

Rear connection mounting bracket and stainless steel case

| Code     | Model         | Dial      | Connections | Pressure MPa | Dimensions      | Weight |
|----------|---------------|-----------|-------------|--------------|-----------------|--------|
| 07011015 | ML60/18C4S/A8 | <b>A8</b> | 1/4" SAE    | -0,1 ÷ 1,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011016 | ML60/38C4S/A8 | <b>A8</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011040 | ML60/38C4S/A4 | <b>A4</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011041 | ML60/53C4S/A4 | <b>A4</b> | 1/4" SAE    | -0,1 ÷ 5,3   | 80 x 80 x 65 mm | 0,3 kg |
| 07011056 | ML60/18C4S/E1 | <b>E1</b> | 1/4" SAE    | -0,1 ÷ 1,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011057 | ML60/38C4S/E1 | <b>E1</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011017 | ML60/18C4S/U  |           | 1/4" SAE    | -0,1 ÷ 1,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011052 | ML60/38C4S/U  |           | 1/4" SAE    | -0,1 ÷ 3,8   | 80 x 80 x 65 mm | 0,3 kg |



## PRESSURE GAUGES Ø60 CLASS 1.6 OIL-FILLED

Rear connection mounting flange and stainless steel case

| Code     | Model          | Dial      | Connections | Pressure MPa | Dimensions      | Weight |
|----------|----------------|-----------|-------------|--------------|-----------------|--------|
| 07011018 | ML60/18C4FA/A8 | <b>A8</b> | 1/4" SAE    | -0,1 ÷ 1,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011019 | ML60/38C4FA/A8 | <b>A8</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011046 | ML60/38C4FA/A4 | <b>A4</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011047 | ML60/53C4FA/A4 | <b>A4</b> | 1/4" SAE    | -0,1 ÷ 5,3   | 80 x 80 x 65 mm | 0,3 kg |
| 07011054 | ML60/18C4FA/E1 | <b>E1</b> | 1/4" SAE    | -0,1 ÷ 1,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011055 | ML60/38C4FA/E1 | <b>E1</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011020 | ML60/18C4FA/U  |           | 1/4" SAE    | -0,1 ÷ 1,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011053 | ML60/38C4FA/U  |           | 1/4" SAE    | -0,1 ÷ 3,8   | 80 x 80 x 65 mm | 0,3 kg |



## PRESSURE GAUGES Ø60 CLASS 1.6 OIL-FILLED

Radial connection mounting flange and stainless steel case

| Code     | Model          | Dial      | Connections | Pressure MPa | Dimensions      | Weight |
|----------|----------------|-----------|-------------|--------------|-----------------|--------|
| 07011021 | ML60/18R4FP/A8 | <b>A8</b> | 1/4" SAE    | -0,1 ÷ 1,8   | 90 x 95 x 65 mm | 0,3 kg |
| 07011022 | ML60/38R4FP/A8 | <b>A8</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 90 x 95 x 65 mm | 0,3 kg |
| 07011048 | ML60/38R4FP/A4 | <b>A4</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 90 x 95 x 65 mm | 0,3 kg |
| 07011049 | ML60/53R4FP/A4 | <b>A4</b> | 1/4" SAE    | -0,1 ÷ 5,3   | 90 x 95 x 65 mm | 0,3 kg |
| 07011058 | ML60/18R4FP/E1 | <b>E1</b> | 1/4" SAE    | -0,1 ÷ 1,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011059 | ML60/38R4FP/E1 | <b>E1</b> | 1/4" SAE    | -0,1 ÷ 3,8   | 80 x 80 x 65 mm | 0,3 kg |
| 07011023 | ML60/18R4FP/U  |           | 1/4" SAE    | -0,1 ÷ 1,8   | 90 x 95 x 65 mm | 0,3 kg |



1 MPa=10 bar

## CERTIFIABLE SAMPLE PRESSURE GAUGE



### DV-2 COOL/80

#### Certifiable sample pressure gauge for coolant examination

The DV-2 COOL was designed for monitoring tasks at coolant filling stations.

Vapour pressure/temperature values for 5 coolant liquids are saved in the unit and can be selected by pressing a button.

The LCD switches from temperature to pressure at the touch of a button, with the display offering a choice of bar/°C or PSI/°F.

The high resolution display means that DV-2 COOL can also be used for measuring leaks in vacuums.

Coolant: the following coolants are stored in the gauge:

R134a - R404a - R507 - R407C liq. and vap. - R410A.

The battery symbol illuminates when battery power is low.

Pressure gauge DV-2 COOL can be supplied with Accredia report to be used as sample pressure gauge.

| Code     | Model        | Description                       |
|----------|--------------|-----------------------------------|
| 07151004 | DV-2 COOL/80 | Certifiable sample pressure gauge |

| Code     | Dimensions       | Weight |
|----------|------------------|--------|
| 07151004 | 125 x 95 x 40 mm | 0,2 kg |



### Technical features

|                               |                                  |
|-------------------------------|----------------------------------|
| Pressure ranges abs           | 0...80 bar                       |
| Accuracy                      | 0,1 %FS                          |
| Compensated range             | 10...40 °C                       |
| Storage/Operating Temperature | -10...60 °C / 0...50 °C          |
| Protection                    | IP 64                            |
| Connection                    | 1/4" SAE                         |
| Battery                       | 3V CR2032                        |
| Battery life                  | 2 months in continuous operation |
| Dimensions                    | 68 x 70 x 35 mm                  |



### Calibration

| Code     | Description                                       |
|----------|---------------------------------------------------|
| 09053008 | Calibration report ref. Accredia for DV-2 COOL/80 |

## X012/A

### "Spiralato" thermoplastic capillary tube 2x5,9

Practical and effective system for performing precision readings in pressure gauges, connecting sensors and valves.

Made of thermoplastic material perfectly compatible with physical characteristics of CFC, HCF, HFC refrigerants.

The braid in polyester fibre (PET) placed between the antiabrasion polyurethane (TPU) and the polyamide (PA) at the core give the tube an excellent mechanical resistance. The antiabrasion polyurethane (TPU) protects it from wear and tear.



### Technical features

|                          |                                                   |
|--------------------------|---------------------------------------------------|
| Outside diameter         | 5,9 mm                                            |
| Inner diameter           | 2,1 mm                                            |
| Core material            | Poliamide (PA) compatible with refrigerant fluids |
| Outer covering           | Antibrasions polyurethane (TPU)                   |
| Stiffening               | Polyester fiber (PET)                             |
| Refrigerants             | CFC-HCFC-HFC-HC-HFO                               |
| Max.operating pressure   | 120 bar                                           |
| Working temperature      | -45 ÷ +130°C                                      |
| Min. radius of curvature | 15 mm                                             |
| Packaging (coil)         | 50 m                                              |
| Weight                   | 28 g/m                                            |

### Thermoplastic capillary tube assembled - 180°x180°

| Code     | Model           | Connections | Length  | Min. Qty |
|----------|-----------------|-------------|---------|----------|
| 06050010 | X012SS/4-4/300  | 1/4" SAE    | 300 mm  | 20       |
| 06050066 | X012SS/4-4/450  | 1/4" SAE    | 450 mm  | 20       |
| 06050012 | X012SS/4-4/600  | 1/4" SAE    | 600 mm  | 20       |
| 06050026 | X012SS/4-4/750  | 1/4" SAE    | 750 mm  | 20       |
| 06050013 | X012SS/4-4/1000 | 1/4" SAE    | 1000 mm | 20       |
| 06050014 | X012SS/4-4/1500 | 1/4" SAE    | 1500 mm | 10       |
| 06050015 | X012SS/4-4/2000 | 1/4" SAE    | 2000 mm | 10       |

For quantity, hoses of any length and/or different types of fittings can be delivered on request.



### Thermoplastic capillary tube assembled - 180°x90°

| Code     | Model           | Connections | Length  | Min. Qty |
|----------|-----------------|-------------|---------|----------|
| 06050067 | X012SL/4-4/300  | 1/4" SAE    | 300 mm  | 20       |
| 06050068 | X012SL/4-4/450  | 1/4" SAE    | 450 mm  | 20       |
| 06050069 | X012SL/4-4/600  | 1/4" SAE    | 600 mm  | 20       |
| 06050070 | X012SL/4-4/750  | 1/4" SAE    | 750 mm  | 20       |
| 06050071 | X012SL/4-4/1000 | 1/4" SAE    | 1000 mm | 20       |
| 06050072 | X012SL/4-4/1500 | 1/4" SAE    | 1500 mm | 10       |
| 06050073 | X012SL/4-4/2000 | 1/4" SAE    | 2000 mm | 10       |

For quantity, hoses of any length and/or different types of fittings can be delivered on request.

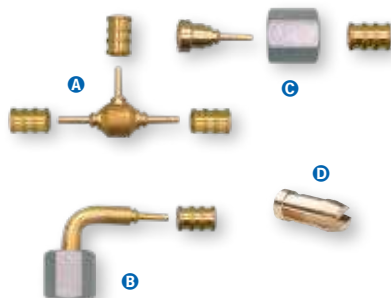


## CAPILLARY TUBE



### Coil of capillary tube

| Code     | Model  | Length | Dimensions        | Weight |
|----------|--------|--------|-------------------|--------|
| 06050006 | X012/A | 50 m   | 250 x 250 x 50 mm | 1,4 kg |



### Fittings to be pressed for capillary tube 2x5,9

| Ref      | Code        | Model      | Description                            |    |
|----------|-------------|------------|----------------------------------------|----|
| <b>A</b> | 05060022010 | WCG210T-TO | Kit of "T" fittings with 3 nuts        | 10 |
| <b>B</b> | 05060021001 | WCG210/90  | Kit of 90° fittings with 1 nut         | 10 |
| <b>C</b> | 06101005    | WCG250     | Kit of straights fittings with 1 nut   | 50 |
| <b>D</b> | 14023017001 | DM 245K    | Valve openers for WCG250-WCG210/90 kit | 10 |

| Ref      | Code        | Connections | Dimensions        | Weight  |
|----------|-------------|-------------|-------------------|---------|
| <b>A</b> | 05060022010 | -           | 140 x 100 x 20 mm | 0,15 kg |
| <b>B</b> | 05060021001 | 1/4"SAE     | 140 x 100 x 20 mm | 0,20 kg |
| <b>C</b> | 06101005    | 1/4"SAE     | 160 x 150 x 10 mm | 0,80 kg |
| <b>D</b> | 14023017001 | -           | 160 x 90 x 10 mm  | 0,01 kg |



### Tools for capillary hose

The crimping manual tools allow to fasten WCG250 fittings easily to the thermoplastic capillary tube and ensures a perfect seal.

| Ref      | Code     | Model  | Description          | Dimensions        | Weight  |
|----------|----------|--------|----------------------|-------------------|---------|
| <b>A</b> | 08006010 | RXA003 | Crimping manual tool | 340 x 120 x 30 mm | 0,70 kg |
| <b>B</b> | 08002012 | 1751   | Plastic tube cutter  | 80 x 20 x 20 mm   | 0,03 kg |



### Complete kit

Supplied: 50 fittings 1/4"SAE, 10 valve openers, 1 crimping tool and 1 tube cutter.

| Code     | Model   | Dimensions         | Weight |
|----------|---------|--------------------|--------|
| 06101007 | KV-X012 | 480 x 400 x 120 mm | 5kg    |



### Spare parts and accessoires

| Code     | Description        |
|----------|--------------------|
| 14029005 | Empty plastic case |

## WNT246P

### Crimping system with hydraulic pump

Crimping modular system especially designed and made to answer the needs of professional technicians for crimping HVAC hoses of conditioning and refrigeration system.

Dies for tubes:

internal Ø 2 mm x external Ø 5,9 mm.

internal Ø 4 mm x external Ø 8,2 mm.

internal Ø 6 mm x external Ø 10,9 mm.

Durable, precise and controlled pump.

The crimper will crimp all aluminium and steel fittings reliably, uniformly and on top of it all, we now offer a way to check the accuracy. The diameter of the resulting crimp can be checked, using the special caliper provided with the crimper.

The basic set includes: hydraulic pump, manual crimper, set of 3 dies, lubricant and caliper.

| Code        | Model   | Description                                   |
|-------------|---------|-----------------------------------------------|
| 08008046    | WNT246P | Crimping systm with hydraulic pump            |
| 08008046001 | WNT246  | Crimping manual system without hydraulic pump |
| 08008029    | WPT150  | Hydraulic pump                                |
| 08008031    | APT100  | Air-hydraulic pump                            |
| 08008030    | UHT150  | Kit with cylinder and hydraulic hose          |



### Technical features

|                   |                  |
|-------------------|------------------|
| Capacity          | 6,7 t at 700 bar |
| Corsa del pistone | 22 mm            |
| Altezza           | 255 mm           |
| Weight            | 1,5 kg           |

## WNT246

Crimping manual system

## APT100

Air-hydraulic pump

## UHT150

Kit with cylinder and hydraulic hose



## PTFE HOSES



### PTFE HOSES

#### High Pressure PTFE hoses with stainless braid

The stainless steel metallic braid guarantees high performances at high pressures. The stainless steel allows to work in acid environments.

These features make these hoses suitable for use with R744 (CO<sub>2</sub>).



#### Technical features

|                          |                                         |
|--------------------------|-----------------------------------------|
| Outside diameter         | 7,5 mm - 8,6 mm                         |
| Inner diameter           | 5 mm - 3.16"                            |
| Core material            | PTFE compatible with refrigerant fluids |
| Outer covering           | AISI 304                                |
| Refrigerants             | R744-CFC-HCFC-HFC-HC-HFO                |
| Max. operating pressure  | 200 bar                                 |
| Working temperature      | -60 - +260°C                            |
| Min. radius of curvature | 64 mm                                   |
| Weight                   | 94 g/m                                  |



### Innox hoses assembled - 180°x180°

| Code     | Model          | Connections | Length  | Min. Qty |
|----------|----------------|-------------|---------|----------|
| 06103006 | COSS/4-4/300   | 1/4" SAE    | 300 mm  | 20       |
| 06103003 | COSS/4-4/450   | 1/4" SAE    | 450 mm  | 20       |
| 06103007 | COSS/4-4/600   | 1/4" SAE    | 600 mm  | 20       |
| 06103008 | COSS/4-4/750   | 1/4" SAE    | 750 mm  | 10       |
| 06103009 | COSS/4-4/1000  | 1/4" SAE    | 1000 mm | 10       |
| 06103001 | COSS/4-4 /1500 | 1/4" SAE    | 1500 mm | 10       |

For quantity, hoses of any length and/or different types of fittings can be delivered on request.



### Innox hose assembled - 180°x90°

| Code     | Model          | Connections | Length  | Min. Qty |
|----------|----------------|-------------|---------|----------|
| 06104001 | COSL/4-4/300   | 1/4" SAE    | 300 mm  | 20       |
| 06104002 | COSL/4-4/450   | 1/4" SAE    | 450 mm  | 20       |
| 06104003 | COSL/4-4/600   | 1/4" SAE    | 600 mm  | 20       |
| 06104004 | COSL/4-4/750   | 1/4" SAE    | 750 mm  | 10       |
| 06104005 | COSL/4-4/1000  | 1/4" SAE    | 1000 mm | 10       |
| 06104006 | COSL/4-4 /1500 | 1/4" SAE    | 1500 mm | 10       |

For quantity, hoses of any length and/or different types of fittings can be delivered on request.





## HD HOSE

Reinforced HEAVY DUTY hose with low permeability barrier and wear-resistant coating



## GY HOSE

Reinforced hose with low permeability barrier and coloured rubber coating



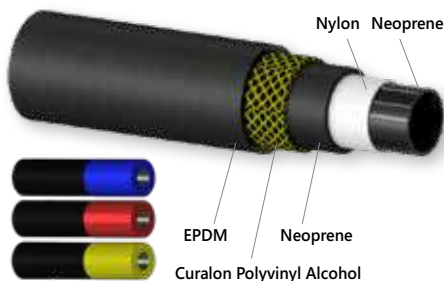
### Read the WIGAM model

| BALL VALVE     | HOSE TYPE | CONNECTION | CONNECTION | CONNECTION         | CONNECTION         | LENGTH       | COLOUR     |
|----------------|-----------|------------|------------|--------------------|--------------------|--------------|------------|
| V - with valve | GY        | S - 180°   | S - 180°   | 4 - 1/4" SAE       | 4 - 1/4" SAE       | 36 - 900 mm  | B - blue   |
|                | HD        | L - 90°    | L - 90°    | 4M - 1/4" SAE male | 4M - 1/4" SAE male | 60 - 1500 mm | R - red    |
|                | CSA       | A - 45°    | A - 45°    | 5 - 5/16" SAE      | 5 - 5/16" SAE      | 72 - 1800 mm | Y - yellow |
|                |           |            |            | 6 - 3/8" SAE       | 6 - 3/8" SAE       |              |            |



Series GY flexible hose with valve, connections straight-straight, 1/4" x 1/4", 1500 mm, red

## "HD" HOSES



### "HD" HOSES

Reinforced HEAVY DUTY hose with low permeability barrier and wear-resistant coating

SAE J2196 - SAE J2888 - SAE J2064

In addition to the models mentioned below, hoses of any length and with any type of connection can be delivered.



### Technical features

|                     |                                                       |
|---------------------|-------------------------------------------------------|
| In accordance with  | SAE J2196/R134a - SAE J2888/R1234yf - SAE J2064/R134a |
| Working pressure    | 5,2 MPa                                               |
| Bursting pressure   | 27,6 MPa                                              |
| Internal Ø          | 1/4"                                                  |
| Working temperature | -30 +125°C                                            |



### Connections on demand

1/2"-16ACME x 1/2"-16ACME  
 1/2"-16ACME x M14 x 1.5  
 M12x1.5 x M12x1.5

5/16"



Kit of 3 flexible hoses with intermediate valve, connections straight x 45° with depressor with blister

| Code     | Model              | Length  | Connections | Dimensions        | Weight |
|----------|--------------------|---------|-------------|-------------------|--------|
| 06010016 | 3HDSA/5-5/32V4/BRY | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06010010 | 3HDSA/5-5/56V4/BRY | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |

5/16"



Kit of 3 flexible hoses, connections straight x 45° with depressor with blister

| Code     | Model            | Length  | Connections | Dimensions        | Weight |
|----------|------------------|---------|-------------|-------------------|--------|
| 06010017 | 3HDSA/5-5/36/BRY | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06010018 | 3HDSA/5-5/60/BRY | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |

1/4"



Kit of 3 flexible hoses, connections straight x 45° with depressor with blister

| Code     | Model              | Length  | Connections | Dimensions        | Weight |
|----------|--------------------|---------|-------------|-------------------|--------|
| 06010015 | 3HDSA/4-4/32V4/BRY | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06010011 | 3HDSA/4-4/56V4/BRY | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |

1/4"



Kit of 3 flexible hoses, connections straight x 45° with depressor with blister

| Code     | Model            | Length  | Connections | Dimensions        | Weight |
|----------|------------------|---------|-------------|-------------------|--------|
| 06010005 | 3HDSA/4-4/36/BRY | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06010003 | 3HDSA/4-4/48/BRY | 1200 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06010004 | 3HDSA/4-4/60/BRY | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06010002 | 3HDSA/4-4/72/BRY | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |

## Flexible hose with intermediate valve, connections straight x 45° with depressor

| Code     | Model         | Length  | Connections | Dimensions        | Weight |
|----------|---------------|---------|-------------|-------------------|--------|
| 06002084 | HDSA/5-5/32V4 | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,3 kg |
| 06002022 | HDSA/5-5/56V4 | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,3 kg |
| 06002083 | HDSA/5-5/68V4 | 1800 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,3 kg |
| 06002070 | HDSA/4-4/32V4 | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,3 kg |
| 06002023 | HDSA/4-4/56V4 | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,3 kg |
| 06002057 | HDSA/4-4/68V4 | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,3 kg |

For colour choice, add to the end of the code:



## Flexible hose, connections straight x 45° with depressor

| Code     | Model       | Length  | Connections | Dimensions        | Weight |
|----------|-------------|---------|-------------|-------------------|--------|
| 06002085 | HDSA/5-5/36 | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,3 kg |
| 06002086 | HDSA/5-5/60 | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,3 kg |
| 06002097 | HDSA/5-5/72 | 1800 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,3 kg |
| 06002008 | HDSA/4-4/36 | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,3 kg |
| 06002004 | HDSA/4-4/60 | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,3 kg |
| 06002001 | HDSA/4-4/72 | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,3 kg |

For colour choice, add to the end of the code:



## Flexible hose with final valve, connections straight x straight with depressor

| Code     | Model         | Length  | Connections | Dimensions        | Weight |
|----------|---------------|---------|-------------|-------------------|--------|
| 06007089 | V/HDSS/5-5/36 | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06007078 | V/HDSS/5-5/60 | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06007098 | V/HDSS/5-5/72 | 1800 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06007012 | V/HDSS/4-4/36 | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06007013 | V/HDSS/4-4/60 | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06007014 | V/HDSS/4-4/72 | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06007022 | V/HDSS/6-6/36 | 900 mm  | 3/8" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06007023 | V/HDSS/6-6/60 | 1500 mm | 3/8" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06007024 | V/HDSS/6-6/72 | 1800 mm | 3/8" SAE    | 250 x 250 x 50 mm | 0,4 kg |

For colour choice, add to the end of the code:



3/8 hoses without depressor.

## Flexible hoses, Connections straight x straight

| Code     | Model       | Length  | Connections | Dimensions        | Weight |
|----------|-------------|---------|-------------|-------------------|--------|
| 06001184 | HDSS/5-5/36 | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06001182 | HDSS/5-5/60 | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06001185 | HDSS/5-5/72 | 1800 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06001017 | HDSS/4-4/36 | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06001011 | HDSS/4-4/60 | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06001014 | HDSS/4-4/72 | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06001024 | HDSS/6-6/36 | 900 mm  | 3/8" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06001026 | HDSS/6-6/60 | 1500 mm | 3/8" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06001027 | HDSS/6-6/72 | 1800 mm | 3/8" SAE    | 250 x 250 x 50 mm | 0,8 kg |

For colour choice, add to the end of the code:



3/8 hoses without depressor.

## "HD" HOSES



For colour choice,  
add to the end  
of the code:



### Flexible hoses, Connections straight x 90° with depressor

| Code     | Model       | Length  | Connections | Dimensions        | Weight |
|----------|-------------|---------|-------------|-------------------|--------|
| 06003130 | HDSL/5-5/36 | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06003131 | HDSL/5-5/60 | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06003132 | HDSL/5-5/72 | 1800 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06003011 | HDSL/4-4/36 | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06003005 | HDSL/4-4/60 | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06003003 | HDSL/4-4/72 | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |

For colour choice, add to the end of the code:



### Flexible hoses with male valve, connections straight x 45° with depressor

| Code     | Model         | Length | Connections | Dimensions        | Weight |
|----------|---------------|--------|-------------|-------------------|--------|
| 06008006 | V/HDSA/4M-4/6 | 150 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,2 kg |

For colour choice, add to the end of the code:



### Flexible hoses, connections 1/4"SAE F 90° x 1/4"SAE M with depressor

| Code     | Model        | Length | Connections | Dimensions        | Weight |
|----------|--------------|--------|-------------|-------------------|--------|
| 06003020 | HDSL/4M-4/6  | 150 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,2 kg |
| 06003022 | HDSL/4M-4/12 | 300 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,2 kg |
| 06003076 | HDSL/4M-4/24 | 600 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,2 kg |



## Spare parts and accessories for HD and GY



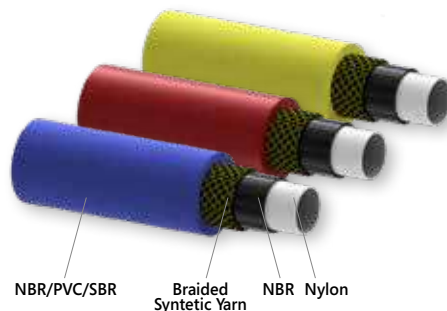
| Ref      | Code        | Model               | Description                                                         |                                                                                       |
|----------|-------------|---------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>A</b> | 14020014001 | G19020              | Kit (10 pcs) gaskets for 1/4"SAE, 1/2"-16ACME in NBR                |  |
|          | 14020048001 | G19516              | Kit (10 pcs) gaskets for 5/16"SAE                                   |  |
| <b>B</b> | 14023001001 | D19302              | Kit (10pcs) valve openers for 1/4" SAE and 5/16" SAE hoses          |  |
| <b>C</b> | 14020015001 | G19030              | Kit (10 pcs) gaskets for 3/8" SAE hoses                             |  |
| <b>D</b> | 14020071001 | G19020/T            | kit (10pcs) PTFE gaskets for 1/4" SAE, 1/2"-16ACME hoses            |  |
| <b>E</b> | 08008059    | LOCK-VALVE-CARE     | Gaskets easy replacement tool for LOCK-VALVE, EW and flexible hoses | -                                                                                     |
| <b>F</b> | 08008065    | LOCK-VALVE-CARE-WIG | Counter display with 10 pz of LOCK-VALVE-CARE                       |  |

## "GY" HOSES

Reinforced hose with low permeability barrier and coloured rubber coating

SAE J2196 - SAEJ2888

In addition to the models mentioned below, hoses of any length and with any type of connection can be delivered.



### Technical features

|                     |                                      |
|---------------------|--------------------------------------|
| In accordance with  | SAE J2196/R134a<br>SAE J2888/R1234yf |
| Working pressure    | 5,6 MPa                              |
| Bursting pressure   | 28 MPa                               |
| Working temperature | -40 +120°C                           |



### Connections on demand

|                           |
|---------------------------|
| 1/2"-16ACME x 1/2"-16ACME |
| 1/2"-16ACME x M14x1.5     |
| M12x1.5 x M12x1.5         |

Kit of 3 flexible hoses with intermediate valve, connections straight x 45° with depressor with blister

| Code     | Model              | Length  | Connections | Dimensions        | Weight |
|----------|--------------------|---------|-------------|-------------------|--------|
| 06080013 | 3GYSA/5-5/32V4/BRY | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06080010 | 3GYSA/5-5/56V4/BRY | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |



5/16"

Kit of 3 flexible hoses, connections straight x 45° with depressor with blister

| Code     | Model            | Length  | Connections | Dimensions        | Weight |
|----------|------------------|---------|-------------|-------------------|--------|
| 06080005 | 3GYSA/5-5/36/BRY | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06080006 | 3GYSA/5-5/48/BRY | 1200 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |
| 06080007 | 3GYSA/5-5/60/BRY | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,8 kg |



5/16"

Kit of 3 flexible hoses, connections straight x 45° with depressor with blister

| Code     | Model              | Length  | Connections | Dimensions        | Weight |
|----------|--------------------|---------|-------------|-------------------|--------|
| 06080014 | 3GYSA/4-4/32V4/BRY | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06080009 | 3GYSA/4-4/56V4/BRY | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |



1/4"

Kit of 3 flexible hoses, connections straight x 45° with depressor with blister

| Code     | Model            | Length  | Connections | Dimensions        | Weight |
|----------|------------------|---------|-------------|-------------------|--------|
| 06080001 | 3GYSA/4-4/36/BRY | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06080002 | 3GYSA/4-4/48/BRY | 1200 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06080003 | 3GYSA/4-4/60/BRY | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |
| 06080004 | 3GYSA/4-4/72/BRY | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,8 kg |



1/4"

## "GY" HOSES



For colour choice,  
add to the end  
of the code:



### Flexible hoses with intermediate valve, connections straight x 45° with depressor

| Code     | Model         | Length  | Connections | Dimensions        | Weight |
|----------|---------------|---------|-------------|-------------------|--------|
| 06072036 | GYSA/5-5/32V4 | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06072013 | GYSA/5-5/56V4 | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06072037 | GYSA/5-5/68V4 | 1800 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06072038 | GYSA/4-4/32V4 | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06072012 | GYSA/4-4/56V4 | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06072039 | GYSA/4-4/68V4 | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |



For colour choice,  
add to the end  
of the code:



### Flexible hose, connections straight x 45° with depressor

| Code     | Model       | Length  | Connections | Dimensions        | Weight |
|----------|-------------|---------|-------------|-------------------|--------|
| 06072004 | GYSA/5-5/36 | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06072005 | GYSA/5-5/60 | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06072006 | GYSA/5-5/72 | 1800 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06072001 | GYSA/4-4/36 | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06072002 | GYSA/4-4/60 | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06072003 | GYSA/4-4/72 | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |



For colour choice,  
add to the end  
of the code:



### Flexible hose with final valve, connections straight x straight with depressor

| Code     | Model         | Length  | Connections | Dimensions        | Weight |
|----------|---------------|---------|-------------|-------------------|--------|
| 06077004 | V/GYSS/5-5/36 | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06077005 | V/GYSS/5-5/60 | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06077006 | V/GYSS/5-5/72 | 1800 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06077001 | V/GYSS/4-4/36 | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06077002 | V/GYSS/4-4/60 | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06077003 | V/GYSS/4-4/72 | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |



For colour choice,  
add to the end  
of the code:



### Flexible hoses, connections "straight - straight"

| Code     | Model       | Length  | Connections | Dimensions        | Weight |
|----------|-------------|---------|-------------|-------------------|--------|
| 06071007 | GYSS/5-5/36 | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06071008 | GYSS/5-5/60 | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06071009 | GYSS/5-5/72 | 1800 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06071001 | GYSS/4-4/36 | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06071002 | GYSS/4-4/60 | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06071003 | GYSS/4-4/72 | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06071036 | GYSS/6-6/36 | 900 mm  | 3/8" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06071055 | GYSS/6-6/60 | 1500 mm | 3/8" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06071076 | GYSS/6-6/72 | 1800 mm | 3/8" SAE    | 250 x 250 x 50 mm | 0,4 kg |

3/8 hoses without depressor.

## Flexible hoses, connections straight x 90° with depressor

| Code     | Model       | Length  | Connections | Dimensions        | Weight |
|----------|-------------|---------|-------------|-------------------|--------|
| 06073004 | GYSL/5-5/36 | 900 mm  | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06073005 | GYSL/5-5/60 | 1500 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06073006 | GYSL/5-5/72 | 1800 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06073001 | GYSL/4-4/36 | 900 mm  | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06073002 | GYSL/4-4/60 | 1500 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06073003 | GYSL/4-4/72 | 1800 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |

For colour choice, add to the end of the code:



## Flexible hose with male valve, connections straight x 45° with depressor

| Code     | Model         | Length | Connections | Dimensions        | Weight |
|----------|---------------|--------|-------------|-------------------|--------|
| 06078002 | V/GYSA/5M-5/6 | 150 mm | 5/16" SAE   | 250 x 250 x 50 mm | 0,4 kg |
| 06078001 | V/GYSA/4M-4/6 | 150 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |

For colour choice, add to the end of the code:



## Flexible hose, connections 1/4"SAE F 90° x 1/4"SAE M with depressor

| Code     | Model        | Length | Connections | Dimensions        | Weight |
|----------|--------------|--------|-------------|-------------------|--------|
| 06073013 | GYSL/4M-4/6  | 150 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06073014 | GYSL/4M-4/12 | 300 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |
| 06073015 | GYSL/4M-4/24 | 600 mm | 1/4" SAE    | 250 x 250 x 50 mm | 0,4 kg |

For colour choice, add to the end of the code:



## Spare parts for HD and GY



| Ref      | Code        | Model               | Description                                                         |    |
|----------|-------------|---------------------|---------------------------------------------------------------------|----|
| <b>A</b> | 14020014001 | G19020              | Kit (10 pcs) gaskets for 1/4"SAE, 1/2"-16ACME in NBR                | 10 |
|          | 14020048001 | G19516              | Kit (10 pcs) gaskets for 5/16"SAE                                   | 10 |
| <b>B</b> | 14023001001 | D19302              | Kit (10pcs) valve openers for 1/4" SAE and 5/16" SAE hoses          | 10 |
| <b>C</b> | 14020015001 | G19030              | Kit (10 pcs) gaskets for 3/8" SAE hoses                             | 10 |
| <b>D</b> | 14020071001 | G19020/T            | kit (10pcs) PTFE gaskets for 1/4" SAE, 1/2"-16ACME hoses            | 10 |
| <b>E</b> | 08008059    | LOCK-VALVE-CARE     | Gaskets easy replacement tool for LOCK-VALVE, EW and flexible hoses | -  |
| <b>F</b> | 08008065    | LOCK-VALVE-CARE-WIG | Counter display with 10 pz of LOCK-VALVE-CARE                       | 10 |

## "CSA" HOSES



### "CSA" HOSES

Kit of three "CSA" hoses with depressor:

Each hose has a different colour, respectively blue, red and yellow.

Connections: straight x 45°.

Blister packaged.

| Code     | Model           | Length  | Connections      |
|----------|-----------------|---------|------------------|
| 06040005 | 3CSA/4-4/60/BRY | 1500 mm | 1/4" SAE         |
| 06040007 | 3CSA/5-5/60/BRY | 1500 mm | 5/16" SAE        |
| 06040009 | 3CSA/4-5/60/BRY | 1500 mm | 1/4" X 5/16" SAE |

| Code     | Pressure operating | Pressure bursting | Dimensions        | Weight |
|----------|--------------------|-------------------|-------------------|--------|
| 06040005 | 4.2 MPa            | 20.7 MPa          | 250 x 250 x 50 mm | 0,8 kg |
| 06040007 | 5.5 MPa            | 27.6 MPa          | 250 x 250 x 50 mm | 0,8 kg |
| 06040009 | 5.5 MPa            | 27.6 MPa          | 250 x 250 x 50 mm | 0,8 kg |



### Spare parts for CSA



A



B



C

D



| Ref | Code        | Model               | Description                                                         |    |
|-----|-------------|---------------------|---------------------------------------------------------------------|----|
| A   | 14020113001 | G-CSA4-17           | Kit (10pcs) of PTFE gaskets for 1/4" SAE hoses                      | 10 |
| A   | 14020114001 | G-CSA5-17           | Kit (10pcs) of NBR gaskets for 1/4" SAE, 1/2"-16ACME hoses          | 10 |
| B   | 14020115001 | D-CSA-17            | Kit (10pcs) valve openers for CSA hoses                             | 10 |
| C   | 08008059    | LOCK-VALVE-CARE     | Gaskets easy replacement tool for LOCK-VALVE, EW and flexible hoses | -  |
| D   | 08008065    | LOCK-VALVE-CARE-WIG | Counter display with 10 pz of LOCK-VALVE-CARE                       | 10 |

## KOMPACT-HFC

Automatic vacuum, test and charging station  
for service operations or small productions

The KOMPACT range is available in 2 variation:

KOMPACT HFC: for HFC (A2L included) with a balance of 35 or 100 kg.

KOMPACT ATEX (page 98): suitable for HC (R290, R600) and precision charges.

The KOMPACT-HFC unit features:

- Database with more than 50 refrigerants.
- Suitable for CFC, HCFC, HFC (R32 e R1234yf included).
- Multilingual digital display and fast access keys.
- Micro SD included: it allows to store the data and transfer to PC (software included).
- 180lt high vacuum two-stage pump.
- Integrated precision vacuum gauge.
- 35 or 100Kg scale.
- Integrated compartments to accommodate and transport cylinders or cartridges of Refrigerant and Nitrogen.
- Handle and wheels for easy handling.
- Flexible hose with valve for connection to the HVAC system.
- Supports for bottles 1/4 "SAE, 5/16" SAE, 1/2 "16 ACME Sx.



| Code        | Model           | Dimensions         | Weight   |
|-------------|-----------------|--------------------|----------|
| 01090034    | KOMPACT-HFC     | 400 x 650 x 815 mm | 37,50 kg |
| 01090034001 | KOMPACT-HFC-100 | 400 x 650 x 815 mm | 37,50 kg |



### Calibration

| Code     | Description                                                  |
|----------|--------------------------------------------------------------|
| 09053052 | Calib. report ref. Accredia for KOMPACT-HFC and KOMPACT-ATEX |



### Technical features

|                   | KOMPACT-HFC                                                                        | KOMPACT-HFC 100 |
|-------------------|------------------------------------------------------------------------------------|-----------------|
| Refrigerants      | CFC, HCFC, HFC, HFO                                                                |                 |
| Two-stage pump    | RS9D (180l/min)                                                                    |                 |
| Scale             | 35 kg                                                                              | 100 kg          |
| Vacuum range      | 1 ÷ 350Pa                                                                          |                 |
| Charging accuracy | ±10g <10 kg *                                                                      | ±30g <10 kg *   |
| Power supply      | 230V 50/60Hz                                                                       |                 |
| Connections       | 1/4" SAE with valve + Supports for bottles<br>1/4" SAE, 5/16" SAE, 1/2" 16 ACME Sx |                 |

\* Detachment mode



### Accessories

| Code        | Model              | Description                              | Female connection | Male connection | Min. Qty |
|-------------|--------------------|------------------------------------------|-------------------|-----------------|----------|
| 05059049001 | LOCK-VALVE1/4-WIG  | Access valve                             | 1/4" SAE          | 1/4" SAE        | -        |
| 05059053001 | LOCK-VALVE/5-4-WIG | Access valve                             | 5/16" SAE         | 1/4" SAE        | -        |
| 06077002001 | V/GYSS/4-4/60/B    | Flexible hose 1500mm with valve          | 2 x 1/4" SAE      | -               | -        |
| 10002017    | AZ200-50           | Heavy duty nitrogen regulator 200-50 bar | -                 | -               | -        |
| 11001060    | BN2/1-TPED         | Nitrogen cartridge 950cc - 110bar        | -                 | -               | 12       |
| 11003011    | BAZ50/1            | Nitrogen 5 litres cylinder               | -                 | -               | -        |
| 11001112    | AZOIDRO            | Azoidro cartridge 1 liter - 110bar       | -                 | -               | 12       |
| 11003020    | AZOIDRO/5          | Azoidro 5 litres cylinder                | -                 | -               | -        |

Bottles not included



#### AUTOMATIC FUNCTIONS:

- Nitrogen test for leak test.
- Test with azoidro mixture for leak test.
- Nitrogen discharge.
- Recovery management (recovery unit not INCLUDED).
- Vacuum.
- Vacuum test and pressure rising test.
- Refrigerant charge.

#### 2 automatic cycles:

| CYCLE 1                | CYCLE 2                |
|------------------------|------------------------|
| Nitrogen test          | Recovery               |
| Vacuum and test vacuum | Nitrogen test          |
| Refrigerant charge     | Vacuum and test vacuum |
|                        | Refrigerant charge     |



## VACUUM AND CHARGING KIT



**BASIC KIT CADDY FOX**



**CADDY FOX 100 SCALE**



### CADDY FOX 5/100

Universal kit for vacuum and charge with digital manifold and scale (5 or 100 kg)

Possibility to work with over 50 refrigerants

Small dimensions and very easy to carry

Standard equipment:

- 46 l/min or 90 l/min dual stage vacuum pump with solenoid valve and vacuum gauge.
- Digital manifold FOX300 complete with 2 probes TK109, 2 flexible hoses 1500 mm with intermediate valve, 1 flexible hose 1500 mm with final valve 1 flexible hose for vacuum IPERVAC 900 mm 3/8" SAE and 2 adapters RG180/5-4-5/16" SAE F x 1/4" SAE M.
- Mineral oil bottle.

#### CADDY FOX 5 version

- 5 kg electronic scale with 1g resolution.
- 3 supports for bottles (1/4" x 1/4" - 5/16" x 1/4" - 1/2"-16 ACME SX x1/4" SAE).

#### CADDY FOX 100 version

- 100 kg electronic scale with 5g resolution.

| Code        | Model               |
|-------------|---------------------|
| 01010006004 | CADDY46D/5/FOX300   |
| 01010007003 | CADDY90D/5/FOX300   |
| 01010006005 | CADDY46D/100/FOX300 |
| 01010007004 | CADDY90D/100/FOX300 |

| Code        | Dimensions         | Weight |
|-------------|--------------------|--------|
| 01010006004 | 630 x 400 x 450 mm | 19 kg  |
| 01010007003 | 630 x 400 x 450 mm | 22 kg  |
| 01010006005 | 630 x 400 x 450 mm | 22 kg  |
| 01010007004 | 630 x 400 x 450 mm | 25 kg  |



#### Technical features

|                 | CADDY 46D/5/FOX300      | CADDY 90D/5/FOX300      | CADDY 46D/100/FOX300    | CADDY 90D/100/FOX300    |
|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Scale capacity  | 5 kg                    | 5 kg                    | 100 kg                  | 100 kg                  |
| Pump volume     | 46 lt/min               | 90 lt/min               | 46 lt/min               | 90 lt/min               |
| Ultimate vacuum | 1x10 <sup>-2</sup> mbar | 1x10 <sup>-2</sup> mbar | 1x10 <sup>-2</sup> mbar | 1x10 <sup>-2</sup> mbar |

## CADDY 5/100

Universal kit for vacuum and charge with scale  
(5 or 100 kg)

Possibility to work with R32-R410A and R22-R134a-R404A-R407C

Small dimensions and very easy to carry

Quick coupling system for vacuum pump-solenoid valve-vacuum gauge -manifold assembly.

Standard equipment:

- 46 l/min or 90 l/min dual stage vacuum pump with solenoid valve and vacuum gauge.
- 2 manifolds with scales A4 and A6, class 1.
- Bottle of mineral oil.
- 4 flexible hoses 1500 mm with intermediate valve (1/4" and 5/16").

### CADDY 5 version

- 5 kg electronic scale with 1g resolution.
- 3 supports for bottles (1/4" x 1/4" - 5/16" x 5/16" - 1/2"-16 ACME SX x 5/16" SAE).

### CADDY 100 version

- 100 kg electronic scale with 5g resolution.

| Code        | Model        |
|-------------|--------------|
| 01010006001 | CADDY46D/5   |
| 01010007001 | CADDY90D/5   |
| 01010006002 | CADDY46D/100 |
| 01010007002 | CADDY90D/100 |

| Code        | Dimensions         | Weight |
|-------------|--------------------|--------|
| 01010006001 | 630 x 400 x 450 mm | 19 kg  |
| 01010007001 | 630 x 400 x 450 mm | 22 kg  |
| 01010006002 | 630 x 400 x 450 mm | 22 kg  |
| 01010007002 | 630 x 400 x 450 mm | 25 kg  |



## BASIC KIT CADDY



**CADDY 5 SCALE**



**CADDY 100 SCALE**



## Technical features

|                 | CADDY 46D/5             | CADDY 90D/5             | CADDY 46D/100           | CADDY 90D/100           |
|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Scale capacity  | 5 kg                    | 5 kg                    | 100 kg                  | 100 kg                  |
| Pump volume     | 46 lt/min               | 90 lt/min               | 46 lt/min               | 90 lt/min               |
| Ultimate vacuum | 1x10 <sup>-2</sup> mbar | 1x10 <sup>-2</sup> mbar | 1x10 <sup>-2</sup> mbar | 1x10 <sup>-2</sup> mbar |

## VACUUM AND CHARGING KIT



## Refrigerants dials

A3 R600a A4 R410A-R32 A6 R22-R134a-R404A-R407C D6 R600a-R290-R1270



## K-PGTB

## Vacuum and charging system with electronic scale 5kg

The quick coupling system, patented by Wigam, for vacuum pump - solenoid valve - vacuum gauge - manifold assembly, allows to replace the manifold very quickly each time you need to operate with a different refrigerant and to have a very compact and easy to carry vacuum and charging station.

Standard equipment:

- 46 l double stage vacuum pump with female rigid swivel connection 3/8" SAE .
- 4-way manifold with Ø80 gauges, class 1.
- electronic scale up to 5 kg, resolution 1 gr
- 2 flexible hoses 1500 mm with intermediate valve.
- 1 vapour discharge hose (only versions A3 and D6)
- plastic case

| Code     | Model     |
|----------|-----------|
| 01010001 | K-PGTB-A4 |
| 01010002 | K-PGTB-A6 |
| 01010013 | K-PGTB-A3 |
| 01010014 | K-PGTB-D6 |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 01010001 | 520 x 290 x 340 mm | 19 kg  |
| 01010002 | 520 x 290 x 340 mm | 22 kg  |
| 01010013 | 520 x 290 x 340 mm | 22 kg  |
| 01010014 | 520 x 290 x 340 mm | 25 kg  |

## Bottles not included in the kit



## Technical features

|                 | K-PGTB-A4               | K-PGTB-A6               | K-PGTB-A3               | K-PGTB-D6               |
|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Refrigerants    | R410A-R32               | R22-R134a-R404C-R407C   | R600a                   | R600a-R290-R1270        |
| Scale capacity  | 5 kg                    | 5 kg                    | 5 kg                    | 5 kg                    |
| Pump volume     | 46 lt/min               | 46 lt/min               | 46 lt/min               | 46 lt/min               |
| Ultimate vacuum | 1x10 <sup>-2</sup> mbar | 1x10 <sup>-2</sup> mbar | 1x10 <sup>-2</sup> mbar | 1x10 <sup>-2</sup> mbar |
| Connections     | 5/16" SAE               | 1/4" SAE                | 1/4" SAE                | 1/4" SAE                |
| Supports        | 2 pcs                   | 1 pc                    | 1 pc                    | 2 pcs                   |

Bottle marked (European directive 2010/35/UE)  
 Valve marked CE (European directive 2010/35/UE)  
 Container made of steel (EN13322-1)  
 Valve connections 17E (EN ISO11116-1) 25E (EN629-1)

## WR1K/32

1 lt refillable bottles with refrigerant R32

| Code     | Model   | Refrigerant | Connections    | Refrigerant quantity | Min. Qty | Weight |
|----------|---------|-------------|----------------|----------------------|----------|--------|
| 11001127 | WR1K/32 | R32         | 1/2"-16ACME SX | 800 gr               | 12       | 2,1 kg |

Recharge service available

Valves and supports for WR1K/R32

| Ref | Code        | Model          | Description        | Connections                |
|-----|-------------|----------------|--------------------|----------------------------|
| A   | 05002034001 | 121 RGAS-5-WIG | Valves             | 1/2-16ACME SX x 5/16"SAE M |
| B   | 05104049    |                | Support + hose 90° | 1/2-16ACME SX x 5/16"SAE F |



## 821/121RGAS-5/K

Connection kit for bottle R32 with connection W 21.7-1/14" Sx

Including:

- Adapter for bottle 12,5 l.
- Valve 5/16" SAE mod.121RGAS-5.
- Nylon gasket.

| Code        | Model           |
|-------------|-----------------|
| 05108103001 | 821/121RGAS-5/K |



## WR1K/134

1 l refillable bottles with refrigerant R134a

| Code     | Model    | Refrigerant | Connections | Refrigerant quantity | Min. Qty | Weight  |
|----------|----------|-------------|-------------|----------------------|----------|---------|
| 11001090 | WR1K/134 | R134a       | 1/4" SAE    | 900 gr               | 12       | 1,90 kg |

Recharge service available

Valves and supports for refillable bottles WR1K/134

| Ref | Code        | Model   | Description        | Connections             |
|-----|-------------|---------|--------------------|-------------------------|
| A   | 05001003001 | 121 RG4 | Valves             | 1/4"SAE F x 1/4"SAE M   |
| B   | 05104045    |         | Support + hose 90° | 1/4" SAE F x 1/4" SAE F |



## REFRIGERANT REFILLABLE BOTTLES - FULL

Bottle marked (European directive 2010/35/UE)

Valve and safety valve marked CE (European directive 2010/35/UE)

Container made of steel (EN13322-1)

Valve and safety valve are protected by collar (European directive 2010/35/UE)

Valve connections 17E (EN ISO11116-1) 25E (EN629-1)



R410A

### WR1K/410

1 l refillable bottles with refrigerant R410A

| Code     | Model    | Refrigerant | Connections | Refrigerant quantity | Min. Qty | Weight  |
|----------|----------|-------------|-------------|----------------------|----------|---------|
| 11001088 | WR1K/410 | R410A       | 5/16" SAE   | 800 gr               | 12       | 1,80 kg |

Recharge service available

Valves and supports for refillable bottles

| Ref | Code        | Model   | Description        | Connections               |
|-----|-------------|---------|--------------------|---------------------------|
| A   | 05001038001 | 121-RG5 | Valves             | 5/16" SAE F x 5/16" SAE M |
| B   | 05104039    |         | Support + hose 90° | 5/16" SAE F x 5/16" SAE F |



R410A

RECHARGE  
SERVICE

### WR2.5K/410

2,5 lt refillable bottles with refrigerant R410A and tube

| Code        | Model      | Refrigerant | Connections       | Refrigerant quantity | Min. Qty | Weight |
|-------------|------------|-------------|-------------------|----------------------|----------|--------|
| 11001079001 | WR2.5K/410 | R410A       | 21,8 W - 1/14" DX | 2 kg                 | 6        | 4,2 kg |

2,5 l bottles recharge

| Code     | Model       | Refrigerant | Refrigerant quantity | Min. Qty | Weight |
|----------|-------------|-------------|----------------------|----------|--------|
| 11011007 | RICAR410/2K | R410a       | 2 kg                 | 6        | 4 kg   |



R410A

RECHARGE  
SERVICE

### WR10K-TPED/44/410

12,5 l refillable bottles with refrigerant R410A

| Code     | Model             | Refrigerant | Connections       | Refrigerant quantity | Min. Qty | Weight  |
|----------|-------------------|-------------|-------------------|----------------------|----------|---------|
| 11001052 | WR10K-TPED/44/410 | R410A       | 21,8 W - 1/14" DX | 10 kg                | 2        | 16,5 kg |

12,5 l bottles recharge

| Code     | Model        | Refrigerant | Refrigerant quantity | Min. Qty | Weight  |
|----------|--------------|-------------|----------------------|----------|---------|
| 11011003 | RICAR410/10K | R410A       | 10 kg                | 2        | 16,5 kg |

## WR2.5K/48

2.5 l refillable bottles without refrigerant, with tube

| Code     | Model     | Refrigerant                                 | Min. Qty |
|----------|-----------|---------------------------------------------|----------|
| 11001077 | WR2.5K/48 | R134a - R407C - R427 - R404A - R507 - R410A | 6        |

| Code     | Connections       | Capacity | Weight |
|----------|-------------------|----------|--------|
| 11001077 | 21,8 W - 1/14" DX | 2,50 lt  | 2,2 kg |



## W2-WR10K/44 - W2-WR9K/48/5

12,5 l refillable bottles without refrigerant with tube, with liquid and vapour valve

| Code     | Model        | Refrigerant                                 | Min. Qty |
|----------|--------------|---------------------------------------------|----------|
| 11001062 | W2-WR10K/44  | R134a - R407C - R427 - R404A - R507 - R410A | 2        |
| 11001124 | W2-WR9K/48/5 | R32                                         | 2        |

| Code     | Connections | Capacity | Weight |
|----------|-------------|----------|--------|
| 11001062 | 1/4"SAE     | 12,5 lt  | 5,9 kg |
| 11001124 | 5/16"SAE    | 12,5 lt  | 5,9 kg |



## W2-WR40K/49

40 l refillable bottles without refrigerant with tube, liquid and vapour valve

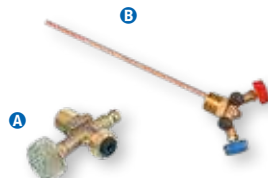
| Code     | Model       | Refrigerant                                 | Min. Qty |
|----------|-------------|---------------------------------------------|----------|
| 11001059 | W2-WR40K/49 | R134a - R407C - R427 - R404A - R507 - R410A | 1        |

| Code     | Connections | Capacity | Weight |
|----------|-------------|----------|--------|
| 11001059 | 1/4"SAE     | 40 lt    | 21 kg  |



## Spare parts and accessories

| Ref | Code     | Model        | Description            |
|-----|----------|--------------|------------------------|
|     | 05002024 | WRF2-P       | WR2.5K/48 with tube    |
| A   | 05002025 | WRF10        | WR10K/44               |
| B   | 05002016 | RF2-1/4"     | W2-WR10K/44 with tube  |
| B   | 05002032 | RF2-5/16"    | W2-WR9K/48/5 with tube |
| B   | 05002022 | RF2-40K-1/4" | W2WR40K/49 with tube   |



## HEATERS AND ADAPTERS FOR BOTTLES



### HOT-BLOWER

#### Hot blower

- Suitable to dry finned batteries (condensers-evaporators).
- Ideal to warm up the refrigerant during the transfer operations (from bottle to bottle and during recovery).

| Code     | Model      | Dimensions         | Weight |
|----------|------------|--------------------|--------|
| 14019019 | HOT-BLOWER | 195 x 170 x 190 mm | 1,6 kg |



#### Technical features

|                    |                         |
|--------------------|-------------------------|
| Power supply       | 230V-50/60Hz            |
| Power              | 550 W                   |
| Wind rate          | 2.7 m³/min              |
| Max. temperature   | 45 °C                   |
| Thermal cut-out    | Yes                     |
| Power switch       | On/Off with lock button |
| Power cable length | 1.8 mt                  |



### RSF400

#### Heater with thermostat

The heater is supplied with two springs.

| Code     | Model              | Dimensions         | Weight  |
|----------|--------------------|--------------------|---------|
| 14019007 | RSF 400/2T/CLASSE2 | 150 x 150 x 190 mm | 0,35 kg |
| 14023015 | Spring for heater  | -                  | -       |



#### Technical features

|               |           |
|---------------|-----------|
| Power         | 400 W     |
| Temperature   | 60 °C max |
| Heater length | 700 mm    |
| Spring length | 80 mm     |



#### Adapters for bottles



| Ref | Code        | Model  | Description                | Connections                                                                                                       |
|-----|-------------|--------|----------------------------|-------------------------------------------------------------------------------------------------------------------|
| A   | 05055009    | 816/2  | Adapter                    | 21.8W-1/14" DX F x 1/4 SAE M                                                                                      |
| A   | 05108020001 | 816/2K | kit 2 adapters with gasket | 21.8W-1/14" DX F x 1/4 SAE M   |
| B   | 05055011    | 816/6  | Adapter                    | 21.8W-1/14" DX F x 3/8 SAE M                                                                                      |
| B   | 05108067001 | 816/6K | kit 2 adapters with gasket | 21.8W-1/14" DX F x 3/8 SAE M   |
| C   | 05055022    | 816/5  | Adapter                    | 21.8W-1/14" DX F x 5/16 SAE M                                                                                     |
| C   | 05108068001 | 816/5K | kit 2 adapters with gasket | 21.8W-1/14" DX F x 5/16 SAE M  |
| D   | 05055100    | W404/6 | Adapter with gasket        | 1/4 SAE F x 3/8 SAE M 100                                                                                         |
| D   | 05108069001 | 404/6K | kit 2 adapters with gasket | 1/4 SAE F x 3/8 SAE M          |
| E   | 05055099    | W404/5 | Adapter with gasket        | 1/4 SAE F x 5/16 SAE M 100                                                                                        |
| E   | 05108022001 | 404/5K | kit 2 adapters with gasket | 1/4 SAE F x 5/16 SAE M         |
| F   | 05055088    | 821/5  | Adapter                    | 21.8W-1/14" SX F x 5/16 SAE M                                                                                     |



# CO<sub>2</sub> (R744)



NITROGEN  
PRESSURE  
TEST



## FOX-R744

### 2 ways digital manifold for CO<sub>2</sub> (R744)

FOX-R744 is realized on purpose to work with CO<sub>2</sub> (R744).

FOX-R744 has the same performances as the other Fox series (see page 52).

#### Functions:

- Maximum operating pressure 160 bar.
- 200 bar overpressure.
- 2 pressure transducers (0-160 bar).
- Precision class better than 1% FS.
- Type K temperature probes.
- Room temperature probe.
- 2-way piston manifold with 3 connections 1/4" SAE.
- Pressure test with nitrogen.

#### Equipment standard:

- 2 probes TK109.

| Code        | Model    | Dimensions         | Weight |
|-------------|----------|--------------------|--------|
| 04080001006 | FOX-R744 | 360 x 320 x 120 mm | 3 Kg   |



## Calibration

| Code     | Model                                    |
|----------|------------------------------------------|
| 09053012 | Calibration report ref. Accredia for Fox |



PROBES  
PAGE 127



## Accessories and parts for FOX-R744 and manifolds for R744

| Ref | Code        | Model        | Description                            |
|-----|-------------|--------------|----------------------------------------|
| A   | 04111016    | PWP-CO2      | Complet piston                         |
| B   | 14021027001 | PWKG-CO2 L   | LOW knob kit                           |
| B   | 14021028001 | PWKG-CO2 H   | HIGH knob kit                          |
| C   | 09012013    | TK 109       | Universal temperature probe            |
| D   | 09012037    | TK 109/STRIP | Universal temperature probe with strip |
| E   | 09012019    | TK 104       | Ambient probe                          |
| F   | 09012020    | TK 105       | Surface probe                          |
| G   | 09012016    | TK 106       | Insersion probe                        |
| H   | 09012017    | TK 107       | Clamp-on probe                         |



## CO<sub>2</sub> (R744) MANIFOLD KIT

2 ways piston manifold kit with Ø80 oil filled gauges for R744, class 1 with regulation screw and stainless steel case, 3 flexible hoses in plastic case.

| Code     | Model            | Connections | Bar pressures    |
|----------|------------------|-------------|------------------|
| 04101119 | K-PF2ML/D5-4-COS | 1/4"SAE     | -1 +100 / 0 +160 |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 04101119 | 360 x 320 x 120 mm | 2,5 kg |



## CO<sub>2</sub> (R744) MANIFOLD

2 ways piston manifold with Ø80 oil filled gauges for R744, class 1 with regulation screw and stainless steel case.

| Code     | Model         | Connections | Bar pressures    |
|----------|---------------|-------------|------------------|
| 04022060 | PF2ML/D5-4/K1 | 1/4"SAE     | -1 +100 / 0 +160 |

| Code     | Dimensions        | Weight |
|----------|-------------------|--------|
| 04022060 | 240 x 220 x 70 mm | 0,9 kg |



## CO<sub>2</sub> (R744) GAUGES - RADIAL CONNECTION

Pressure gauge, Ø 80, oil filled, class 1, radial connection 1/8NPT, with regulation screw and stainless steel case.

| Code     | Model            | Bar pressures |
|----------|------------------|---------------|
| 07113001 | ML80/100R1/D5/K1 | -1 +100       |
| 07113002 | ML80/160R1/D5/K1 | 0 +160        |

| Code     | Dimensions       | Weight |
|----------|------------------|--------|
| 07113001 | 100 x 90 x 40 mm | 0,3 kg |
| 07113002 | 100 x 90 x 40 mm | 0,3 kg |



## CO<sub>2</sub> (R744) GAUGES - REAR CONNECTION

Pressure gauges, Ø 80, oil filled, class 1, rear connection 1/4 SAE, mounting bracket and stainless steel case.

| Code     | Model             | Bar pressures |
|----------|-------------------|---------------|
| 07113014 | ML80/100C4S/D5/K1 | -1 +100       |
| 07113015 | ML80/160C4S/D5/K1 | 0 +160        |

| Code     | Dimensions      | Weight |
|----------|-----------------|--------|
| 07113014 | 90 x 90 x 70 mm | 0,3 kg |
| 07113015 | 90 x 90 x 70 mm | 0,3 kg |





### LOCK-VALVE-R744

#### CO<sub>2</sub> (R744) access valve

- Max operating pressure 160bar.
- Very efficient tightness that guarantees no gas leaks.
- Extremely reduced volumes that prevent gas leaks during the valve connecting or disconnecting phase.
- Very easy to handle.
- Prevent the burning risks to fingers when disconnecting.
- Constructive superior precision.
- PTFE seal.

| Code        | Model             | Connections             |
|-------------|-------------------|-------------------------|
| 05059064001 | LOCK-VALVE1/4-744 | 1/4" SAE F x 1/4" SAE M |
| Code        | Dimensions        | Weight                  |
| 05059064001 | 140 x 100 x 20 mm | 0,10 Kg                 |



### R744 (CO<sub>2</sub>) KIT OF 3 FLEXIBLE HOSES 1500 MM

PTFE hose, inox covering.

| Code     | Model             | Connections |
|----------|-------------------|-------------|
| 06103002 | 3COSS/4-4/60      | 1/4" SAE    |
| Code     | Dimensions        | Weight      |
| 06103002 | 430 x 230 x 20 mm | 0,5 kg      |



### Technical features

|                       |                  |
|-----------------------|------------------|
| Working max. pressure | 200 bar (20 MPa) |
| Busting pressure      | 800 bar (80 MPa) |
| Operating temperature | -60 °C ÷ +200 °C |



### Spare parts and accessories



B



C



| Ref | Code     | Model               | Description                                                         |    |
|-----|----------|---------------------|---------------------------------------------------------------------|----|
| A   | 14020097 | G-LV/T-WIG          | Kit 5 pz LOCK-VALVE gaskets                                         | 5  |
| B   | 08008059 | LOCK-VALVE-CARE     | Gaskets easy replacement tool for LOCK-VALVE, EW and flexible hoses | -  |
| C   | 08008065 | LOCK-VALVE-CARE-WIG | Counter display with 10 pz of LOCK-VALVE-CARE                       | 10 |

## NITROGEN REGULATOR (0-200 BAR) FOR CO<sub>2</sub> (R744) SYSTEMS

**200 bar**  
Special for  
R744

| Code     | Model     | Countries | Connections       |
|----------|-----------|-----------|-------------------|
| 10002039 | WN2-200   | IT        | W 27.1 x 1/14" M  |
| 10002041 | WN2-200/D | F-B-P-E   | Ø21.7 x 1.814F    |
| 10002040 | WN2-200/E | GB        | G 5/8" M          |
| 10002042 | WN2-200/C | D         | W 24.32 x 1/14" F |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 10002039 | 220 x 150 x 150 mm | 2,3 kg |
| 10002041 | 220 x 150 x 150 mm | 2,3 kg |
| 10002040 | 220 x 150 x 150 mm | 2,3 kg |
| 10002042 | 220 x 150 x 150 mm | 2,3 kg |



### Technical features

|                   |                        |
|-------------------|------------------------|
| Inlet pressure    | 300 bar (30 MPa)       |
| Outlet pressure   | 0-200 bar (0 - 20 MPa) |
| Connections       | 1/4" SAE M             |
| Regulation system | Piston                 |
| Inlet gauge       | 0-400 bar FS           |
| Outlet gauge      | 0-400 bar              |

## CO<sub>2</sub> (R744) TEST SYSTEM KIT

Complete with gauge 0-200 bar (3080 psi) with reference indicator.  
Hose total length 1750 mm.

| Code     | Model                    |
|----------|--------------------------|
| 05015014 | COSS/4-4/60V8/PF80/N2-K1 |

| Code     | Dimensions        | Weight |
|----------|-------------------|--------|
| 05015014 | 220 x 240 x 70 mm | 1 kg   |



## ADAPTER FOR CO<sub>2</sub> (R744) BOTTLE

| Code     | Model | Connections                  |
|----------|-------|------------------------------|
| 05055009 | 816/2 | 21.8W-1/4"D x F x 1/4" SAE M |





### EXACTA-MAXI-CO<sub>2</sub>

#### CO<sub>2</sub> (R744) electronic programmable scale

Very accurate charges, programmable by microprocessor.

Professional scale pan: 300 x 300 mm.

| Code     | Model           | Dimensions         | Weight |
|----------|-----------------|--------------------|--------|
| 09013022 | EXACTA-MAXI-CO2 | 460 x 350 x 170 mm | 8,5 kg |



#### Technical features

|                       |                                                                    |
|-----------------------|--------------------------------------------------------------------|
| Capacity              | 100 kg                                                             |
| Resolution            | ± 2 gr up to 9.999 gr (capacity 30 kg)<br>± 10 gr (capacity 10 kg) |
| Accuracy              | ± 5 gr up to 30 kg<br>± 10 gr > 30 kg                              |
| Scale pan dimensions  | 300 x 300 mm                                                       |
| Operating temperature | 0 - 50 °C                                                          |
| Power supply          | 230/1/50-60Hz                                                      |

## VOYAGER

R744

### VOYAGER (R744)

#### Infrared leak detector for R744 (CO<sub>2</sub>)

VOYAGER- R744 is equipped with an infrared sensor specifically for R744 (CO<sub>2</sub>) that offers superior accuracy, insensitivity to false alarms and extended service life.

The robust construction with unique ergonomic design, the innovative large LCD display and the rechargeable lithium-ion batteries make the infrared leak detector not only extremely reliable, but also very intuitive and easy to use.

- 3 sensitivity levels (L/M/H).
- Audible alarm and optimised graphics on large LCD screen.
- High-quality, durable double-barrier probe.
- "Mute" button and connection for headphones.
- Peak storage function.
- Automatic calibration.
- Ergonomic grip.
- Sturdy case with battery charger and 5 spare tips with filters.

| Code     | Model        | Dimensions        | Weight |
|----------|--------------|-------------------|--------|
| 09001119 | VOYAGER-R744 | 330 x 240 x 70 mm | 1,2 kg |



#### Technical features

|                     |                                  |
|---------------------|----------------------------------|
| Tecnology           | Infrared                         |
| Maximum sensitivity | <6 g/year                        |
| Calibration         | Automatic                        |
| Warm-up time        | <30 seconds                      |
| Response time       | <3 seconds                       |
| Probe length        | 40 cm                            |
| Power supply        | Rechargeable lithium-ion battery |
| Batteries life      | 8 consecutive hours              |
| Compliance          | CE, SAE J1627, EN14624           |





# HC (R290 - R600a - R1270)



## iDO ATEX - THE 4.0 ROBOT UNIT

**NEW**



CE ATEX 3G IIB T3 Gc

**EXCLUSIVE  
INNOVATION**



Wi-Fi 4.0  
Ready Interconnection



BOTTLES NOT INCLUDED IN THE KIT



Large digital control  
touchscreen display

### iDO ATEX

4.0 digital automatic portable unit suitable for R290 and R600a

The digital manifold turns into your compact ATEX 4.0 Robot. iDO ATEX is suitable to work with flammable refrigerants such as R290 and R600a and thanks to its electronics and its large LCD Touchscreen, it does not only display information and measurements, but also manages the various integrated or connected equipment in order to carry out autonomous operations, such as discharge and recovery, pressing, vacuum and charge, or cycles of operations, verifying the results with appropriate test phases and reports.

With multiple advantages ranging from time saving to certified quality of the work performed, it is possible to assign tasks or cycles of tasks to the iDO ATEX portable unit, with the certainty that they will be carried out, checked and certified through reports. The large touchscreen makes the unit extremely easy to use, while the interconnection on the Service Portal, accessible via PC and Smartphone, allows remote management and exchange of information in real time.

iDO ATEX meets the requirements for Impresa 4.0 benefits.

AUTOMATIC CYCLES



Management of  
PRESSURIZATION and TEST



Management of  
VACUUM and Test



Management of  
CHARGE

## iDO ATEX

### 4.0 digital automatic portable unit suitable for R290 and R600a

The iDO range is available in the following versions:

- iDO HFC (P. 46-47): for HFC (A2L included).
- iDO ATEX: suitable also for A3 refrigerants such as HC (R290, R600a).

Unit iDO ATEX features:

- ATEX Zone 2 Certification (CE Atex 3G IIB T3 Gc).
- Suitability to be used with A3 flammable refrigerants such as R600a-R290-R1270.
- Double automatic discharge system assisted by evacuation through integrated Atex vacuum pump or through flushing with nitrogen.
- Compatibility with refrigerants HC, CFC, HCFC, HFC (included R32 and R1234yf).
- Large digital control TouchScreen display.
- 2 pressure sensors (Low and High).
- Built-in electronic precision vacuum gauge (mTorr, Pa, mbar,...).
- 3 temperature sensors (Low, High, Ambient), Subcooling and Superheating.
- Compatibility with all K-type temperature probes (2 x TK109 included).
- 35kg removable scale with fittings and adapters for different cylinders.
- Connection for external cylinder of Nitrogen or Azidoro.
- USB port for data transfer and report.
- Integrated wifi kit for 4.0 ready Interconnection.
- Wigam Service Portal, accessible via PC and Smartphone for management, information exchange and report.
- Refrigerant database that can be updated from the portal.
- Database that can be updated with the charging data of the manufacturers.
- Dual stage 46 l/min integrated vacuum pump.

| Code     | Model    | Empty pump | Packaging dimensions | Weight   |
|----------|----------|------------|----------------------|----------|
| 01090036 | iDO-ATEX | RS3D-EX    | 650 x 400 x 380 mm   | 22,00 kg |

NEW

4.0  
READY

HC  
R600A-R290  
R1270



CE ATEX 3G IIB T3 Gc



### Automatic functions:



- PRESSURIZATION and TEST to check for leaks
- AUTOMATIC HC DISCHARGE
- VACUUM and VACUUM TEST with rising check
- REFRIGERANT CHARGE internal vehicles database
- USER-ADJUSTABLE AUTOMATIC CYCLES



### Calibration

| Code     | Model                      |
|----------|----------------------------|
| 09053054 | Calibration report for iDO |

### Technical features

|                         |                                                          |
|-------------------------|----------------------------------------------------------|
| Refrigerant             | CFC, HCFC, HFO, HC-A3 (R290,R600a...)                    |
| Dual stage vacuum pump  | 46 l/min                                                 |
| Scale                   | 35 kg                                                    |
| Empty range             | 1-350 Pa                                                 |
| Charge accuracy         | ±5g <5kg (detachment mode)                               |
| Power supply            | 230V 50/60Hz                                             |
| High/Low hoses          | 1,5m 1/4" SAE with LockValve 1/4"                        |
| Bearings for cyclinders | 1/4"SAE, 5/16"SAE<br>+ Supporti 7/16"SAE, 1/2"-16ACME Sx |

SPARE  
PARTS AND  
ACCESSORIES  
PAG. 99

### INTERCONNECTION: iDO meets the technical requirements for Impresa 4.0 benefits



4.0  
READY



CE ATEX 3G IIB T3 Gc



Bottles not included


**AUTOMATIC FUNCTIONS:**

- Nitrogen test for leak test.
- Test with azidro mixture for leak test.
- Nitrogen discharge.
- HC (R290, R600a) optimized discharge.
- Recovery management (recovery unit not included).
- Vacuum.
- Vacuum test and pressure rising test.
- Refrigerant charge.
- **2 automatic cycles:**

**CYCLE 1**

- Nitrogen test
- Vacuum and test vacuum
- Refrigerant charge

**CYCLE 2**

- HC discharge
- Nitrogen test
- Vacuum and test vacuum
- Refrigerant charge


**KOMPACT ATEX**

Automatic vacuum, test and charging ATEX station for service operations or small productions

The KOMPACT range is available in 2 variation:

- KOMPACT ATEX : suitable for HC (R290, R600) and precision charges.
- KOMPACT HFC (pag 81): for HFC (A2L included) with a 35 or 100Kg scale.
- Designed for use with hydrocarbon (R600a-R290-R1270).
- ATEX Zone 2 certification (CE Atex II 3G IIB T3 Gc).
- Hi-Accuracy Injection system (injection gun).
- Discharge procedure supported by integrated ATEX vacuum pump.
- Suitable for HC, CFC, HCFC, HFC (R32 e R1234yf included).
- Database with more than 50 refrigerants.
- Multilingual digital display.
- Fast access keys.
- Micro SD included: it allows to store the data and transfer to PC (software included).
- Integrated precision vacuum gauge.
- 35 scale for bottles/cylinders of different volumes.
- Integrated compartments to accommodate and transport cylinders or cartridges of refrigerant and Nitrogen.
- Handle and wheels for easy handling
- Supports for bottles 7/16", 1/2" 16 ACME Sx, 5/16"SAE

| Code     | Model        | Dimensions         | Weight  |
|----------|--------------|--------------------|---------|
| 01090033 | KOMPACT-ATEX | 400 x 450 x 815 mm | 36,5 kg |


**Calibration**

| Code     | Model                                                             |
|----------|-------------------------------------------------------------------|
| 09053052 | Calibration report ref. Accredia for KOMPACT-HFC and KOMPACT-ATEX |


**Technical features**

|                   |                                                                        |
|-------------------|------------------------------------------------------------------------|
| Refrigerants      | HC, CFC, HCFC, HFC, HFO                                                |
| Two-stage pump    | RS3D-EX (46 l/m) ATEX                                                  |
| Scale             | 35 Kg                                                                  |
| Vacuum range      | 1÷350Pa                                                                |
| Charging accuracy | ± 2g <5 kg / ±0.1% >5 kg                                               |
| Power supply      | 230V 50/60HZ                                                           |
| Connections       | 1/4" SAE Female + Cylinder supports 7/16", 1/2" 16 ACME Sx, 5/16" SAE" |



## Application examples



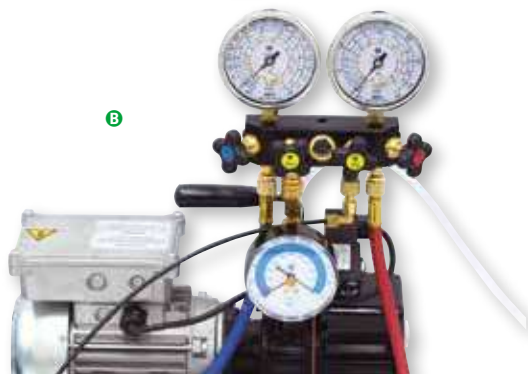
## Spare parts and accessories



| Ref | Code        | Model          | Description                                | Mn. Qty |
|-----|-------------|----------------|--------------------------------------------|---------|
| A   | 05059049001 | LOCK-VALVE1/4  | Access valve 1/4" SAE F x 1/4" SAE M       | -       |
| B   | 05059053001 | LOCK-VALVE/5-4 | Access valve 5/16" SAE F x 1/4" SAE M      | -       |
| C   | 05105008001 | GF6-1/4"NPT    | Quick connector for tube 6 mm              | -       |
| D   | 05105009001 | GF8-1/4"NPT    | Quick connector for tube 8 mm              | -       |
| E   | 05108045001 | WM 16-WIG      | Male quick coupling 1/4"NPT                | -       |
| F   | 05108046001 | WF 16-WIG      | Female quick coupling 1/4"NPT              | -       |
| G   | 05004002    | BPV 21         | Piercing valve Ø 12,7-15,8                 | 8       |
| G   | 05004003    | BPV 31         | Piercing valve Ø 6,3-7,9-9,5               | 12      |
| H   | 05004004    | W341           | Piercing valve Ø 4,8÷9,6                   | -       |
| I   | 05004005    | WPV 31         | Piercing valve Ø 6,3-7,9-9,5-10            | 10      |
| J   | 08006007    | PT-109         | Piercing plier                             | -       |
| K   | 08006011    | PP-343         | Piercing plier                             | -       |
| L   | 10002017    | AZ200-50       | Nitrogen regulator 200-50 bar with bracket | -       |
| M   | 11001060    | BN2/1-TPED     | Nitrogen cartridge 950 cc                  | 12      |
|     | 11001112    | AZOIDRO        | Azoidro cartridge 1 litre                  | 12      |
| N   | 11003011    | BAZ 50/1       | Nitrogen bottle 5 litres                   | -       |
|     | 11003020    | AZOIDRO/5      | Azoidro bottle 5 litres                    | -       |



Cartridge not included



Detail of the kit with solenoid valve and vacuum meter

## KIT K-EX-46D/D6

### Vacuum and charging kit for R600a-R290-R1270

In compliance with the work safety recommendations when using hydrocarbons and flammable refrigerants, the kit is equipped with an ATEX-certified vacuum pump in the two versions without **A** and with solenoid valve and vacuum meter **B**.

The kit is equipped with the quick assembly kit of the manifold on the vacuum pump patented by Wigam.

All components are provided in comfortable trunk for simple handling.

Standard equipment:

- ATEX (Zone 2) vacuum pump RS3D-EX.
- 4 ways piston manifold, d. 80 oil filled pressure gauges, for R600a-R290-R1270.
- 2 flexible hoses 1500 mm, 1/4"SAE.
- 2 access valve LOCK-VALVE 1/4"- SAE F x 1/4" SAE M.
- 1 discharge vapour hose 5 m.
- Electronic scale 5kg, resolution 1g.
- 2 supports for cartridge (R290 and R600a).
- 1 mineral oil bottle.

| Ref      | Code        | Model          |
|----------|-------------|----------------|
| <b>A</b> | 01010008001 | K-EX46D/D6     |
| <b>B</b> | 01010008003 | K-EX-EV-46D/D6 |

| Ref      | Code        | Dimensions         | Weight  |
|----------|-------------|--------------------|---------|
| <b>A</b> | 01010008001 | 550 x 330 x 360 mm | 12,8 kg |
| <b>B</b> | 01010008003 | 550 x 330 x 360 mm | 12,8 kg |



### Technical features

|                 |                         |
|-----------------|-------------------------|
| Scale capacity  | 5 kg                    |
| Pump volume     | 46 l/min                |
| Ultimate vacuum | 1x10 <sup>-2</sup> mbar |



### Spare parts



| Ref      | Code        | Model         | Description                   | Mn. Qty |
|----------|-------------|---------------|-------------------------------|---------|
| <b>A</b> | 06053010    |               | Vapour exhaust pipe 5 m       | -       |
| <b>B</b> | 06071002001 | GYSS/4-4/60 B | Hose 1500 mm 1/4 x 1/4 - Blue | -       |
| <b>C</b> | 06071002002 | GYSS/4-4/60 R | Hose 1500 mm 1/4 x 1/4 - Red  | -       |
| <b>D</b> | 12002003    | K1L           | Mineral oil 1 l               | 12 pz   |

## RS3D-EX

### ATEX high vacuum pump

Designed specifically to operate, according to the ATEX directive with systems characterized by A3 refrigerants such as HC (such as R290 and R600a).

Available in two versions: without **A** and with solenoid valve-vacuummeter **B**.

Equipped with vapour discharge hose 5 m.

| Ref      | Code     | Model      | Dimensions         | Weight |
|----------|----------|------------|--------------------|--------|
| <b>A</b> | 02002052 | RS3D-EX    | 267 x 150 x 250 mm | 6,4 kg |
| <b>B</b> | 02099036 | RS3DE/V-EX | 267 x 150 x 250 mm | 6,4 kg |



### Technical features

|                   |                         |
|-------------------|-------------------------|
| Swept volume      | 46 l/min                |
| Ultimate vacuum   | 1x10 <sup>-2</sup> mbar |
| Power supply      | 220-240/1/50-60         |
| Nominal power     | 120 W                   |
| Protection degree | IP54                    |
| Oil charge        | 300 cc                  |
| Connections       | 1/4" NPT-F - 1/4" SAE   |



### Spare parts

| Code     | Description               |
|----------|---------------------------|
| 06053010 | Vapour discharge hose 5 m |



CE ATEX II 3G c T3



## 4-WAYS PISTON MANIFOLD WITH PRESSURE GAUGES Ø80 CLASS 1 OIL-FILLED

With regulation screw.

| Code     | Model           | Refrigerants     | Dial      |
|----------|-----------------|------------------|-----------|
| 04024039 | PW4ML80/D6/4/K1 | R600a-R290-R1270 | <b>D6</b> |

| Code     | Connections             | Dimensions        | Weight |
|----------|-------------------------|-------------------|--------|
| 04024039 | 3x1/4" SAE + 1x3/8" SAE | 220 x 220 x 70 mm | 0,9 kg |



OTHER  
SOLUTIONS  
PAGE 60

## ACCESS VALVES

| Code        | Model           | Connections             |
|-------------|-----------------|-------------------------|
| 05059049001 | LOCK-VALVE 1/4" | 1/4" SAE F x 1/4" SAE M |

| Code        | Dimensions        | Weight |
|-------------|-------------------|--------|
| 05059049001 | 140 x 100 x 20 mm | 0,1 kg |





ATEX II 3G Ex nA IIA T3 Gc



## FOX-EX/100

### 4-way digital manifold (ATEX Zone 2)

The FOX-EX 4-way digital manifold (ATEX Zone 2) is designed specifically to support refrigerators in service operations on systems that use A3 refrigerants such as R290 and R600a.

FOX-EX/100 (ATEX Zone 2), responding to the needs of an evolving market that will see in refrigeration the increasing spread of refrigerants with reduced environmental impact, is extremely flexible thanks to 50 other refrigerants in memory (see list at page 52).

FOX-EX/100 offers all the features of the FOX series.

Features and equipment:

- 4-way piston manifold 3x1/4" (LOW-HIGH-REF) and 1x3/8" (VAC).
- Database with more than 50 refrigerants (CFCs, HCFCs, HFCs, Hydrocarbons and HFOs).
- Maximum operating pressure 56 bar.
- 2 Pressure Transducers (Range -0.99 )
- Precision class better than 1% FS.
- 2 K-type temperature probes.
- Ambient temperature probe.
- Pressure test with nitrogen.
- Standard equipment:
- 2 TK109 (3 m) probes.
- Robust and practical case.

| Code        | Model      | Dimensions         | Weight |
|-------------|------------|--------------------|--------|
| 04080014001 | FOX-EX/100 | 310 x 370 x 130 mm | 2 Kg   |



### Displayed readings

Low pressure side (LOW)  
 High pressure side (HIGH)  
 Temperature T1  
 Temperature T2  
 Ambient temperature  
 Refrigerant saturation temperature (LOW)  
 Refrigerant saturation temperature (HIGH)  
 Calculating the temperature difference T2 - T1  
 Subcooling  
 Superheating  
 Type of refrigerants



### Calibration

| Code     | Model                                    |
|----------|------------------------------------------|
| 09053012 | Calibration report ref. Accredia for FOX |
| 14025158 | Refrigerating database upgrade           |



### Accessories for FOX-EX/100

| Ref | Code        | Model           | Description                                               |
|-----|-------------|-----------------|-----------------------------------------------------------|
| A   | 05059049001 | LOCK-VALVE1/4   | Access valve 1/4" SAE F x 1/4" SAE M                      |
| A   | 05059053001 | LOCK-VALVE/5-4  | Access valve 5/16" SAE F x 1/4" SAE M                     |
| B   | 14020097    | G-LV/T-WIG      | Kit 5pz seals for LOCK VALVE                              |
| C   | 08008059    | LOCK-VALVE-CARE | Gaskets easy replacement tool in LOCK-VALVE, EW and hoses |
| D   | 06140001    | IVSS/6-6/36     | Hose IperVAC 900 mm 3/8" SAE                              |



## FAN-ATEX

### Atex Fan

Essential service accessory to be used with flammable refrigerants.

- Heavy Duty unit certified ATEX ZONE 2 (CE ATEX II 3G Ex ec IIC Gc).
- 5 mt power cable.
- Optimum capacity in compact dimensions.
- Capacity: 25 m<sup>3</sup>/min.
- Diameter: 254 mm.
- Power: AC 230V-50/60 Hz.

| Code     | Model    | Dimensions         | Weight |
|----------|----------|--------------------|--------|
| 14006059 | FAN-ATEX | 350 x 200 x 350 mm | 5 kg   |

**NEW**



CE ATEX II 3G Ex ec IIC Gc



## R-ECOPUMP

### Manual system for refrigerant and oil transfer

Safe system, not have ignition sources, especially designed for recovery/transfer/charge of flammable refrigerants (A3, A2L).

The system enables to recover the refrigerant minimizing the residual quantities.

Can be used with followings refrigerants and lubricants:

R290 - R600a - R134a - R1234ze - R1234yf - R12 - R22.

Equipped with:

- 2 flexible hoses with valve 1/4" SAE 1500 m, blue and red.

| Ref      | Code     | Model        | Description                                                                |
|----------|----------|--------------|----------------------------------------------------------------------------|
| <b>A</b> | 13001026 | R-ECOPUMP    | Manual system                                                              |
| <b>B</b> | 11001124 | W2-WR9K/48/5 | 12.5 lt refillable bottle without refrigerant with liquid and vapour valve |

| Ref      | Code     | Dimensions         | Weight |
|----------|----------|--------------------|--------|
| <b>A</b> | 13001026 | 580 x 255 x 140 mm | 3 kg   |
| <b>B</b> | 11001124 |                    | 5,9 kg |



## Technical features

|                                   |            |
|-----------------------------------|------------|
| Max operating pressure            | 12 bar     |
| Liquid flow rate (for R134-R1234) | 800 g/min* |
| Vapour flow rate (for R134-R1234) | 180 g/min* |
| Liquid flow rate (for R290-R600)  | 320 g/min* |
| Vapour flow rate (for R290-R600)  | 72 g/min*  |
| Reachable vacuum                  | - 0,8 bar  |
| Max temperature                   | 40 °C      |

\*The calculation of the flow rate has been made considering a mean of 40/45 pumpings per minute.



## BOTTLES R600a - R290



### CHARGING OPTIMIZATION DEVICE AND CONTROL OF WORKING PRESSURES

Thanks to its small inner volumes and to its easy regulation, the device allows to optimize the HVAC systems charging process, maximizing the accuracy and reducing at the lowest the quantity of dissipated refrigerant.

| Code     | Model            | Dimensions        | Weight |
|----------|------------------|-------------------|--------|
| 04001082 | W1VRML80/D6/4/K1 | 220 x 240 x 70 mm | 0,7 kg |



### CARTRIDGES, VALVES AND SUPPORTS FOR R600a

Disposable cartridges with refrigerant R600a

| Ref      | Code     | Model      | Refrigerant | Refrig. Qty | Connections | Mn. Qty | Weight  |
|----------|----------|------------|-------------|-------------|-------------|---------|---------|
| <b>A</b> | 11001026 | BF420/R600 | R600a       | 420 gr      | 7/16"       | 12      | 0,60 kg |

Valves and supports for disposable cartridges R600a

| Ref      | Code        | Model | Description        | Connections          |
|----------|-------------|-------|--------------------|----------------------|
| <b>B</b> | 05002003001 | BVR-4 | Valve              | 7/16" F x 1/4" SAE M |
| <b>C</b> | 05104038    |       | Support + 90° hose | 7/16" F x 1/4" SAE F |



### CARTRIDGES, VALVES AND SUPPORTS FOR R290

Disposable cartridges with refrigerant R290

| Ref      | Code     | Model      | Refrig. | Refrig. Qty | Connections     | Mn. Qty | Weight  |
|----------|----------|------------|---------|-------------|-----------------|---------|---------|
| <b>A</b> | 11001085 | BF370/R290 | R290    | 370 gr      | 1/2" 16 ACME SX | 12      | 1,15 kg |

Valves and supports for disposable cartridges R290

| Ref      | Code        | Model          | Description        | Connections                      |
|----------|-------------|----------------|--------------------|----------------------------------|
| <b>B</b> | 05002035001 | 121 RGAS-4-WIG | Valve              | 1/2" - 16 ACME SX F x 1/4" SAE M |
| <b>C</b> | 05104052    |                | Support + 90° hose | 1/2" - 16 ACME SX F x 1/4" SAE F |

## PIERCING PLIERS

Sturdy piercing pliers that allows to have an immediate piercing of the refrigeration system charging hose.

Indispensable for performing vacuum and charging operations especially on HVAC systems with flammable refrigerants (HC - hydrocarbons).

| Ref | Code     | Model  | Connections | Ø tubes mm          |
|-----|----------|--------|-------------|---------------------|
| A   | 08006007 | PT-109 | 1/4" SAE    | 1/4"-1/2" (6-12 mm) |
| B   | 08006011 | PP-343 | 1/4" SAE    | 1/4" (6 mm)         |

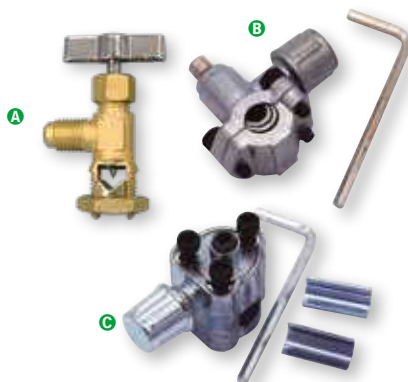
| Ref | Code     | Dimensions        | Weight  |
|-----|----------|-------------------|---------|
| A   | 08006007 | 300 x 130 x 25 mm | 0,26 kg |
| B   | 08006011 | 240 x 75 x 25 mm  | 0,43 kg |



## TUBE PIERCING VALVES

| Ref | Code     | Model  | Connections | Ø tubes mm     | Mn. Qty |
|-----|----------|--------|-------------|----------------|---------|
| A   | 05004004 | W341   | 1/4" SAE    | 4,8 ÷ 9,6      | -       |
| B   | 05004005 | WPV31  | 1/4" SAE    | 6,3-7,9-9,5-10 | 10      |
| C   | 05004002 | BPV 21 | 1/4" SAE    | 12,7-15,8      | 8       |
| C   | 05004003 | BPV 31 | 1/4" SAE    | 6,3-7,9-9,5    | 12      |

| Ref | Code     | Dimensions        | Weight |
|-----|----------|-------------------|--------|
| A   | 05004004 | 70 x 30 x 30 mm   | 0,1 kg |
| B   | 05004005 | 150 x 100 x 65 mm | 0,7 kg |
| C   | 05004002 | 135 x 85 x 80 mm  | 1,0 kg |
| C   | 05004003 | 150 x 100 x 65 mm | 1,2 kg |



## PINCH-OFF PLIERS

Sturdy pinch-off pliers. Allows to deform and close copper pipes, thanks to its particular jaws.

| Ref | Code     | Model   | Ø tubes mm  |
|-----|----------|---------|-------------|
| A   | 08006001 | RR      | 1/8" - 3/8" |
| B   | 08006012 | POP-201 | 1/8" - 3/8" |

| Ref | Code     | Dimensions       | Weight  |
|-----|----------|------------------|---------|
| A   | 08006001 | 250 x 80 x 20 mm | 0,36 kg |
| B   | 08006012 | 190 x 60 x 20 mm | 0,35 kg |



## RATCHET TUBE CUTTER

| Code     | Model   | Sizes                                  |
|----------|---------|----------------------------------------|
| 08002020 | WR-TC12 | from 1/8" to 1/2" (from 3 mm to 12 mm) |

| Code     | Dimensions        | Weight |
|----------|-------------------|--------|
| 08002020 | 190 x 100 x 30 mm | 0,2 kg |





## SELF-FLARING CAPS



### EASY-CAP

#### Self-flaring caps for hermetic closure of the end of the service pipes

EASY CAP is a simple and fast system that allows hermetic sealing of service pipes, without carrying out welding operations.

EASY-CAP is easily applicable only with the use of two simple hexagonal keys.

The result obtained is of the same hermetic level as a weld, but without the disadvantages it entails.

| Code        | Model              | Description                 | Mn. Qty |
|-------------|--------------------|-----------------------------|---------|
| 05108109    | EASY-CAP-1/4-6     | Self-flaring caps           | 500     |
| 05108109001 | EASY-CAP-1/4-6-10K | Kit 10 pz self-flaring caps | 10      |

| Code        | Ø tube   | Weight |
|-------------|----------|--------|
| 05108109    | 1/4" 6mm | 40 gr  |
| 05108109001 | 1/4" 6mm | 400 gr |



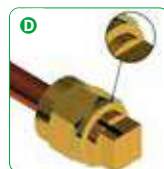
**A** Insert the tube into the EASY CAP system.



**B** Tighten the nut until the signal.



**C** Loosen to check the quality of the work obtained.



**D** Tighten again with 1/4 of a turn at the end of the work.



### INTERNAL CORE FOR HC (R290, R600a)

| Code        | Model         | Description                                   | Mn. Qty |
|-------------|---------------|-----------------------------------------------|---------|
| 14023023    | M1/4"-R290/V  | Internal core for HC R290 R600 1/4"           | 500     |
| 05108110001 | M1/4"-R290/VK | Kit 10 pz internal core for HC R290 R600 1/4" | 10      |



### CAP WITH GASKET FOR HC (R290, R600a)

| Code        | Model        | Description                                                     | Mn. Qty |
|-------------|--------------|-----------------------------------------------------------------|---------|
| 05063055    | CP1/4"-R290  | Cap for HC service ports R290-R600a equipped with internal core | 500     |
| 05108111001 | CP1/4"-R290K | Kit of 10 pcs of cap for R290-R600a                             | 10      |

## ELD-C EX

### Combustible gas leak detector

Ideal for locating leaks in industrial, commercial and residential refrigeration and heating systems, ELD-C EX detects fuel gas concentrations of up to 5 ppm.

- ATEX Zone 2 Certificate (ATEX II 3G Ex nA IIA T3 Gc)
- Self-calibrating and with low maintenance.
- Sensitivity less than 50 ppm. (Propane, Iso-butane, Methane).
- Light and ergonomic.
- Visual and sound loss detection signal.

Gases detected: propane, methane, iso-butane, natural gas, acetone, hesean, acetylene, benzene, butane, ethanol, etylene oxide, gasoline, hydrogen, industrial solvents, methanol, paint thinners, naphtha, GPL, etc.

| Codice   | Modello  | Dimensioni        | Peso    |
|----------|----------|-------------------|---------|
| 09001117 | ELD-C EX | 310 x 210 x 80 mm | 0,90 kg |



### Technical features

|                     |                               |
|---------------------|-------------------------------|
| Technology          | semi-conductor                |
| Maximum sensitivity | <50 ppm                       |
| Calibration         | automatic                     |
| Warm-up time        | from 25 to 90 seconds         |
| Response time       | 5 seconds                     |
| Probe Length        | 30 cm                         |
| Power supply        | 2x 1,5V AA alkaline batteries |
| Batteries life      | 11 hours                      |



ATEX II 3G Ex nA IIA T3 Gc



### Spare parts

| Code     | Model | Description              |
|----------|-------|--------------------------|
| 09050074 | ELS-C | Sensing tip for ELD-C EX |

## SURE CHECK

### "Sure Check" leak detector

- Gases detected: propane, methane, iso-butane, natural gas, acetone, acetylene.
- Formula for all temperatures: from -48°C to 93°C (from -55°F to 200°F).
- Ultra sensitive; long-lasting bubbles.
- Fluorescent bubbles for better visibility.
- Not corrosive, non-toxic.
- Can be used with refrigerants, natural gas, propane and oxygen.

| Code     | Model | Quantity | Dimensions       | Weight |
|----------|-------|----------|------------------|--------|
| 09001024 | 32850 | 473 ml   | 260 x 70 x 70 mm | 0,6 kg |





**AIR CONDITIONING AND REFRIGERATION**  
SYSTEMS AND INSTRUMENTS



*Solutions for Natural  
and LOW GWP refrigerants*

**HC (R600a - R290)**



**HFC (R32...) HFO (R1234...)**

**CO<sub>2</sub> (R744)**



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EQUIPMENTS.



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# INSTRUMENTS



## ELECTRONIC SCALES COMPARATIVE TABLE

|                                  | EXACTA MAXI                                                                       | PRATIKA WL 100-05                                                                 | PRATIKA-PLUS 100-05                                                               | PRATIKA 100-05                                                                    | W8025                                                                              |
|----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|                                  |  |  |  |  |  |
| Max capacity                     | 100 kg                                                                            | 100 kg                                                                            | 100 kg                                                                            | 100 kg                                                                            | 5 kg                                                                               |
| Resolution                       | $\pm 2$ g up to 9999 g (capacity 30 kg)<br>$\pm 10$ g (capacity 100 kg)           | 5 g                                                                               | 5 g                                                                               | 5 g                                                                               | 1 g                                                                                |
| Accuracy                         | $\pm 5$ g up to 30 kg<br>$\pm 10$ g/f > 30 kg                                     | 0,5% value                                                                        | 0,5% value                                                                        | 0,5% value                                                                        | 1 g                                                                                |
| Programmable charge and recovery | ✓                                                                                 | -                                                                                 | ✓                                                                                 | -                                                                                 | -                                                                                  |
| Scale pan dimensions             | 300 x 300 mm                                                                      | 270 x 270 mm                                                                      | 230 x 230 mm                                                                      | 230 x 230 mm                                                                      | Ø 140 mm                                                                           |
| Measuring units                  | kg                                                                                | kg, lbs                                                                           | kg, lbs/oz                                                                        | kg, lbs/oz                                                                        | kg, lbs                                                                            |
| Operating temperature            | 0-50 °C                                                                           | 0-45°C                                                                            | 0-45°C                                                                            | 0-45°C                                                                            | 0-45°C                                                                             |
| Auto power off                   | -                                                                                 | 30 min                                                                            | 1,5 min                                                                           | 1,5 min                                                                           | 3 min                                                                              |
| Power supply                     | 230/1/50-60 Hz                                                                    | 8 x 1,5V AA alkaline batteries                                                    | 4 x 1,5V AA alkaline batteries                                                    | 1 x 9V alkaline batteries                                                         | 2 x 1,5V AA alkaline batteries                                                     |
| Dimensions                       | 460 x 350 x 170 mm                                                                | 430 x 300 x 85 mm                                                                 | 380 x 300 x 80 mm                                                                 | 380 x 300 x 80 mm                                                                 | 235 x 130 x 40 mm                                                                  |
| Weight                           | 8,5 kg                                                                            | 2,5 kg                                                                            | 3,70 kg                                                                           | 3,10 kg                                                                           | 0,5 kg                                                                             |



## W8025

Electronic scale up to 5 kg

| Code     | Model | Dimensions        | Weight |
|----------|-------|-------------------|--------|
| 09013018 | W8025 | 235 x 130 x 40 mm | 0,5 kg |



## Technical features

|                      |                             |
|----------------------|-----------------------------|
| Max capacity         | 5 kg                        |
| Resolution           | 1 g                         |
| Accuracy             | 1 g                         |
| Scale pan dimensions | Ø 140 mm                    |
| Measuring units      | kg, lbs                     |
| Power supply         | 2x1,5 AA alkaline batteries |

## EXACTA-MAXI

### Programmable electronic scale up to 100 kg

- Display reading.
- Very accurate charges and recoveries, programmable by microprocessor.
- Pre-set data storage in case of power supply interruption.
- Charge and discharge repeatability function.
- Suitable to work with all refrigerants (R410A included).
- Strong manufacture for small and medium productions.
- Compact and handy.

| Code     | Model           | Dimensions         | Weight |
|----------|-----------------|--------------------|--------|
| 09013021 | EXACTA-MAXI     | 460 x 350 x 170 mm | 8,5 kg |
| 09013022 | EXACTA-MAXI-CO2 | 460 x 350 x 170 mm | 8,5 kg |



### Technical features

|                       |                                       |
|-----------------------|---------------------------------------|
| Max capacity          | 100 kg                                |
| Resolution            | ± 2 g up to 9.999 gr (capacity 30 kg) |
| Accuracy              | ± 5 g up to 30 kg ± 10 g/f > di 30 kg |
| Scale pan dimensions  | 300 x 300 mm                          |
| Measuring units       | kg                                    |
| Operating temperature | 0 - 50 °C                             |
| Power supply          | 230/1/50-60Hz                         |

## PRATIKA-WL 100-05

### Wireless electronic scale up to 100 kg

- WIRELESS technology.
- Increased platform 270x270 mm.
- Memory function for bottle replacement.
- Acoustic signal on reaching of the desired value.

| Code     | Model             | Dimensions        | Weight |
|----------|-------------------|-------------------|--------|
| 09013026 | PRATIKA-WL 100-05 | 430 x 300 x 85 mm | 2,5 kg |



### Technical features

|                       |                        |
|-----------------------|------------------------|
| Max capacity          | 100 kg                 |
| Resolution            | 5 g                    |
| Accuracy              | 0,5 % value            |
| Scale pan dimensions  | 270 x 270 mm           |
| Measuring units       | kg, lbs                |
| Operating temperature | 0 - 45 °C              |
| Auto power off        | 30 min                 |
| Power supply          | 8 x1,5 AAA             |
| Batteries life        | 50 hours in continuous |



### Calibration

| Code        | Model               | Description                                |
|-------------|---------------------|--------------------------------------------|
| 09053013    |                     | Calibration report ref. Accredia for scale |
| 09013026001 | PRATIKA-WL100-05/RT | Scale with calibration report              |

## ELECTRONIC SCALES



### PRATIKA-PLUS 100-05

Programmable electronic scale up to 100 kg

| Code     | Model               | Dimensions        | Weight  |
|----------|---------------------|-------------------|---------|
| 09013020 | PRATIKA-PLUS 100-05 | 380 x 300 x 80 mm | 3,70 kg |



#### Technical features

|                       |              |
|-----------------------|--------------|
| Max capacity          | 100 kg       |
| Resolution            | 5 g          |
| Accuracy              | 0,5 % value  |
| Scale pan dimensions  | 230 x 230 mm |
| Measuring units       | kg, lbs/oz   |
| Operating temperature | 0° - 45° C   |
| Auto power off        | 1.5 min      |
| Power supply          | 4x1,5 AA     |



#### Calibration

| Code        | Model                  | Description                                |
|-------------|------------------------|--------------------------------------------|
| 09053013    |                        | Calibration report ref. Accredia for scale |
| 09013020001 | PRATIKA-PLUS 100-05/RT | Scale with calibration report              |

### PRATIKA 100-05

Electronic scale up to 100 kg

| Code     | Model          | Dimensions        | Weight  |
|----------|----------------|-------------------|---------|
| 09013019 | PRATIKA 100-05 | 380 x 300 x 80 mm | 3,10 kg |



#### Technical features

|                       |                       |
|-----------------------|-----------------------|
| Max capacity          | 100 kg                |
| Resolution            | 5 g                   |
| Accuracy              | 0,5 % value           |
| Scale pan dimensions  | 230 x 230 mm          |
| Measuring units       | kg, lbs/oz            |
| Operating temperature | 0° - 45° C            |
| Auto power off        | 1.5 min               |
| Power supply          | 9V alkaline batteries |



#### Calibration

| Code        | Model             | Description                                |
|-------------|-------------------|--------------------------------------------|
| 09053013    |                   | Calibration report ref. Accredia for scale |
| 09013019001 | PRATIKA 100-05/RT | Scale with calibration report              |

|                                  | VOYAGER-IR                                                                        | VOYAGER                                                                           | ELD-H                                                                             | VOYAGER-R744                                                                      | ELD-C EX                                                                          | ELD-A                                                                              |
|----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|                                  |  |  |  |  |  |  |
| HFC, CFC, HCFC<br>(Included R32) | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | -                                                                                 | -                                                                                 | -                                                                                  |
| HFO<br>(es. R1234yf, R1234ze)    | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | -                                                                                 | -                                                                                 | -                                                                                  |
| HC (CH4, R290, R600)             | -                                                                                 | ✓                                                                                 | -                                                                                 | -                                                                                 | ✓                                                                                 | -                                                                                  |
| R744 (CO2)                       | -                                                                                 | -                                                                                 | -                                                                                 | ✓                                                                                 | -                                                                                 | -                                                                                  |
| Azidro (N2-H2)                   | -                                                                                 | ✓                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | ✓                                                                                  |
| Technology                       | Infrared                                                                          | Semi-conductor                                                                    | Negative crown                                                                    | Infrared                                                                          | Semi-conductor                                                                    | Semi-conductor                                                                     |
| Maximum sensitivity              | 4 g/year                                                                          | 3 g/year                                                                          | 3 g/year                                                                          | 6 g/year                                                                          | <50 ppm                                                                           | 4,9 g/year                                                                         |
| Automatic calibration            | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                  |
| Audible                          | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                  |
| Visual display                   | LCD display                                                                       | LCD display                                                                       | LED tricolor                                                                      | LCD display                                                                       | LED tricolor                                                                      | LED tricolor                                                                       |
| Sensor life                      | 10 years                                                                          | 1 year                                                                            | 30 hours                                                                          | 10 years                                                                          | 1 year                                                                            | 1 year                                                                             |
| Warm-up time                     | <30 sec                                                                           | <60 sec                                                                           | <2 sec                                                                            | <30 sec                                                                           | from 25 to 90 sec                                                                 | from 25 to 90 sec                                                                  |
| Response time                    | <3 sec                                                                            | <3 sec                                                                            | instant                                                                           | <3 sec                                                                            | 5 sec                                                                             | 5 sec                                                                              |
| Compliance CE EN14624            | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | -                                                                                 | -                                                                                  |
| Probe Length                     | 40 cm                                                                             | 40 cm                                                                             | 30 cm                                                                             | 40 cm                                                                             | 30 cm                                                                             | 30 cm                                                                              |
| Power supply                     | Rechargeable lithium                                                              | Rechargeable lithium                                                              | 2x 1,5V AA alkaline batteries                                                     | Rechargeable lithium                                                              | 2x1.5V AA Alkaline batteries                                                      | 2x 1,5V AA alkaline batteries                                                      |
| Batteries life                   | 6 hours                                                                           | 6 hours                                                                           | 40 hours                                                                          | 6 hours                                                                           | 11 hours                                                                          | 11 hours                                                                           |

## INFRARED LEAK DETECTORS



# VOYAGER



### VOYAGER-IR

#### Infrared leak detector for HVAC and A/C

VOYAGER-IR offers you maximum reliability and accuracy in leak detection.

leak detection. With its infrared sensor, it offers the best insensitivity to false alarms and also incomparable longevity.

VOYAGER-IR detects all halogenated refrigerants HFC, CFC, HCFC, HFOs and their mixtures including A2L refrigerants such as R32 or R1234yf.

The sturdy construction with unique ergonomic design, the innovative large LCD display and the rechargeable lithium-ion batteries make the infrared leak detector not only extremely reliable, but also very intuitive and easy to use.

- Sealed sensor: the sensor doesn't "touch" refrigerant as it passes through the instrument.
  - Doesn't trigger on high concentrations, liquid or moisture like other types of detectors.
  - Senses change in refrigerant levels, working even in contaminated environments.
- VOYAGER-IR designed for HVAC e A/C:
- 3 Sensitivity Levels (4gr/yr).
  - Audible alarm and optimized graphics on large LCD screen.
  - High quality sturdy probe.
  - Peak / Mute buttons and connection for earphone.
  - Ergonomic design.
  - Sturdy case.
  - Complies with EN14624:2012, SAE J1627, SAE J2791, SAE J2913.

| Code     | Model      | Dimensions        | Weight |
|----------|------------|-------------------|--------|
| 09001116 | VOYAGER-IR | 330 x 240 x 70 mm | 1,2 kg |



#### Detects all halogenated refrigerants, including:

|      |                                       |
|------|---------------------------------------|
| CFC  | R12-R11-R500-R503                     |
| HCFC | R22-R123-R124-R502                    |
| HFC  | R134A-R404A-R125-R407C-R507-R410A-R32 |
| HFO  | R1234yf and R1234ze                   |



#### Technical features

|                       |                                  |
|-----------------------|----------------------------------|
| Tecnology             | infrared                         |
| Maximum sensitivity   | 4 g/year                         |
| Calibration           | automatic                        |
| Warm-up time          | <30 seconds                      |
| Response time         | < 3 seconds                      |
| Operating temperature | -20°C +60°C                      |
| Probe Length          | 40 cm                            |
| Power supply          | rechargeable lithium-ion battery |
| Batteries life        | 6 hours continue                 |
| Compliance            | CE n. 1516 2007                  |



#### CE N 1516/2007: METHODS OF DIRECT MEASUREMENT

#### ARTICLE 6

Gas detection devices referred to in paragraph 1(a) shall be checked every 12 months to ensure their proper functioning. The sensitivity of portable gas detection devices shall be at least five grams per year.



#### Calibration

| Code        | Model         | Description                           |
|-------------|---------------|---------------------------------------|
| 09053009005 |               | Calibration report for leak detector  |
| 09001116001 | VOYAGER IR/RT | Leak detector with calibration report |

## VOYAGER

### Semi-conductor electronic leak detector

With its new heated diode sensor, VOYAGER combines multiple instruments in a single ally ready to support you in the different needs and detection strategies you decide to apply.

It detects efficiently all HFC, CFC, HCFC, HFO halogenated refrigerants and their mixtures (including A2 such as R32 or R1234yf).

It also extends its versatility by detecting HC hydrocarbons (such as R290 and R600a) and the AZOIDRO mixture (95% Nitrogen-5% Hydrogen) designed specifically for pressurisation for leak detection, without the need to purchase an additional sensing element.

The sensing element protection chamber, the lithium-ion battery and the new robust ergonomic design with large colour LCD screen further enhance this ideal leak detection instrument for maintenance and repair with the readiness and versatility of the new heated diode sensor.

- Multiple sensitivity levels (3gr/year).
- Sound alarm and optimized graphics on LCD screen.
- "Mute" button and headphone connection.
- Peak button.
- Ergonomic handle.
- High quality sturdy probe.
- Complies with EN14624: 2012, SAE J1627.

| Code     | Model   | Dimensions        | Weight |
|----------|---------|-------------------|--------|
| 09001115 | VOYAGER | 330 x 240 x 70 mm | 1,0 kg |



# VOYAGER



### Detects all halogenated refrigerants, including:

|       |                                                   |
|-------|---------------------------------------------------|
| CFC   | R12 - R11 - R500 - R503                           |
| HCFC  | R22 - R123 - R124 - R502                          |
| HFC   | R134A - R404A - R125 - R407C - R507 - R410A - R32 |
| HFO   | R1234yf - R1234ze                                 |
| HC    | R600 - R290                                       |
| N2-H2 | Azoidro                                           |



### CE N 1516/2007: METHODS OF DIRECT MEASUREMENT

#### ARTICLE 6

Gas detection devices referred to in paragraph 1(a) shall be checked every 12 months to ensure their proper functioning. The sensitivity of portable gas detection devices shall be at least five grams per year.



### Calibration

| Code        | Model      | Description                           |
|-------------|------------|---------------------------------------|
| 09053009005 |            | Calibration report for leak detector  |
| 09001115001 | VOYAGER/RT | Leak detector with calibration report |



### Spare parts

| Code     | Model | Description                                   |
|----------|-------|-----------------------------------------------|
| 09050111 | V-EL1 | Sensing tip for VOYAGER                       |
| 09050117 | V-B1  | Lithium battery for VOYAGER - VOYAGER-IR      |
| 09050121 | V-F3  | Kit of filters for VOYAGER-VOYAGER-IR (3 pcs) |



### Technical features

|                     |                                  |
|---------------------|----------------------------------|
| Technology          | Semi-conductor                   |
| Maximum sensitivity | 3 g/year                         |
| Calibration         | automatic                        |
| Warm-up time        | <60 seconds                      |
| Response time       | <3 seconds                       |
| Probe Length        | 40 cm                            |
| Power supply        | rechargeable lithium-ion battery |
| Batteries life      | 6 hours continue                 |
| Compliance          | CE n. 1516 2007                  |

## ELECTRONIC LEAK DETECTOR

INCLUDED  
R32

INCLUDED  
R1234ze



### ELD-H

#### Electronic leak detector

- Lightweight and ergonomic design.
- Both visual and audible leak detection signal.
- Simple, one button operation.
- Two sensitivity modes.
- Low battery indicator.
- Automatic power-off to conserve battery life.

| Code     | Model | Dimensions        | Weight |
|----------|-------|-------------------|--------|
| 09001081 | ELD-H | 310 x 210 x 80 mm | 0,9 kg |



#### Detects ALL halogenated refrigerants, including:

|      |                                       |
|------|---------------------------------------|
| CFC  | R12-R11-R500-R503                     |
| HCFC | R22-R123-R124-R502                    |
| HFC  | R134A-R404A-R125-R407C-R507-R410A-R32 |
| HFO  | R1234yf and R1234ze                   |



#### CE N 1516/2007: METHODS OF DIRECT MEASUREMENT

#### ARTICLE 6

Gas detection devices referred to in paragraph 1(a) shall be checked every 12 months to ensure their proper functioning. The sensitivity of portable gas detection devices shall be at least five grams per year.



#### Technical features

|                     |                               |
|---------------------|-------------------------------|
| Technology          | Negative crown                |
| Maximum sensitivity | 3 g/year                      |
| Calibration         | automatic                     |
| Warm-up time        | <2 seconds                    |
| Response time       | instant                       |
| Probe Length        | 30 cm                         |
| Power supply        | 2x 1,5V alkaline batteries AA |
| Batteries life      | 40 hours                      |
| Compliance          | CE n. 1516 2007               |



#### Calibration

| Code        | Model    | Description                           |
|-------------|----------|---------------------------------------|
| 09053009005 |          | Calibration report for leak detector  |
| 09001081001 | ELD-H/RT | Leak detector with calibration report |



#### Spare parts

| Code     | Model | Description           |
|----------|-------|-----------------------|
| 09050073 | ELS-H | Sensing tip for ELD-H |

## ELD-A

### AZOIDRO leak detector

ELD-A leak detector uses a specific sensor for the Azoidro mixture (95% Nitrogen and 5% Hydrogen). This mixture was created in accordance with Regulation (EC) n.1516/2007.

| Code     | Model | Dimensions        | Weight |
|----------|-------|-------------------|--------|
| 09001107 | ELD-A | 310 x 210 x 80 mm | 0,9 kg |



### Technical features

|                     |                                           |
|---------------------|-------------------------------------------|
| Technology          | Semi-conductor                            |
| Maximum sensitivity | < 8 ppm H2 (<4,9 g/year R134a equivalent) |
| Calibration         | automatic                                 |
| Warm up time        | 25 for 90 seconds                         |
| Response time       | 5 seconds                                 |
| Probe length        | 30 cm                                     |
| Power supply        | 2x 1,5V alkaline batteries AA             |
| Batteries life      | 11 hours                                  |
| Leak side indicator | 3 colours LED                             |



### Spare parts

| Code     | Model | Description |
|----------|-------|-------------|
| 09050109 | ELS-A | Sensing tip |

## ELD-C EX

### Combustible gas leak detector

Ideal for locating leaks in industrial, commercial and residential refrigeration and heating systems, ELD-C EX detects fuel gas concentrations of up to 5 ppm.

- ATEX Zone 2 Certificate (ATEX II 3G Ex n IIA T3 Gc).
- Self-calibrating and with low maintenance.
- Sensitivity less than 50 ppm. (Propane, Iso-butane, Methane).
- Light and ergonomic.
- Visual and sound loss detection signal.

Gases detected: propane, methane, iso-butane, natural gas, acetone, hesean, acetylene, benzene, butane, ethanol, etylene oxide, gasoline, hydrogen, industrial solvents, methanol, paint thinners, naphtha, etc.

| Code     | Model    | Dimensions        | Weight  |
|----------|----------|-------------------|---------|
| 09001117 | ELD-C EX | 310 x 210 x 80 mm | 0,90 kg |



ATEX II 3G Ex n IIA T3 Gc



### Technical features

|                     |                               |
|---------------------|-------------------------------|
| Technology          | semi-conductor                |
| Maximum sensitivity | <50 ppm                       |
| Calibration         | automatic                     |
| Warm-up time        | from 25 to 90 seconds         |
| Response time       | 5 seconds                     |
| Probe Length        | 30 cm                         |
| Power supply        | 2x 1,5V AA alkaline batteries |
| Batteries life      | 11 hours                      |



### Spare parts

| Code     | Model | Description              |
|----------|-------|--------------------------|
| 09050074 | ELS-C | Sensing tip for ELD-C EX |

## R744 (CO<sub>2</sub>) LEAK DETECTORS

R744




INFRARED



### VOYAGER (R744)

#### Infrared leak detector for R744 (CO<sub>2</sub>)

VOYAGER- R744 is equipped with an infrared sensor specifically for R744 (CO<sub>2</sub>) that offers superior accuracy, insensitivity to false alarms and extended service life.

The robust construction with unique ergonomic design, the innovative large LCD display and the rechargeable lithium-ion batteries make the infrared leak detector not only extremely reliable, but also very intuitive and easy to use.

- 3 sensitivity levels (L/M/H).
- Audible alarm and optimised graphics on large LCD screen.
- High-quality, durable double-barrier probe.
- "Mute" button and connection for headphones.
- Peak storage function.
- Automatic calibration.
- Ergonomic grip.
- Sturdy case with battery charger and 5 spare tips with filters.

| Code     | Model        | Dimensions        | Weight |
|----------|--------------|-------------------|--------|
| 09001119 | VOYAGER-R744 | 330 x 240 x 70 mm | 1,2 kg |



### Technical features

|                     |                                  |
|---------------------|----------------------------------|
| Tecnology           | Infrared                         |
| Maximum sensitivity | <6 g/year                        |
| Calibration         | Automatic                        |
| Warm-up time        | <30 seconds                      |
| Response time       | <3 seconds                       |
| Probe length        | 40 cm                            |
| Power supply        | Rechargeable lithium-ion battery |
| Batteries life      | 8 consecutive hours              |
| Compliance          | CE, SAE J1627, EN14624           |



## RL-134/H2N2 • RL410/32

### Reference leak

- It checks the efficiency of your electronic leak detector.
- Calibrated at 5g/year for R134a or R410A.
- Suitable for standard refrigerant cylinders (1/4"SAE connection).
- No expiry date.

The RL series reference leak allows to check the efficiency of your leak detector at regular intervals even during a leak detection operation.

This helps to identify quickly any problems to the sensor or the batteries that could affect the performances of the instrument.

When the refrigerant leak is connected to a R134a or R410A refrigerant cylinder, it produces a 5g/year leakage. If the leak detector "sniffs" the leakage, then it is considered suitable for use.

The RL series reference leak does not allow to issue calibration reports and/or certificates and is not certifiable itself.

### Is my leak detector "working"?

The RL serie reference leak answers your question!

Easy checking and immediate answer

| Ref      | Code        | Model       | Description                                   |
|----------|-------------|-------------|-----------------------------------------------|
| <b>A</b> | 09050099    | RL-134/H2N2 | Reference leak for R134a and Azoidro- 5g/year |
| <b>A</b> | 09050100    | RL-410/32   | Reference leak for R410A/R32 - 5g/year        |
| <b>B</b> | 11001090    | WR1K/134    | Cartridge R134a - 900g                        |
| <b>B</b> | 11001088    | WR1K/410    | Cartridge R410A - 800g                        |
| <b>C</b> | 05001003001 | 121-RG-4    | Valve for WR1/134 1/4"F swivel x 1/4"M        |
| <b>C</b> | 05001033001 | 121-RG5-4   | Valve for WR1/410 5/16"F swivel x 1/4"M       |

| Ref      | Code        | Dimensions        | Weight  |
|----------|-------------|-------------------|---------|
| <b>A</b> | 09050099    | 55 x 25 x 25 mm   | 0,03 kg |
| <b>A</b> | 09050100    | 55 x 25 x 25 mm   | 0,03 kg |
| <b>B</b> | 11001090    | 240 x 80 x 80 mm  | 2 kg    |
| <b>B</b> | 11001088    | 240 x 80 x 80 mm  | 2 kg    |
| <b>C</b> | 05001003001 | 140 x 100 x 20 mm | 0,1 kg  |
| <b>C</b> | 05001033001 | 140 x 100 x 20 mm | 0,1 kg  |



### For use with R134a, R410A and R32



**A** Connect the reference leak to the cylinder valve (closed). Bring the leak detector sensor near to the white positioner.



**B** Open the cylinder valve.



**C** If the performances of the leak detector are OK (5g/year), the instrument will answer within a few seconds.

### For use with AZOIDRO

Connect to an Azoidro cartridge through a pressure regulator calibrated at 9 bar.

## SPRAY LEAK DETECTOR



### GAS-CONTROL

#### Spray leak detector

It is designed to test the hermetic sealing of systems using any type of gas. The liquid has a special formula against corrosion if used on copper, brass and steel. In conformity with DIN EN 14291.

It reveals any leak forming bubbles of foam.

| Code     | Model       | Capacity | Min. Qty | Dimensions         | Weight |
|----------|-------------|----------|----------|--------------------|--------|
| 09001080 | GAS CONTROL | 400 ml   | 10       | 340 x 140 x 200 mm | 4,8 kg |



### 32850 SURE CHECK

#### "Sure Check" leak detector

- Gases detected: propane, methane, iso-butane, natural gas, acetone, acetylene.
- Formula for all temperatures: from -48°C to 93°C (from -55°F to 200°F).
- Ultra sensitive; long-lasting bubbles.
- Fluorescent bubbles for better visibility.
- Not corrosive, non-toxic.
- Can be used with refrigerants, natural gas, propane and oxygen.

| Code     | Model | Capacity | Dimensions       | Weight |
|----------|-------|----------|------------------|--------|
| 09001024 | 32850 | 473 ml   | 260 x 70 x 70 mm | 0,6 kg |



### TELESCOPIC MIRRORS

| Rif | Code     | Model    | Description        | Dimensions       | Weight  |
|-----|----------|----------|--------------------|------------------|---------|
| A   | 08008052 | WSR-2149 | 5 x 9 cm           | 410 x 80 x 30 mm | 0,15 kg |
| B   | 08008024 | WSR-2146 | Ø5 da 21,5 a 45 mm | 410 x 80 x 30 mm | 0,15 kg |

## LEAK-STOP

### Stop leak system for HVAC systems

The easy and fast solution to seal with just one application all the leaks that are difficult to detect and reach with conventional tools.

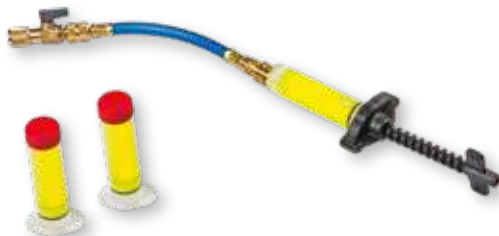
- Usable with all refrigerants.
- Compatible with 100% of the systems on the market.
- Complete compatibility with gaskets and seals of the HVAC system.

Dotazione standard:

- 1 injection system.
- 2 LEAK-STOP cartridges (30 ml).
- 1 flexible hose with ballvalve.

| Code     | Model          |
|----------|----------------|
| 12001047 | LEAK-STOP-HVAC |

| Code     | Dimensions        | Weight |
|----------|-------------------|--------|
| 12001047 | 240 x 145 x 40 mm | 0,4 kg |



2 pcs of 30 ml cartridges included in the kit



### Suggested quantities

#### HVAC system refrigerating capacity Suggested fluid quantity

|                                  |                           |
|----------------------------------|---------------------------|
| < 18000 BTUH 300ml oil           | 30 ml                     |
| 18000 to 60000 BTU/H 900ml oil   | 60 ml                     |
| 60000 to 120000 BTU/H >900ml oil | 30ml every 600 ml of oil  |
| >120000 BTU/H                    | 30ml every 1200 ml of oil |



### Spare parts and accessories



| Rif | Code        | Model       | Description             | Capacity | Connections                     |
|-----|-------------|-------------|-------------------------|----------|---------------------------------|
| A   | 12001048    | K-LS        | Kit of 2 cartridges     | 30 ml    | -                               |
| B   | 05059023001 | RG180/5-4   | Straight adapter        | -        | 5/16" SAE F swivel x 1/4" SAE M |
| C   | 13005067    | UV-CLEAN250 | Additive cleaning spray | 250 ml   |                                 |

## UV LEAK DETECTION



### TORCH-PRO-60-KIT

#### Leak detection kit with UV lamp

Standard equipment:

- 1 Lamp TORCH-PRO high performance 365nm with glasses.
- 1 Plastic injector.
- 1 Flexible hose 1/4" SAE with no return valve.
- 1 RG180/5-4 Adapter 5/16" SAE F swivel x 1/4" SAE M.
- 1 Dye bellow cartridge 60ml (10 doses).
- 1 Detergent 250 ml.
- 1 Battery charger.
- 1 Rechargeable battery.

| Code     | Model                 | Description  |
|----------|-----------------------|--------------|
| 09001110 | TORCH-PRO-60-KIT/HVAC | Complete kit |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 09001110 | 380 x 300 x 100 mm | 1,5 kg |



### Spare parts and accessories



| Rif | Code        | Model           | Description                                       | Dimensions         | Weight  |
|-----|-------------|-----------------|---------------------------------------------------|--------------------|---------|
| A   | 09001108    | TORCH-PRO       | Lamp PRO-UV high performance 365nm – with glasses | 80 x 190 x 70 mm   | 0,5 kg  |
| B   | 14028028    | BELLOW-IN36     | Plastic injector for bellow cartridges            | 190 x 87 Ø mm      | 0,3 kg  |
| C   | 12001058    | UV-BELLOW-60    | Dye bellow cartridge 60ml (10 doses)              | 110 x 36 Ø mm      | 0,07 kg |
| D   | 12099008    | BELLOW-HOSE-NRV | 1/4 adapter hose with no return valve             | -                  | -       |
|     | 05059023001 | RG180/5-4       | Adapter 5/16" SAE F swivel x 1/4" SAE M           | -                  | -       |
| E   | 13005067    | UV-CLEAN250     | Detergent 250 ml                                  | 190 x 87 Ø mm      | 0,27 kg |
| F   | 14029066    | VP/TORCH        | Plastic case for TORCH-PRO                        | 380 x 300 x 100 mm | -       |

### OJ

#### Aluminium injectors

| Code     | Model | Description                    |
|----------|-------|--------------------------------|
| 14028005 | OJ/4  | 1/4"SAE aluminium injectors    |
| 14028006 | OJ/6  | 3/8"SAE aluminium injectors    |
| 14028007 | OJ/A  | 1/2"16ACME aluminium injectors |



### UV-CAN50

#### Universal dye

| Code     | Model     | Capacity | Dimensions       | Weight  |
|----------|-----------|----------|------------------|---------|
| 12001057 | UV-CAN250 | 250 ml   | 90 x 180 x 40 mm | 0,27 kg |



### UV-CLEAN250

#### Dye cleaner

The citrus based biodegradable cleaner which has been specially formulated to remove spillage and residues of additives, it is also very effective on greases, adhesives, dirt, tar and gummy deposits. UV-CLEAN250 is harmless to most surfaces, and is safe to use on all metals.

| Code     | Model       | Quantity | Dimensions    | Weight  |
|----------|-------------|----------|---------------|---------|
| 13005067 | UV-CLEAN250 | 250 ml   | 190 x 87 Ø mm | 0,27 kg |



## THERMOMETERS COMPARATIVE TABLE

|                         | TIR-50C                                                                           | SA 880 SSX                                                                        | TFC-502                                                                           | TFC-201                                                                           | THA-261                                                                            |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|                         |  |  |  |  |  |
| Thermometer             | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                  |
| Hygrometer              | no                                                                                | no                                                                                | no                                                                                | no                                                                                | yes                                                                                |
| Measurement technology  | infrared                                                                          | contact                                                                           | contact (2 probes)                                                                | contact (2 probes)                                                                | contact                                                                            |
| Measured distance ratio | 16:1                                                                              | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                  |
| Emissivity              | Adjustable (0,1 - 1,0)                                                            | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                  |
| Supported probes        | -                                                                                 | -                                                                                 | K, J                                                                              | K                                                                                 | -                                                                                  |
| Measuring units         | °C, °F                                                                            | °C, °F                                                                            | °C, °F                                                                            | °C, °F                                                                            | °C, °F                                                                             |
| Measurement range       | -50 a 800 °C                                                                      | -50 a 300 °C                                                                      | -200 a 1375 °C (K)                                                                | -200 a 1375 °C (K)                                                                | -20 a 60 °C                                                                        |
| Resolution              | 1 °C                                                                              | 0,1°C (19,9 a 199,9°C)<br>1°C (altro)                                             | 0,1 °C                                                                            | 0,1°C (-100 a 1370°C)<br>1°C (-100 a -200°C)                                      | 0,1°C                                                                              |
| Accuracy                | ±2,5% reading                                                                     | ±1°C (-20 a 80°C)<br>±5°C (altro)                                                 | ±0,05% reading (K)                                                                | ±0,05% reading (K)                                                                | ±0,5% °C (0 to 45 °C)                                                              |
| Range measurement Rh%   | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 0 - 100                                                                            |
| Resolution Rh%          | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 0,1%                                                                               |
| Accuracy Rh%            | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | ±2,5% °C to 25 °C<br>(10% to 90% Rh)                                               |
| Power supply            | 1x9V alkaline batteries                                                           | 1xDC1,5V alkaline batteries                                                       | 1x9V alkaline batteries                                                           | 2x1,5V alkaline batteries                                                         | 2x1,5V alkaline batteries                                                          |
| Dimensions              | 190 x 90 x 60 mm                                                                  | 107 x 60 x 20 mm                                                                  | 200 x 120 x 60 mm                                                                 | 190 x 60 x 50 mm                                                                  | 190 x 60 x 50 mm                                                                   |
| Weight                  | 0,16 kg                                                                           | 0,11 kg                                                                           | 0,5 kg                                                                            | 0,2 kg                                                                            | 0,2 kg                                                                             |

## TIR-50C

### Infrared thermometers

- Non-contact measurement with laser pointer.
- Wide range of applications: checking foodstuffs on stands, pallets or inside warehouses and means of transport, checking of temperature in inaccessible or dangerous places.
- Auto Power off after 4 seconds non-operation.
- Adjustable emissivity (0.1 - 1.0).
- Backlight digital display for use in dark areas.
- Hold data.
- Laser class II.
- °C/F switchable.
- Battery indicator.

| Code     | Model   | Dimensions       | Weight  |
|----------|---------|------------------|---------|
| 09011060 | TIR-50C | 190 x 90 x 60 mm | 0,16 kg |



### Technical features

|                       |                               |
|-----------------------|-------------------------------|
| Measuring range       | -50 to 800°C                  |
| Distance              | spot Ratio 16:1               |
| Accuracy              | ±2,5% reading                 |
| Repeatability         | 1% reading or 1°C             |
| Response time         | 500 msec                      |
| Operating environment | 0°C to 60°C                   |
| Storage temperature   | -20°C to +60°C (battery-free) |
| Resolution            | 1 °C                          |
| Batteries             | 9 Volt x 1                    |
| Batteries life        | 12 hours                      |
| laser sight           | yes                           |

## SA 880 SSX

### Digital thermometer

| Code     | Model      | Dimensions       | Weight  |
|----------|------------|------------------|---------|
| 09011031 | SA 880 SSX | 107 x 60 x 20 mm | 0,11 kg |



### Technical features

|                                      |                            |
|--------------------------------------|----------------------------|
| Measuring range                      | -50 to +300°C              |
| Probe                                | 100 mm. stainless steel    |
| Resolution                           | 0,1°C (-19,9°C to 199,9°C) |
| Measuring units                      | °C/°F                      |
| High or low temperature programmable | yes                        |



## DIGITAL DUAL INPUT THERMOMETER



### TFC-502

Digital dual input thermometer

| Code     | Model   | Dimensions        | Weight |
|----------|---------|-------------------|--------|
| 09011021 | TFC-502 | 200 x 120 x 60 mm | 0,5 kg |



#### Technical features

|                           |                    |
|---------------------------|--------------------|
| Measuring range (Probe K) | -200 °C; 1375°C    |
| Measuring range (Probe J) | -200°C to 1050°C   |
| Supported probes          | K - J              |
| Resolution                | 0,1°C              |
| Accuracy                  | +/-0,05% rdg+0,3°C |
| Measuring units           | °C / °F            |



#### Calibration

| Code        | Model      | Description                                                                |
|-------------|------------|----------------------------------------------------------------------------|
| 09053006    |            | Calibration report ref. Accredia for thermometers with 2 calibrated probes |
| 09011021001 | TFC-502/RT | Thermometer with calibration report                                        |



### TFC-201

Digital dual input thermometer

| Code     | Model   | Dimensions       | Weight |
|----------|---------|------------------|--------|
| 09011053 | TFC-201 | 190 x 60 x 50 mm | 0,2 kg |



#### Technical features

|                           |                          |
|---------------------------|--------------------------|
| Measuring range (Probe K) | -200 °C to 1375°C        |
| Supported probes          | K                        |
| Resolution                | 0,1°C (-100°C to 1375°C) |
| Accuracy                  | +/-0,05% rdg+0,3°C       |
| Measuring units           | °C / °F                  |



#### Calibration

| Code     | Model | Description                                                                |
|----------|-------|----------------------------------------------------------------------------|
| 09053006 |       | Calibration report ref. Accredia for thermometers with 2 calibrated probes |

## TK109 Fiber glass insulated thermocouple

| Code     | Model | Measuring range | Cable length | Dimensions       | Weight  |
|----------|-------|-----------------|--------------|------------------|---------|
| 09012013 | TK109 | -50 to +200°C   | 3 m          | 100 x 80 x 10 mm | 0,02 kg |



### Calibration

| Code     | Description                                |
|----------|--------------------------------------------|
| 09053005 | Calibration report ref. Accredia for TK109 |



## TK109-STRIP Fiber glass insulated thermocouple with strip

| Code     | Model       | Measuring range | Cable length | Dimensions       | Weight  |
|----------|-------------|-----------------|--------------|------------------|---------|
| 09012037 | TK109-STRIP | -50 to +200°C   | 3 m          | 100 x 80 x 10 mm | 0,02 kg |



### Calibration

| Code     | Description                                      |
|----------|--------------------------------------------------|
| 09053005 | Calibration report ref. Accredia for TK109-STRIP |

Strip suitable  
for hoses max.  
diameter 80 mm



## TK104 Fast reacting probe for air and gases

| Code     | Model | Measuring range | Cable length | Dimensions        | Weight  |
|----------|-------|-----------------|--------------|-------------------|---------|
| 09012019 | TK104 | -50 to +800°C   | 27 cm        | 380 x 100 x 10 mm | 0,12 kg |



### Calibration

| Code     | Description                                |
|----------|--------------------------------------------|
| 09053001 | Calibration report ref. Accredia for TK104 |



## TK106 Insertion probe for food-stuff, plastic, rubber etc.

| Code     | Model | Measuring range | Cable length | Dimensions        | Weight  |
|----------|-------|-----------------|--------------|-------------------|---------|
| 09012016 | TK106 | -50 to +700°C   | 27 cm        | 380 x 100 x 10 mm | 0,09 kg |



### Calibration

| Code     | Description                                |
|----------|--------------------------------------------|
| 09053003 | Calibration report ref. Accredia for TK106 |



## TK105 Surface probe

| Code     | Model | Measuring range | Cable length | Dimensions        | Weight  |
|----------|-------|-----------------|--------------|-------------------|---------|
| 09012020 | TK105 | -50 to +400°C   | 27 cm        | 380 x 100 x 10 mm | 0,14 kg |



### Calibration

| Code     | Description                                |
|----------|--------------------------------------------|
| 09053002 | Calibration report ref. Accredia for TK105 |



## TK107 Clamp on probe for measurements on pipes

| Code     | Model | Measuring range | Cable length | Dimensions        | Weight  |
|----------|-------|-----------------|--------------|-------------------|---------|
| 09012017 | TK107 | -50 to +120°C   | 54 cm        | 230 x 100 x 40 mm | 0,16 kg |



### Calibration

| Code     | Description                                |
|----------|--------------------------------------------|
| 09053004 | Calibration report ref. Accredia for TK107 |



Max opening 36 mm

## THERMOMETERS

A



### ST09 /ST10

#### Digital thermometer

| Rif | Code     | Model | Dimensions       | Weight  |
|-----|----------|-------|------------------|---------|
| A   | 09011023 | ST09  | 210 x 80 x 20 mm | 0,04 kg |
| B   | 09011050 | ST10  | 240 x 70 x 20 mm | 0,04 kg |

B



#### Technical features

|                        | ST09         | ST10                           |
|------------------------|--------------|--------------------------------|
| Temperature range      | -40 to 200°C | -50 to 300°C                   |
| Temperature resolution | 0,1°C        | 1°C (>205°C)<br>0,1°C (others) |
| Power supply           | DC 1,5V LR44 | DC 1,5V LR44                   |
| Dimensions             | 20 x 150 mm  | 20 x 207 mm                    |



### EWT300

#### Digital LCD thermometer

| Code     | Model  | Dimensions      | Weight  |
|----------|--------|-----------------|---------|
| 09011033 | EWT300 | 60 x 70 x 20 mm | 0,04 kg |



#### Technical features

|                        |                 |
|------------------------|-----------------|
| Temperature range      | -50 to 70°C     |
| Temperature resolution | 0.1°C           |
| Probe                  | 1 m             |
| Power supply           | DC 1,5V LR44    |
| Dimensions             | 48 x 48 x 16 mm |



### F87 R100

#### Thermometer with reversible flange

| Code     | Model    | Flange diameter | Measuring range |
|----------|----------|-----------------|-----------------|
| 09011019 | F87 R100 | 100 mm          | -40 to +40°C    |

| Code     | Dimensions        | Weight  |
|----------|-------------------|---------|
| 09011019 | 100 x 100 x 50 mm | 0,08 kg |



### ROF 88

#### Telethermometer

| Code     | Model  | Measuring range | Dimensions        | Weight  |
|----------|--------|-----------------|-------------------|---------|
| 09011008 | ROF 88 | -40 to +40°C    | 100 x 100 x 30 mm | 0,06 kg |

## MINIDISQUES

### JRI remote temperature recorders

- Small size makes recorder suitable for panel mounting.
- Continuous 7 days' recording on Ø 125 mm chart.
- Stainless steel sensor with 3 mt long capillary tube.
- Complete with wall - mounting bracket, door panel and key lock and 100 recording charts.
- Quartz chart movement, power supply 1 x 1.5V battery; average battery life is 6 months (at 20°C).



DESIGNED IN CONFORMITY WITH EUROPEAN DIRECTIVES 92/1, 93/43, NF E 18-150 AND EN 12830 STANDARD



### Single probe temperature recorders

| Code     | Model    | Measuring range | Recording period | Recording chart | Fiber pen | Dimensions         | Weight |
|----------|----------|-----------------|------------------|-----------------|-----------|--------------------|--------|
| 09008005 | 13052.11 | -35 to +15 °C   | 7 days*          | D3169           | 97601     | 230 x 200 x 170 mm | 1,5 kg |
| 09008011 | 13023.11 | -10 to +40 °C   | 7 days*          | D3174           | 97601     | 230 x 200 x 170 mm | 1,5 kg |
| 09008008 | 13019.11 | -100 to +50 °C  | 7 days           | D3230           | 97601     | 230 x 200 x 170 mm | 1,5 kg |

\* The recording period can be changed in 24h just by moving the lever on the movement and placing a 24h chart.

Other models with different measuring ranges are available on request.



### Spare parts

| Code     | Model | Description           | Measuring range | Recording period | Min. Qty |
|----------|-------|-----------------------|-----------------|------------------|----------|
| 09009001 | D3169 | Recording chart       | -35 to +15 °C   | 7 days           | 100      |
| 09009003 | D3174 | Recording chart       | -10 to +40 °C   | 7 days           | 100      |
| 09009002 | D3230 | Recording chart       | -100 to +50 °C  | 7 days           | 100      |
| 09010001 | 97601 | Fiber pen             | -               | -                | -        |
| 09052001 | 1T/7  | Quartz movement motor | -               | -                | -        |

## THERMO-HYGROANEMOMETER

**THA-261**

Digital thermo-hygroanemometer

| Code     | Model   | Dimensions       | Weight |
|----------|---------|------------------|--------|
| 09011057 | THA-261 | 190 x 60 x 50 mm | 0,2 kg |

**Temperature**

|                 |                        |
|-----------------|------------------------|
| Measuring range | -20°C to 60°C          |
| Resolution      | 0,1°C                  |
| Accuracy        | ±0.5° from 0°C to 45°C |
| Measuring units | °C - °F                |

**Humidity**

|                 |                                 |
|-----------------|---------------------------------|
| Measuring range | 0% to 100% RH                   |
| Resolution      | 0.1%                            |
| Accuracy        | ±2.5% at 25°C (77°F) 10%to90%RH |

**Wind velocity**

|                 |                          |
|-----------------|--------------------------|
| Measuring range | 0.4 to 20 m/s            |
| Resolution      | 0,1 m/s                  |
| Accuracy        | ±0.2 m/s + 2% of reading |

## CLAMP-ONE

### Wireless digital clamp-on meter

- Maximum reading of 3999.
- Heavy duty test leads.
- ACA Measurement up to 1000A.
- Ohm, Diode, Continuity, Capacitance, Frequency and Duty input Protection to 750V DA/AC rms.
- Diode test and Audible continuity check function.
- Auto power off to preserve battery life.
- Display back-light feature.
- Provides DATA-HOLD, RELATIVE.
- Complete of external temperature probe.

| Code     | Model     | Dimensions       | Weight  |
|----------|-----------|------------------|---------|
| 09006008 | CLAMP-ONE | 225 x 97 x 40 mm | 0,45 kg |



### Electrical specifications

|              | Range                                           |
|--------------|-------------------------------------------------|
| DC voltage   | 400mV, 4V, 40V, 400V, 1000V                     |
| AC voltage   | 4V, 40V, 400V, 750V                             |
| DC current   | 200A, 1000A                                     |
| AC current   | 400A, 1000A                                     |
| Resistance   | 400Ω, 40KΩ, 400KΩ, 4MΩ, 40mΩ                    |
| Quantity     | 5124F, 5, 124F, 51.24F, 100 4F                  |
| Temperature  | -20 to 1000 °C                                  |
| Frequency    | 5.12Hz, 51.2Hz, 512Hz, 5.12kHz, 512kHz, 5.12MHz |
| Duty current | 0.1% to 99.9%                                   |



### Calibration

| Code        | Model        | Description                                         |
|-------------|--------------|-----------------------------------------------------|
| 09053017    |              | Calibration report ref. Accredia for clamp-on meter |
| 09006008001 | CLAMP-ONE/CT | Clamp-on meter with calibration report              |

INDISPENSABLE FOR INVERTER  
UNITS CHECK



COMPATIBLE APPS  
WITH FOX-ONE



PHONE  
APP



## DIGITAL CLAMP-ON METER

INDISPENSABLE FOR INVERTER  
UNITS CHECK



### 9001

#### Digital clamp-on meter

- Maximum reading of 3999.
- Heavy duty test leads.
- ACA Measurement up to 600A.
- Dimensions of conductor : Ø35 mm.
- Ohm, Diode, Continuity, Capacitance, Frequency and Duty input Protection to 600V DA/AC rms.
- Diode test and Audible continuity check function.
- Auto power off to preserve battery life.
- Display back-light feature.
- Provides DATA-HOLD, RELATIVE.
- EN61010-1 Approval, Over-Voltage Category III 1000V.

| Code     | Model | Dimensions        | Weight |
|----------|-------|-------------------|--------|
| 09006007 | 9001  | 260 x 130 x 60 mm | 0,6 kg |



#### Electrical specifications

##### Range

|                              |                                                 |
|------------------------------|-------------------------------------------------|
| AC current                   | 40A, 400A, 600A                                 |
| AC voltage                   | 0.1V to 600V 400mV (manu), 4V, 40V, 400V, 600V  |
| DC voltage                   | 0.1V to 600V 400mV (manu), 4V, 40V, 400V, 600V  |
| Resistance                   | 400Ω, 4KΩ, 40KΩ, 400KΩ, 4MΩ, 40mΩ               |
| Frequency                    | 5.12Hz, 51.2Hz, 512Hz, 5.12kHz, 512kHz, 5.12MHz |
| Duty cycle<br>(2Hz to 20KHz) | 10% to 90%                                      |



#### Calibration

| Code        | Model   | Description                                         |
|-------------|---------|-----------------------------------------------------|
| 09053017    |         | Calibration report ref. Accredia for clamp-on meter |
| 09006007001 | 9001/CT | Clamp-on meter with calibration report              |

## ICG

Relays and hard starts for refrigeration systems without run capacitors.

| Code     | Model   | Dimensions        | Weight  |
|----------|---------|-------------------|---------|
| 09016002 | ICG-220 | 140 x 120 x 20 mm | 0,05 kg |



## RO

Relays and hard starts for refrigeration systems without run capacitors.

| Code     | Model | Dimensions        | Weight  |
|----------|-------|-------------------|---------|
| 09016001 | RO-82 | 140 x 120 x 40 mm | 0,07 kg |
| 09016004 | RO-62 | 140 x 120 x 40 mm | 0,07 kg |
| 09016003 | RO-42 | 140 x 120 x 40 mm | 0,07 kg |



## PO

Relays with overload combination.

| Code     | Model  | Dimensions        | Weight  |
|----------|--------|-------------------|---------|
| 09016017 | PO-230 | 120 x 100 x 20 mm | 0,03 kg |



## RCO

3 n° 1 Start Relay.

| Code     | Model   | Dimensions        | Weight  |
|----------|---------|-------------------|---------|
| 09016033 | RCO-820 | 190 x 180 x 40 mm | 0,20 kg |
| 09016009 | RCO-620 | 190 x 180 x 40 mm | 0,20 kg |
| 09016011 | RCO-420 | 190 x 180 x 40 mm | 0,20 kg |



## Comparative table

|                 | ICG-220       | PO-230        | RO-82         | RO-62         | RO-42         | RCO-820       | RCO-620       | RCO-420       |
|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Relay           | x             | x             | x             | x             | x             | x             | x             | x             |
| Overload        | -             | -             | x             | x             | x             | x             | x             | x             |
| Start capacitor | -             | -             | -             | -             | -             | x             | x             | x             |
| Mounting        | Quick connect | Quick connect | Quick connect | Quick connect | Quick connect | Quick connect | Quick connect | Quick connect |
| HP rating       | 1/12 to 1/2   | 1/12 to 1/2   | 1/12 to 1/8   | 1/6 to 1/5    | 1/4 to 1/3    | 1/12 to 1/8   | 1/6 to 1/5    | 1/4 to 1/3    |
| Voltage         | 230           | 230           | 230           | 230           | 230           | 230           | 230           | 230           |

## STARTER AND TIMER



### SPP

#### Starter

Increases starting torque up to 250% TO 600%.

| Code     | Model | Dimensions        | Weight  |
|----------|-------|-------------------|---------|
| 09016015 | SPP   | 120 x 100 x 20 mm | 0,03 kg |
| 09016012 | SPP5  | 190 x 150 x 40 mm | 0,15 kg |
| 09016022 | SPP6  | 200 x 60 x 60 mm  | 0,30 kg |
| 09016034 | SPP7S | 300 x 140 x 40 mm | 0,28 kg |



### Comparative table

|                      | SPP       | SPP5      | SPP6      | SPP7S     |
|----------------------|-----------|-----------|-----------|-----------|
| Voltage              | 90 - 277  | 90 - 277  | 90 - 277  | 90 - 277  |
| Recommended range HP | 1/2 to 10 | 1/2 to 10 | 1/2 to 10 | 1/2 to 10 |
| Increase in torque   | 250%      | 300%      | 500%      | 600%      |
| Capacitor            | -         | X         | X         | X         |



### EDT

#### Electronic adjustable defrost timer

Replaces most timers being used in today's domestic refrigerators and freezers!

The new energy efficient "Edt" electronic adjustable defrost timers were designed and developed by Supco engineers. They offer numerous advantages over conventional electro-mechanical defrost timers presently being used. The "Edt" has a two dial adjustment configuration that allows for the setting of any defrost frequency from 4 to 12 hours and any defrost time from 10 to 35 minutes. Quiet operation and repeat reliability is unmatched.

#### Features:

- Standard size and mounting to fit most applications.
- Standard terminal configuration to accommodate most connections.
- No ground wire.
- Dustproof case.
- State of the art extra long life electronic circuitry.

| Code     | Model | Voltage     | Max compressor rating | Max resistive load | Dimensions        | Weight  |
|----------|-------|-------------|-----------------------|--------------------|-------------------|---------|
| 09016013 | EDT20 | 208/240 VAC | 1/3 HP                | 5 Amp              | 240 x 110 x 40 mm | 0,10 kg |
| 09016035 | EDT21 | 208/240 VAC | 3/4 HP                | 20 Amp             | 240 x 110 x 40 mm | 0,12 kg |

### TD69

#### TD series delay on make timers (Dom)

For protection of Hvac/r equipment, the Td series of time delays provide the solution, choose the delay on make, delay on break or by-pass timer that solves the problem.

#### Applications:

- Multi Purpose "Delay on Make" timing.
- Protects air-conditioning, refrigeration and heat pumps from damage which may be caused by short cycling of compressor.
- For compressor staging and stagger starting multiple units.
- Helps to reduce power surges in multiple compressor applications.

#### Technical features:

- Delay range (adj.): 6 sec. to 8 min.
- Delay range (fixed): 3/5 min.
- Initiate timer: 70 millise.
- Input voltage: 19 to 250 VAC/VDC, 56/60 Hz.
- Max load: 1 amp - 10 amp in rush.
- Temperature: -18°C +71°C.
- Dimensions: 50,8 x 50,8 x 19 mm.
- Mount: 1 hole only for mounting.
- Connections: 1/4" M.



| Code     | Model | Delay period   | Dimensions       | Weight  |
|----------|-------|----------------|------------------|---------|
| 09016016 | TD69  | 6 sec to 8 min | 130 x 90 x 40 mm | 0,05 kg |



# TOOLS - VALVES FITTINGS



## RATCHET FLARING TOOL



LIGHT ALLOY  
WEIGHT 1,030 G



### W850-AVIO

**Ratchet flaring tool with clutch and ratchet**

New light aluminium body.

| Code     | Model      | For OD tubing                            |
|----------|------------|------------------------------------------|
| 08001028 | W850-AVIO  | 1/4" - 5/16" - 3/8" - 1/2" - 5/8" - 3/4" |
| 08001029 | W850M-AVIO | 6-8-10-12-16-18 mm                       |

| Code     | Dimensions        | Weight |
|----------|-------------------|--------|
| 08001028 | 250 x 220 x 50 mm | 1,4 kg |
| 08001029 | 250 x 220 x 50 mm | 1,4 kg |



1

Possibility to operate by manual ratched and electric drill.



2

Standstill device for copper tube.



3

Bar fast disconnecting system.



4

Supplied in plastic case.



### W810A

**Eccentric flaring tool with clutch and ratchet**

| Code     | Model | For OD tubing                                    |
|----------|-------|--------------------------------------------------|
| 08001024 | W810A | 1/4" - 3/16" - 5/16" - 3/8" - 1/2" - 5/8" - 3/4" |

| Code     | Dimensions        | Weight |
|----------|-------------------|--------|
| 08001024 | 250 x 220 x 50 mm | 1,9 kg |

Supplied in plastic case

## UNIVERSAL FLARING TOOL

| Code     | Model | For OD tubing            | Dimensions        | Weight  |
|----------|-------|--------------------------|-------------------|---------|
| 08001020 | W525  | 3/16" ÷ 5/8" 4,7 ÷ 16 mm | 160 x 120 x 30 mm | 0,85 kg |



## FLARING TOOL IN INCHES

| Code     | Model | For OD tubing                            | Dimensions        | Weight |
|----------|-------|------------------------------------------|-------------------|--------|
| 08001027 | W195  | 3/16"-1/4"-5/16"<br>3/8"-7/16"-1/2"-5/8" | 200 x 130 x 30 mm | 1 kg   |



## FLARING TOOL IN INCHES

| Code     | Model | For OD tubing                   | Dimensions        | Weight |
|----------|-------|---------------------------------|-------------------|--------|
| 08001023 | W500  | 3/16"-1/4"-5/16"-3/8"-1/2"-5/8" | 200 x 130 x 30 mm | 0,9 kg |



## FLARING AND SWAGING TOOL

| Code     | Model | For OD tubing                                            | Dimensions        | Weight |
|----------|-------|----------------------------------------------------------|-------------------|--------|
| 08001019 | W275L | 1/8" - 7/16" - 1/4" - 5/16"<br>3/8" - 1/2" - 5/8" - 3/4" | 330 x 150 x 40 mm | 2,1 kg |



## UNIVERSAL OIL FOR FLARE

Universal oil essential for the flare lubrication, during flaring operation and before clamping with torque wrenches.

| Code     | Model  | Min. Qty | Capacity | Dimensions       | Weight |
|----------|--------|----------|----------|------------------|--------|
| 12002015 | FO-200 | 12       | 200 ml   | 170 x 50 x 50 mm | 0,2 kg |



## FLARING TOOLS



### UNIVERSAL FLARING TOOL

| Code     | Model | For OD tubing |              | Dimensions        | Weight  |
|----------|-------|---------------|--------------|-------------------|---------|
| 08001001 | 525F  | 5 ÷ 16 mm     | 3/16" ÷ 5/8" | 200 x 120 x 30 mm | 0,86 kg |



### FLARING AND SWAGING TOOL

| Code     | Model  | For OD tubing                                      |  | Dimensions        | Weight  |
|----------|--------|----------------------------------------------------|--|-------------------|---------|
| 08001012 | 275 FS | 1/8"-3/16"-1/4"-5/16"-3/8"<br>7/16"-1/2"-5/8"-3/4" |  | 254 x 215 x 45 mm | 1,40 kg |



### FLARING TOOL

| Code     | Model | For OD tubing                   |  | Dimensions        | Weight |
|----------|-------|---------------------------------|--|-------------------|--------|
| 08001005 | 500FC | 3/16"-1/4"-5/16"-3/8"-1/2"-5/8" |  | 250 x 220 x 50 mm | 2 kg   |



### UNIVERSAL OIL FOR FLARE

Universal oil essential for the flare lubrication, during flaring operation and before clamping with torque wrenches.

| Code     | Model  | Min. Qty | Capacity | Dimensions       | Weight |
|----------|--------|----------|----------|------------------|--------|
| 12002015 | FO-200 | 12       | 200 ml   | 170 x 50 x 50 mm | 0,2 kg |

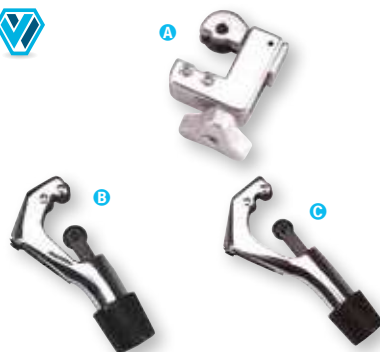
## TUBE CUTTERS

| Ref | Code     | Model | For OD tubing           | Dimensions       | Weight  |
|-----|----------|-------|-------------------------|------------------|---------|
| A   | 08002019 | W127  | 1/8" ÷ 5/8" 4 ÷ 16 mm   | 60 x 40 x 30 mm  | 0,10 kg |
| B   | 08002017 | W274  | 1/8" ÷ 1-1/8" 4 ÷ 28 mm | 130 x 60 x 40 mm | 0,30 kg |
| C   | 08002018 | W312  | 1/4" ÷ 1-5/8" 7 ÷ 41 mm | 150 x 70 x 40 mm | 0,30 kg |



### Spare parts

| Code     | Model | Description           | Min. Qty |
|----------|-------|-----------------------|----------|
| 08052012 | W127B | Wheel for W127        | 10       |
| 08052013 | W274B | Wheel for W274 - W312 | 10       |



## RACHET TUBE CUTTERS

| Code     | Model   | Sizes                                    |
|----------|---------|------------------------------------------|
| 08002020 | WR-TC12 | from 1/8" to 1/2" (from 3 mm to 12 mm)   |
| 08002022 | WR-TC22 | from 1/4" to 7/8" (from 6 mm to 22 mm)   |
| 08002021 | WR-TC29 | from 5/16" to 1-1/8" (from 8 mm a 29 mm) |

| Code     | Dimensions        | Weight  |
|----------|-------------------|---------|
| 08002020 | 190 x 100 x 30 mm | 0,20 kg |
| 08002022 | 130 x 260 x 50 mm | 0,35 kg |
| 08002021 | 125 x 270 x 50 mm | 0,38 kg |



### Spare parts

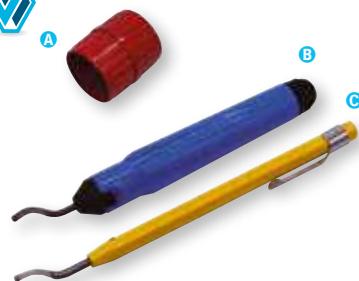
| Code     | Model    | Description       |
|----------|----------|-------------------|
| 08052015 | WR-TC12B | Wheel for WR-TC12 |
| 08052017 | WR-TC22B | Wheel for WR-TC22 |
| 08052016 | WR-TC29B | Wheel for WR-TC29 |



## REAMERS

| Ref | Code     | Model | Description                                     |
|-----|----------|-------|-------------------------------------------------|
| A   | 08008034 | W209  | Inner/outer reamer                              |
| B   | 08008049 | W210  | Pen reamer with blade container and spare blade |
| C   | 08008050 | W211  | Pen reamer                                      |

| Ref | Code     | Dimensions       | Weight  |
|-----|----------|------------------|---------|
| A   | 08008034 | 60 x 60 x 60 mm  | 0,22 kg |
| B   | 08008049 | 240 x 80 x 20 mm | 0,05 kg |
| C   | 08008050 | 220 x 80 x 20 mm | 0,05 kg |



## TUBE CUTTERS



### TUBE CUTTERS

| Ref      | Code     | Model  | For OD tubing | Dimensions       | Weight  |
|----------|----------|--------|---------------|------------------|---------|
| <b>A</b> | 08002008 | TC1050 | 4 ÷ 16 mm     | 76 x 51 x 38 mm  | 0,08 kg |
| <b>B</b> | 08002006 | TC1000 | 4 ÷ 28 mm     | 127 x 57 x 38 mm | 0,27 kg |
| <b>C</b> | 08002005 | 174 FC | 10 ÷ 28 mm    | 76 x 56 x 31 mm  | 0,07 kg |
| <b>D</b> | 08002007 | 312 FC | 17 ÷ 41 mm    | 159 x 66 x 35 mm | 0,32 kg |
| <b>E</b> | 08002009 | 206 FB | 10 ÷ 66 mm    | 213 x 96 x 41 mm | 0,88 kg |



### Accessories

| Code     | Model  | Description | Per Model | Dimensions        | Weight  |
|----------|--------|-------------|-----------|-------------------|---------|
| 08052014 | TC1051 | Ratchet     | TC1050    | 130 x 30 x 230 mm | 0,05 Kg |



### Spare parts

| Code     | Model  | Description | Per Model              | Min. Qty |
|----------|--------|-------------|------------------------|----------|
| 08052002 | 75015  | Wheels      | TC1000-312 FC - 174 FC | 10       |
| 08052003 | 323633 | Wheels      | TC1050                 | 5        |
| 08052004 | 74761  | Wheels      | 206 FB                 | 5        |
| 08052006 | 74762  | Screws      | TC1000-312 FC - 174 FC | 5        |
| 08052007 | 77511  | Screws      | 206 FB                 | -        |
| 08052009 | 26883  | Screws      | TC1050                 | -        |
| 08052010 | 77507  | Nuts        | 206 FB                 | -        |



### REAMERS

| Code     | Model | Dimensions      | Weight  |
|----------|-------|-----------------|---------|
| 08008006 | 208F  | 76 x 54 x 54 mm | 0,20 kg |

## CARRYING CASE FOR WE01 TUBE EXPANDER

| Code     | Model | Dimensions        | Weight |
|----------|-------|-------------------|--------|
| 14029003 | WE 02 | 420 x 200 x 50 mm | 2,2 kg |

## TUBE EXPANDER TOOL WITHOUT HEAD

| Code     | Model | Dimensions        | Weight  |
|----------|-------|-------------------|---------|
| 08004001 | WE 01 | 400 x 110 x 80 mm | 1,45 kg |

## HEAD FOR WE01 TUBE EXPANDER

| Code     | Model    | For OD tubing | Dimensions      | Weight  |
|----------|----------|---------------|-----------------|---------|
| 08005001 | WE 08    | 8 mm*         | 50 x 50 x 40 mm | 0,12 kg |
| 08005002 | WE 10    | 10 mm         | 50 x 50 x 40 mm | 0,12 kg |
| 08005003 | WE 12    | 12 mm         | 50 x 50 x 40 mm | 0,12 kg |
| 08005004 | WE 14    | 14 mm         | 50 x 50 x 40 mm | 0,12 kg |
| 08005012 | WE 15    | 15 mm         | 50 x 50 x 40 mm | 0,12 kg |
| 08005005 | WE 16    | 16 mm         | 50 x 50 x 40 mm | 0,12 kg |
| 08005006 | WE 18    | 18 mm         | 50 x 50 x 40 mm | 0,13 kg |
| 08005007 | WE 20    | 20 mm         | 50 x 50 x 40 mm | 0,14 kg |
| 08005008 | WE 22    | 22 mm         | 50 x 50 x 40 mm | 0,15 kg |
| 08005009 | WE 24    | 24 mm         | 50 x 50 x 40 mm | 0,15 kg |
| 08005010 | WE 26    | 26 mm         | 50 x 50 x 40 mm | 0,18 kg |
| 08005011 | WE 28    | 28 mm         | 50 x 50 x 40 mm | 0,19 kg |
| 08005014 | WE 30    | 30 mm         | 50 x 50 x 40 mm | 0,20 kg |
| 08005013 | WE 32    | 32 mm -1,1/4" | 50 x 50 x 40 mm | 0,22 kg |
| 08005015 | WE 35    | 35 mm         | 50 x 50 x 40 mm | 0,25 kg |
| 08005016 | WE 36    | 36 mm         | 50 x 50 x 40 mm | 0,28 kg |
| 08005017 | WE 40    | 40 mm         | 50 x 50 x 40 mm | 0,28 kg |
| 08005018 | WE 42    | 42 mm         | 50 x 50 x 40 mm | 0,30 kg |
| 08005021 | WE 1/2   | 1/2"          | 50 x 50 x 40 mm | 0,12 kg |
| 08005020 | WE 3/8   | 3/8"          | 50 x 50 x 40 mm | 0,12 kg |
| 08005022 | WE 5/8   | 5/8"          | 50 x 50 x 40 mm | 0,12 kg |
| 08005023 | WE 3/4   | 3/4"          | 50 x 50 x 40 mm | 0,12 kg |
| 08005024 | WE 7/8   | 7/8"          | 50 x 50 x 40 mm | 0,15 kg |
| 08005025 | WE 1     | 1"            | 50 x 50 x 40 mm | 0,20 kg |
| 08005026 | WE 1,1/8 | 1,1/8"        | 50 x 50 x 40 mm | 0,22 kg |
| 08005027 | WE 1,3/8 | 1,3/8"        | 50 x 50 x 40 mm | 0,24 kg |
| 08005028 | WE 1,5/8 | 1,5/8"        | 50 x 50 x 40 mm | 0,26 kg |

\* To be used only with annealed hose



Example picture

## SWAGING PUNCHES

| Code     | Model | Description           | For OD tubing              |
|----------|-------|-----------------------|----------------------------|
| 08004002 | 193 S | Swaging punches serie | 1/4"-3/8"-1/2"-5/8" inches |

| Code     | Dimensions       | Weight |
|----------|------------------|--------|
| 08004002 | 160 x 90 x 30 mm | 0,4 kg |



## TUBE BENDERS



### RATCHET TUBE BENDERS

| Ref      | Code     | Model | For OD tubing                    |
|----------|----------|-------|----------------------------------|
| <b>A</b> | 08003013 | 230   | 6-8-10-12-14-16 mm               |
| <b>B</b> | 08003014 | 250   | 10-12-14-16-18-22 mm             |
| <b>B</b> | 08003030 | 260   | 3/8" - 1/2" - 5/8" - 3/4" - 7/8" |

| Ref      | Code     | Dimensions         | Weight |
|----------|----------|--------------------|--------|
| <b>A</b> | 08003013 | 360 x 320 x 100 mm | 3 kg   |
| <b>B</b> | 08003014 | 400 x 340 x 100 mm | 3,7 kg |
| <b>B</b> | 08003030 | 400 x 350 x 100 mm | 3,4 kg |



### 7 IN 1 RATCHET TUBE BENDERS

| Code     | Model | For OD tubing                       |
|----------|-------|-------------------------------------|
| 08003082 | W280  | 8-10-12-14-16-19-22 mm              |
| 08003081 | W270  | 1/4"-5/16"-3/8"-1/2"-5/8"-3/4"-7/8" |

| Code     | Dimensions        | Weight |
|----------|-------------------|--------|
| 08003082 | 370 x 300 x 80 mm | 3,5 kg |
| 08003081 | 370 x 300 x 80 mm | 3,4 kg |



### DOUBLE HANDLER TUBE BENDERS

| Ref      | Code     | Model        | Bend radius      | For OD tubing |
|----------|----------|--------------|------------------|---------------|
| <b>A</b> | 08003042 | TB-364-04    | 14,2 mm - 9/16"  | 6 mm - 1/4"   |
| <b>A</b> | 08003037 | TB-364-8 MM  | 17,5 mm - 11/16" | 8 mm          |
| <b>A</b> | 08003038 | TB-364-10 MM | 24 mm - 15/16"   | 10 mm - 3/8"  |
| <b>A</b> | 08003044 | TB-364-08    | 38,1 mm - 1-1/2" | 12 mm - 1/2"  |
| <b>B</b> | 08003041 | TB-364-15 MM | 57 mm - 2-1/4"   | 15 mm         |
| <b>B</b> | 08003040 | TB-364-16 MM | 57 mm - 2-1/4"   | 16 mm - 5/8"  |
| <b>B</b> | 08003046 | TB-364-12    | 76 mm - 3"       | 19 mm - 3/4"  |
| <b>B</b> | 08003056 | TB-364-14    | 76 mm - 3"       | 22 mm - 7/8"  |

| Ref      | Code     | Dimensions        | Weight |
|----------|----------|-------------------|--------|
| <b>A</b> | 08003042 | 260 x 75 x 50 mm  | 0,6kg  |
| <b>A</b> | 08003037 | 260 x 75 x 50 mm  | 0,6kg  |
| <b>A</b> | 08003038 | 400 x 130 x 90 mm | 2 kg   |
| <b>A</b> | 08003044 | 400 x 130 x 90 mm | 2 kg   |
| <b>B</b> | 08003041 | 730 x 130 x 80 mm | 2,5 kg |
| <b>B</b> | 08003040 | 730 x 130 x 80 mm | 2,5 kg |
| <b>B</b> | 08003046 | 820 x 130 x 90 mm | 3,2 kg |
| <b>B</b> | 08003056 | 820 x 140 x 90 mm | 3,5 kg |



### MULTIPLE TUBE BENDERS

| Code     | Model   | For OD tubing   | Dimensions       | Weight  |
|----------|---------|-----------------|------------------|---------|
| 08003048 | TB-368  | 1/4"-5/16"-3/8" | 250 x 70 x 50 mm | 0,44 kg |
| 08003059 | TB-368M | 6-8-10 mm       | 250 x 70 x 50 mm | 0,45 kg |

## PRE-CALIBRATED TORQUE WRENCHES

New kit of 6 pre-calibrated torque wrenches in plastic case:

| Code     | Model         | Description                      | Dimensions        | Weight  |
|----------|---------------|----------------------------------|-------------------|---------|
| 08007041 | PRE-TW/KIT-06 | Kit of 6 pre-calibrated wrenches | 380 x 290 x 60 mm | 1,75 kg |
| 08007028 | PRE-TW17      | Single wrench 17 mm              | 210 x 30 x 50 mm  | 0,40 kg |
| 08007029 | PRE-TW22      | Single wrench 22 mm              | 220 x 30 x 50 mm  | 0,40 kg |
| 08007030 | PRE-TW26      | Single wrench 26 mm              | 250 x 30 x 50 mm  | 0,45 kg |
| 08007031 | PRE-TW29      | Single wrench 29 mm              | 280 x 30 x 50 mm  | 0,52 kg |
| 08007032 | PRE-TW24      | Single wrench 24 mm              | 240 x 30 x 50 mm  | 0,42 kg |
| 08007033 | PRE-TW27      | Single wrench 27 mm              | 280 x 30 x 50 mm  | 0,53 kg |



SMALL DIMENSIONS  
THAT ENABLE  
AN EASY USE



## Technical features

| Wtrench | Dimensions | Tightening torque Nm | Lenght | Refrigerant         |
|---------|------------|----------------------|--------|---------------------|
| 17      | 1/4"       | 18                   | 220 mm | R22-R407C-R410A-R32 |
| 22      | 3/8"       | 42                   | 265 mm | R22-R407C-R410A-R32 |
| 26      | 1/2"       | 55                   | 270 mm | R410A-R32           |
| 29      | 5/8"       | 65                   | 335 mm | R410A-R32           |
| 24      | 1/2"       | 55                   | 250 mm | R22-R407C           |
| 27      | 5/8"       | 65                   | 280 mm | R22-R407C           |

## TORQUE WRENCHES KIT

orque wrenches complete kit with regulating torque wrench setting complete with carrying plastic case.

It is possible to modify the torque value with spaces of 1 Nm. Working range 0÷75 Nm.

| Code     | Model     | Description                                       |
|----------|-----------|---------------------------------------------------|
| 08007025 | TW/KIT-04 | Complete wrenches kit 17 - 22 - 24 - 26 - 27 - 29 |

| Code     | Dimensions        | Weight  |
|----------|-------------------|---------|
| 08007025 | 380 x 290 x 60 mm | 1,75 kg |



## UNIVERSAL OIL FOR FLARE

Universal oil essential for the flare lubrication, during flaring operation and before clamping with torque wrenches.

| Code     | Model  | Min. Qty | Capacity | Dimensions       | Weight |
|----------|--------|----------|----------|------------------|--------|
| 12002015 | FO-200 | 12       | 200 ml   | 170 x 50 x 50 mm | 0,2 kg |



## TORQUE WRENCHES



### DTW-32/85

#### Digital adjustable torque wrenches

Large back-light display shows the target torque and real time reading.

- 2-colour led light, buzzer and vibration provide visual and audible indicator when target torque is reached.
- High accuracy in 2%.
- Available measurement units: Nm - lbf.in - lbf.ft - kgf.m.
- Memory storage up to 5 sets of target torque setting.
- Easily calibration.

| Code     | Model    | Dimensions       | Weight |
|----------|----------|------------------|--------|
| 08007040 | DTW32/85 | 460 x 90 x 70 mm | 1,4 kg |



#### Technical features

|                       |                                                               |
|-----------------------|---------------------------------------------------------------|
| Working range         | 8 ÷ 85 N.m                                                    |
|                       | 71 ÷ 1195 lbf.in                                              |
|                       | 6 ÷ 63 lbf.ft                                                 |
|                       | 1 ÷ 8 kgf.m                                                   |
| Accuracy              | ± 2% (C.W./C.C.W. of reading, from 10% to 100% of full scale) |
| Resolution            | 0.1 Nm / 1 lbf.in / 0.1 lbf.ft / 0.1 kgf.m                    |
| Open end size         | 10 ÷ 32 mm                                                    |
| Power supply          | 3V (2 x AAA batteries)                                        |
| Operating temperature | 0 ÷ 40°C                                                      |
| Storage temperature   | -20 ÷ 45°C                                                    |
| Wrench length         | 390 mm                                                        |



#### Calibration

| Code     | Description                   |
|----------|-------------------------------|
| 09053035 | Calibration report for wrench |



## PTC1

### Capillary tube cutter

Handy tube cutter for the exact cut of capillary tubes of all dimensions, without altering the tube internal diameter.

| Code     | Model | Dimensions       | Weight  |
|----------|-------|------------------|---------|
| 08006003 | PTC1  | 150 x 70 x 20 mm | 0,08 kg |



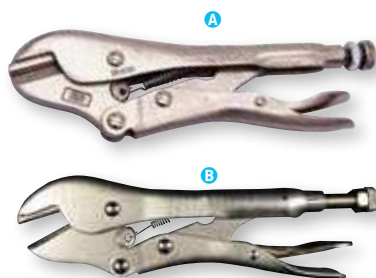
## RR - POP-201

### Pinch-off plier

Sturdy pinch-off plier which, thanks to its particular jaws, allows to deform and close copper tubes.

| Ref | Code     | Model   | For Od tubing |
|-----|----------|---------|---------------|
| A   | 08006001 | RR      | 1/8" - 3/8"   |
| B   | 08006012 | POP-201 | 1/8" - 3/8"   |

| Ref | Code     | Dimensions       | Weight  |
|-----|----------|------------------|---------|
| A   | 08006001 | 250 x 80 x 20 mm | 0,36 kg |
| B   | 08006012 | 190 x 60 x 20 mm | 0,35 kg |



## PA11-PA6

### Fin comb

Tool suitable for the cleaning and aligning of fins of any type of radiators.

| Ref | Code     | Model | Dimensions        | Weight  |
|-----|----------|-------|-------------------|---------|
| A   | 08008051 | PA11  | 280 x 100 x 40 mm | 0,14 kg |
| B   | 08008007 | PA6   | 130 x 160 x 40 mm | 0,10 kg |



## CAPILLARY TOOLS

Small gauge tools for the measurement of capillary tubes inside diameter.

| Ref | Code     | Model      | Dimensions    | Weight           |
|-----|----------|------------|---------------|------------------|
| A   | 08008008 | C4751/015  | 0,45 ÷ 1,5 mm | 120 x 75 x 30 mm |
| B   | 08008009 | C4751/0130 | 1,5 mm ÷ 3 mm | 120 x 75 x 30 mm |



## WRENCHES



### RATCHET WRENCHES

| Ref      | Code     | Model   | Description  | Dimensions        | Weight |
|----------|----------|---------|--------------|-------------------|--------|
| <b>A</b> | 08007005 | R6725MK | Complete set | 240 x 130 x 50 mm | 1,3 kg |



### Spare parts

| Ref      | Code     | Model | Description    | Square opening              | Dimensions       | Weight  |
|----------|----------|-------|----------------|-----------------------------|------------------|---------|
| <b>B</b> | 08007042 | R6950 | Ratchet wrench | 1/4"-5/16"<br>8,5-9,5-13 mm | 170 x 60 x 30 mm | 0,75 kg |



Ratchet measures  
1/4"-5/16"



Fixed key measures  
8,5-9,5-13 mm



### RATCHET WRENCHES

| Ref      | Code     | Model     | Square opening            | Hexagonal opening | Dimensions        | Weight  |
|----------|----------|-----------|---------------------------|-------------------|-------------------|---------|
| <b>A</b> | 08007001 | 127 C     | 1/4"-3/8"-3/16"-<br>5/16" |                   | 267 x 133 x 9 mm  | 0,11 kg |
| <b>B</b> | 08007003 | 124 C     | 1/4"-3/16"                | 9/16"-1/2"        | 267 x 133 x 15 mm | 0,20 kg |
| <b>C</b> | 08007006 | 127<br>CO | 1/4"-3/8"-3/16"-<br>5/16" |                   | 267 x 133 x 23 mm | 0,11 kg |



### RATCHET WRENCHES

| Ref      | Code     | Model | Square opening        | Dimensions       | Weight  |
|----------|----------|-------|-----------------------|------------------|---------|
| <b>A</b> | 08007024 | W122  | 1/4"-3/8"-3/16"-5/16" | 190 x 70 x 20 mm | 0,13 kg |
| <b>B</b> | 08007039 | W124  | 1/4"-3/8"-3/16"-5/16" | 190 x 70 x 20 mm | 0,12 kg |



### PROFESSIONAL 1/2" SQUARE RATCHET WRENCH

| Code     | Model | Square opening | Dimensions       | Weight |
|----------|-------|----------------|------------------|--------|
| 08007043 | W12-S | 1/2"           | 280 x 50 x 45 mm | 0,6 kg |



## CTV-DIGIT

### Digital torque screwdriver

CTV-DIGIT torque screwdriver has been created for the tightening of the charging valves with controlled torque and digital reading on the display.

- Possibility to set the tightening torque according to the specifications supplied by the valves manufacturer.
- Suitable for standard valves and magnum valves.
- Prevents the excessive tightening and thus the valve damage.
- Small, light and handy.
- Backlight display to make operations in dark areas easier.
- Visual alarm when the pre-set tightening torque is reached.
- Complete of two heads.

| Code     | Model     | Dimensions       | Weight |
|----------|-----------|------------------|--------|
| 08008057 | CTV-DIGIT | 175 x 50 x 50 mm | 0,6 kg |



### Technical features

|                   |                                       |
|-------------------|---------------------------------------|
| Torque range      | 0-2 Nm                                |
| Torque resolution | 0.01 Nm                               |
| Torque accuracy   | ±1% CW/CCW of reading, 10% ÷ 100 % FS |
| Power supply      | 1,5 V, 1xAA alkaline                  |

## CORE SCREWS TOOLS

Complete range of plastic and metal core screwdriver tools.

| Ref | Code     | Model  |
|-----|----------|--------|
| A   | 08008002 | W32000 |
| B   | 08008003 | CTV 1  |

| Ref | Dimensions       | Weight  |
|-----|------------------|---------|
| A   | 190 x 70 x 30 mm | 0,09 kg |
| B   | 100 x 40 x 20 mm | 0,03 kg |



## MAS20

### Open-release magnet for solenoid valve

- The magnet allows to open and release non-energized solenoid valves, turning them into manual valves.
- Can be used valves with diameters ≤15,8 mm.
- Ideal for any operation of maintenance, such as refrigerant recovery, transfer of fluids.

| Ref | Code     | Model     | Description                                     |
|-----|----------|-----------|-------------------------------------------------|
| A   | 08007037 | MAS20     | Open-release magnet for solenoid valve          |
| B   | 08007038 | MAS20-WIG | Kit of 8 open-release magnet for solenoid valve |

| Ref | Dimensions        | Weight  |
|-----|-------------------|---------|
| A   | 50 x 50 x 40 mm   | 0,12 kg |
| B   | 130 x 230 x 80 mm | 1 kg    |



## LOCK-VALVE-CARE - GASKETS REPLACEMENT TOOL



### LOCK-VALVE-CARE

#### Simple gaskets replacement tool

LOCK-VALVE-CARE allows easy removal of worn gaskets and replacement with new one in Lock Valve, EW3900/4900 and HD/GY tubes.

The hooked tip allows the easy removal of the worn gasket while the cap on the back is specifically sized to facilitate the insertion of the new gasket.

The cap is also equipped with a specific groove to position the depressor inside HD/GY hoses.

LOCK-VALVE-CARE is equipped with a internal compartment to store the tip and any spare gaskets.

The solution is available in a single blister or in counter display containing 10 pcs.

| Ref | Code     | Model               | Description                                           |    |
|-----|----------|---------------------|-------------------------------------------------------|----|
| A   | 08008059 | LOCK VALVE CARE     | Gasket replacement tool for Lock valves, EW and hoses | -  |
| B   | 08008065 | LOCK-VALVE-CARE-WIG | Counter display with 10 pcs of LOCK-VALVE-CARE        | 10 |

| Ref | Code     | Dimensions        | Weight  |
|-----|----------|-------------------|---------|
| A   | 08008059 | 220 x 60 x 18 mm  | 0,04 kg |
| B   | 08008065 | 235 x 145 x 65 mm | 0,51 kg |



Removal of gasket



Inserting new gasket



### Accessories and Spare parts



| Ref | Code        | Model      | Description                                               |    |
|-----|-------------|------------|-----------------------------------------------------------|----|
| A   | 14020097    | G-LV/T-WIG | Kit 5pcs gaskets for LOCK-VALVE and EW3900/EW4900         | 5  |
| B   | 14020014001 | G19020     | Kit 10 pcs gaskets for hoses 1/4" SAE, 1/2"-16ACME-NBR    | 10 |
| C   | 14020071001 | G19020/T   | Kit 10 pcs gaskets for hoses 1/4" SAE, 1/2"-16ACME - PTFE | 10 |
|     | 14020048001 | G19516     | Kit 10 pcs gaskets for hoses 5/16"SAE                     | 10 |
| D   | 14020015001 | G19030     | Kit of 10 pcs gaskets for hoses 3/8"SAE                   | 10 |
| E   | 14023001001 | D19302     | Kit of 10 pcs valve openers for hoses                     | 10 |

## LOCK-VALVE

### Access valves

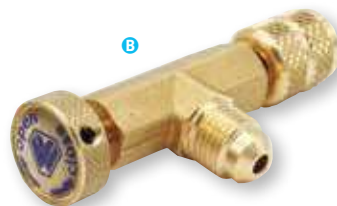
- Very efficient tightness that guarantees no gas leaks.
- Extremely reduced volumes that prevent gas leaks during the valve connecting or disconnecting phase.
- Very easy to handle.
- Allow to regulate the refrigerant flow.
- Prevent the burning risks to fingers when disconnecting.
- Constructive precision that guarantees 100% compatibility with the systems on the market.
- PTFE seal compatible with CFC, HCFC, HFC and HFO.

| Ref      | Code        | Model            | Description               |
|----------|-------------|------------------|---------------------------|
| <b>A</b> | 05059049001 | LOCK-VALVE 1/4"  | 1/4" SAE F x 1/4" SAE M   |
| <b>B</b> | 05059050001 | LOCK-VALVE 5/16" | 5/16" SAE F x 5/16" SAE M |
|          | 05059053001 | LOCK-VALVE/5-4   | 5/16" SAE F x 1/4" SAE M  |
|          | 05059063001 | LOCK-VALVE/4-5   | 1/4" SAE F x 5/16" SAE M  |

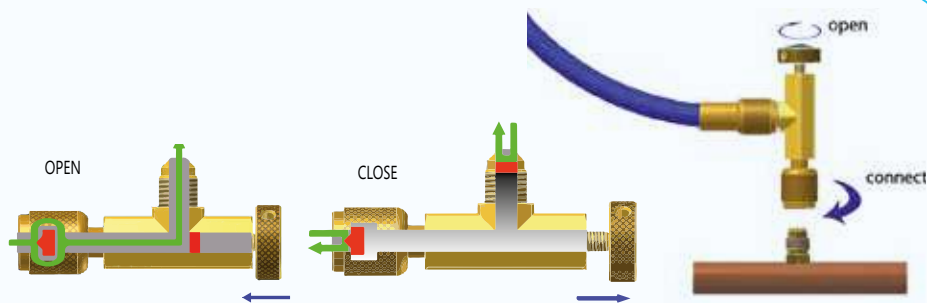
| Ref      | Code        | Dimensions        | Weight  |
|----------|-------------|-------------------|---------|
| <b>A</b> | 05059049001 | 140 x 100 x 20 mm | 0,10 Kg |
| <b>B</b> | 05059050001 | 140 x 100 x 20 mm | 0,10 Kg |
|          | 05059053001 | 140 x 100 x 20 mm | 0,10 Kg |
|          | 05059063001 | 140 x 100 x 20 mm | 0,10 Kg |



MINIMUM LEAKAGE: REDUCES RELEASE OF REFRIGERANT INTO THE ATMOSPHERE



### Connecting scheme



### Accessories and Spare parts



| Ref      | Code     | Model               | Description                                       |    |
|----------|----------|---------------------|---------------------------------------------------|----|
| <b>A</b> | 14020097 | G-LV/T-WIG          | Kit 5pcs gaskets for LOCK-VALVE and EW3900/EW4900 | 5  |
| <b>B</b> | 08008059 | LOCK-VALVE-CARE     | Gasket easy replacement tool                      |    |
| <b>C</b> | 08008065 | LOCK-VALVE-CARE-WIG | Counter display with 10 pcs LOCK-VALVE-CARE       | 10 |

## CORE SCREWER TOOL



### EW3900

#### Core screwer tool

Easy and efficient system that enables to remove and replace valve cores without dispersing one gramme of refrigerant. It also enables to recharge the A/C system faster by removing the valve core and reinserting it again once charging is over.

| Code        | Model     |
|-------------|-----------|
| 08008023002 | EW 3900   |
| 08008023003 | EW 3900/5 |

| Swivel female connections | Male connections | Dimensions        | Weight  |
|---------------------------|------------------|-------------------|---------|
| 1/4" SAE                  | 1/4" SAE         | 100 x 175 x 30 mm | 0,10 kg |
| 5/16" SAE                 | 1/4" SAE         | 100 x 175 x 30 mm | 0,10 kg |



Functioning diagrams: how to remove and replace valve cores without dispersing one gramme of refrigerant.



A



B



C



### EW4900

#### Core removal access solution with dual connections

EW4900 enables to remove the valve core, and then open the way to its two integrated SAE M 3/8" and 1/4" connections equipped with valves.

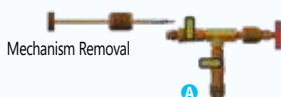
3/8" port designed for coupling with the IperVAC hose (see pag 32) and 1/4" port for vacuum digital gauge, charging hose or manifold.

| Code        | Model     | Description                                         |
|-------------|-----------|-----------------------------------------------------|
| 08008060002 | EW 4900   | 1/4" core removal solution with double connections  |
| 08008060003 | EW 4900/5 | 5/16" core removal solution with double connections |

| Swivel female connections | Male connections    | Dimensions        | Weight  |
|---------------------------|---------------------|-------------------|---------|
| 1/4" SAE                  | 3/8" SAE + 1/4" SAE | 100 x 175 x 30 mm | 0,25 kg |
| 5/16" SAE                 | 3/8" SAE + 1/4" SAE | 100 x 175 x 30 mm | 0,25 kg |

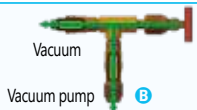


Application:



Mechanism Removal

A



Vacuum

Vacuum pump

B



Charge

C



Accessories and Spare parts

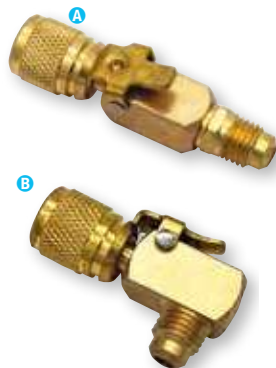
| Code        | Model            | Description                                              |
|-------------|------------------|----------------------------------------------------------|
| 06140002    | IVSS/6-6/60      | IPERVAC 1500 mm hose 3/8" connection                     |
| 06140001    | IVSS/6-6/36      | IPERVAC 900 mm hose 3/8" connection                      |
| 14020097    | G-LV/T-WIG       | Kit 5 pcs gaskets for LOCK-VALVE - EW3900/EW4900         |
| 08008059    | LOCK VALVE CARE  | Gasket replacement tool for LOCK-VALVE, EW and hoses     |
| 05108043001 | M1/4"-R134A/V-RK | Kit 10 pcs internal cores for HFC (R134a-R410A, R32,...) |
| 05055099    | W404/5           | 1/4" SAE F x 5/16" SAE M adapter                         |

## QUICK COUPLERS

- Allow to open or close automatically the system without loss of refrigerant.
- Eliminate hazardous discharge of refrigerant and oil from system when disconnecting hose.
- Prevent finger burn when disconnecting.

| Ref | Code     | Model | Description                       |
|-----|----------|-------|-----------------------------------|
| A   | 05059005 | 16 C  | 1/4" SAE male x 1/4" SAE female   |
| A   | 05059038 | 26 C  | 5/16" SAE male x 5/16" SAE female |
| B   | 05059007 | 17 C  | 1/4" SAE male 1/4" SAE female     |
| B   | 05059039 | 27 C  | 5/16" SAE male 5/16" SAE female   |

| Ref | Code     | Dimensions        | Weight  |
|-----|----------|-------------------|---------|
| A   | 05059005 | 165 x 135 x 20 mm | 0,07 kg |
| A   | 05059038 | 165 x 135 x 20 mm | 0,07 kg |
| B   | 05059007 | 165 x 135 x 20 mm | 0,07 kg |
| A   | 05059039 | 165 x 135 x 20 mm | 0,07 kg |



## Spare parts

| Code     | Model     | Description               | For             |    |
|----------|-----------|---------------------------|-----------------|----|
| 14020087 | S8920071  | Female coupler-sleeve     | 16C             | 10 |
| 14020088 | S8920072  | Female coupler-retaine    | 16C             | 10 |
| 14020047 | S8920073  | Female coupler-gasket kit | 16C-17C         | 10 |
| 14020022 | S8920077  | Female coupler-o-ring     | 16C-17C-26C-27C | 10 |
| 14020023 | S8920263  | Female coupler-3/16"      | 19C             | 10 |
| 14020081 | S10000996 | Female coupler-gasket kit | 26C-27C         | 10 |

## CLICK-LOCK

### Universal system of identification and protection

Protect your craftsmanship.

Reduce questionable warranty returns.

Defend your reputation and provide your customer with a permanent system protection. Safeguard your equipment from being contaminated by impure refrigerants.

| Code     | Model   | Description          | Pack   | Dimensions        | Weight  |
|----------|---------|----------------------|--------|-------------------|---------|
| 05049025 | CLSR100 | For 1/4"-3/8"-1/2".. | 25 pcs | 240 x 200 x 60 mm | 0,30 kg |
| 05049034 | CLSC100 | For 5/16"            | 25 pcs | 240 x 200 x 60 mm | 0,30 kg |



## How to fit the CLICK-LOCK? As easy as 1-2-3!



## FITTINGS



### EASY-JOINT

#### Self-flaring connections for split systems

EASY-JOINT replaces flares very quickly, safely and cheaply.

No further connection or soldering is necessary.

The operator must only prepare the copper tube (cut and deburred) and place the nose at its end after having inserted the nut.

- No calibrator is required for copper tube thickness from 0,8 to 1 mm.
- For all types of refrigerants (included R410A).
- Easy and quick installation.
- Perfect for small spaces.
- Low cost.
- Safe.

| Code        | Model           | Description                       |   |
|-------------|-----------------|-----------------------------------|---|
| 05108075001 | EASY-JOINT1/4"  | Self-flaring connections kit 1/4" | 4 |
| 05108076001 | EASY-JOINT 3/8" | Self-flaring connections kit 3/8" | 4 |
| 05108077001 | EASY-JOINT 1/2" | elf-flaring connections kit 1/2"  | 4 |

| Code        | Dimensions        | Weight  |
|-------------|-------------------|---------|
| 05108075001 | 140 x 100 x 30 mm | 0,15 kg |
| 05108076001 | 140 x 100 x 30 mm | 0,15 kg |
| 05108077001 | 140 x 100 x 30 mm | 0,15 kg |



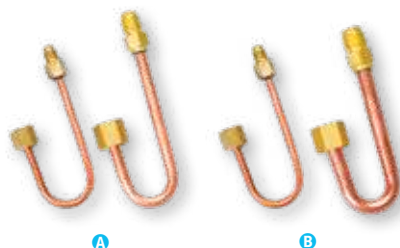
### INLINE-JOINT

#### Self-flaring straight connections

- Replaces flares very quickly, safely and cheaply.
- For all types of refrigerants (included R410A).
- Easy and quick installation.
- Perfect for small spaces.

| Code        | Model             | Description                      |
|-------------|-------------------|----------------------------------|
| 05108083001 | INLINE-JOINT-1/4" | 1/4" - 1/4" complete with 2 nuts |
| 05108084001 | INLINE-JOINT-3/8" | 3/8" - 3/8" complete with 2 nuts |
| 05108085001 | INLINE-JOINT-1/2" | 1/2" - 1/2" complete with 2 nuts |

| Code        | Dimensions        | Weight  |
|-------------|-------------------|---------|
| 05108083001 | 140 x 100 x 30 mm | 0,10 kg |
| 05108084001 | 140 x 100 x 30 mm | 0,10 kg |
| 05108085001 | 140 x 100 x 30 mm | 0,10 kg |



### INVERSING FITTINGS

| Ref | Code     | Model   | Description                           |   |
|-----|----------|---------|---------------------------------------|---|
| A   | 05108080 | INV-4/6 | 1 pc. 1/4" x 1/4" + 1 pc. 3/8" x 3/8" | - |
| B   | 05108081 | INV-4/8 | 1 pc. 1/4" x 1/4" + 1 pc. 1/2" x 1/2" | - |

| Ref | Code     | Dimensions        | Weight  |
|-----|----------|-------------------|---------|
| A   | 05108080 | 200 x 150 x 30 mm | 0,20 kg |
| B   | 05108081 | 200 x 150 x 30 mm | 0,20 kg |

## 121RG SERIES WITH DEPRESSOR

| Code        | Model          | A                         | B             | Dimensions        | Weight    |
|-------------|----------------|---------------------------|---------------|-------------------|-----------|
|             |                | Female swivel connections | Male connect  |                   |           |
| 05001003001 | 121RG4         | 1/4" SAE                  | 1/4" SAE      | 140 x 100 x 20 mm | 0,10 kg * |
| 05002003001 | BVR-4          | 7/16" SAE                 | 1/4" SAE      | 140 x 100 x 20 mm | 0,10 kg   |
| 05001033001 | 121RG5-4       | 5/16" SAE                 | 1/4" SAE      | 140 x 100 x 20 mm | 0,10 kg   |
| 05001011001 | 121RG6-4       | 3/8" SAE                  | 1/4" SAE      | 140 x 100 x 20 mm | 0,10 kg   |
| 05001010001 | 121RG4-4       | 1/2" -16 ACME             | 1/4" SAE      | 140 x 100 x 20 mm | 0,10 kg   |
| 05001038001 | 121RG5 (BVR-5) | 5/16" SAE                 | 5/16" SAE     | 140 x 100 x 20 mm | 0,10 kg   |
| 05001031001 | 121RG4-5       | 1/4" SAE                  | 5/16" SAE     | 140 x 100 x 20 mm | 0,10 kg   |
| 05002034001 | 121RG4-5       | 1/2" -16 ACME             | 5/16" SAE     | 140 x 100 x 20 mm | 0,10 kg   |
| 05001004001 | 121RG6         | 3/8" SAE                  | 3/8" SAE      | 140 x 100 x 20 mm | 0,10 kg   |
| 05001007001 | 121RG4-6       | 1/4" SAE                  | 3/8" SAE      | 140 x 100 x 20 mm | 0,10 kg   |
| 05001041001 | 121RG5-6       | 5/16" SAE                 | 3/8" SAE      | 140 x 100 x 20 mm | 0,10 kg   |
| 05001009001 | 121RG4-6       | 1/2" -16 ACME             | 3/8" SAE      | 140 x 100 x 20 mm | 0,10 kg   |
| 05001008001 | 121RG4         | 1/2" -16 ACME             | 1/2" -16 ACME | 140 x 100 x 20 mm | 0,10 kg   |
| 05001020001 | 121RG4-A       | 1/4" SAE                  | 1/2" -16 ACME | 140 x 100 x 20 mm | 0,10 kg   |
| 05001005001 | 121RG6-A       | 3/8" SAE                  | 1/2" -16 ACME | 140 x 100 x 30 mm | 0,10 kg   |



Available in following colors



(\*) With 2 plates.

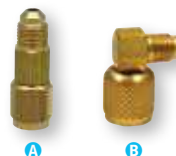


### Spare parts

| Ref | Code        | Model     | Description                      |    |
|-----|-------------|-----------|----------------------------------|----|
| A   | 14022191001 | K-PLATE/B | Kit 10 pcs blue colored plates   | 10 |
| B   | 14022191002 | K-PLATE/R | Kit 10 pcs red colored plates    | 10 |
| C   | 14022191003 | K-PLATE/Y | Kit 10 pcs yellow colored plates | 10 |

## RG SERIES WITH DEPRESSOR

| Code        | Model     | A                         | B            | Dimensions        | Weight  |
|-------------|-----------|---------------------------|--------------|-------------------|---------|
|             |           | Female swivel connections | Male connect |                   |         |
| 05059002001 | RG180     | 1/4" SAE                  | 1/4" SAE     | 140 x 100 x 20 mm | 0,10 kg |
| 05059022001 | RG180/4-5 | 1/4" SAE                  | 5/16" SAE    | 140 x 100 x 20 mm | 0,10 kg |
| 05059023001 | RG180/5-4 | 5/16" SAE                 | 1/4" SAE     | 140 x 100 x 20 mm | 0,10 kg |
| 05059009001 | RG183     | 3/16" SAE                 | 1/4" SAE     | 140 x 100 x 20 mm | 0,10 kg |



| Code        | Model  | A                         | B              | Dimensions        | Weight  |
|-------------|--------|---------------------------|----------------|-------------------|---------|
|             |        | Female swivel connections | Female connect |                   |         |
| 05059001001 | RG180F | 1/4" SAE                  | 1/4" SAE       | 140 x 100 x 20 mm | 0,04 kg |



| Code        | Model     | Description                                              | Dimensions        | Weight  |
|-------------|-----------|----------------------------------------------------------|-------------------|---------|
| 05059003001 | RG090     | Adapter 90°, 1/4" SAE M x 1/4" SAEW swivel connection F  | 140 x 100 x 20 mm | 0,04 kg |
| 05059024001 | RG090/5-4 | Adapter 90°, 1/4" SAE M x 5/16" SAEW swivel connection F | 140 x 100 x 20 mm | 0,10 kg |
| 05059010001 | RG093     | Adapter 90°, 1/4" SAE M x 3/16" SAEW swivel connection F | 140 x 100 x 20 mm | 0,10 kg |



## QUICK CONNECTOR, COUPLINGS, PIERCING PLIER



### QUICK CONNECTORS

| Ref      | Code        | Model       | Description     | Connection   | Dimensions        | Weight  |
|----------|-------------|-------------|-----------------|--------------|-------------------|---------|
| <b>A</b> | 05105008001 | GF6-1/4"NPT | Quick connector | 1/4"NPT 6 mm | 140 x 100 x 20 mm | 0,20 kg |
| <b>B</b> | 05105009001 | GF8-1/4"NPT | Quick connector | 1/4"NPT 8 mm | 140 x 100 x 20 mm | 0,20 kg |
|          | 14020017    | G6          | Gasket Ø 6      |              | 140 x 100 x 20 mm | 0,20 kg |
|          | 14020018    | G8          | Gasket Ø 8      |              | 140 x 100 x 20 mm | 0,20 kg |



### 1/4" NPT QUICK COUPLINGS

Realized in stainless steel.

| Ref      | Code        | Model | Connection | Dimensions        | Weight  |
|----------|-------------|-------|------------|-------------------|---------|
| <b>A</b> | 05108046001 | WF 16 | 1/4"NPT    | 140 x 100 x 20 mm | 0,15 kg |
| <b>B</b> | 05108045001 | WM 16 | 1/4"NPT    | 140 x 100 x 20 mm | 0,15 kg |



### 3/8" NPT QUICK COUPLINGS

| Ref      | Code        | Model | Connection | Dimensions        | Weight  |
|----------|-------------|-------|------------|-------------------|---------|
| <b>A</b> | 05108056001 | WF 21 | 3/8"NPT    | 140 x 100 x 30 mm | 0,15 kg |
| <b>B</b> | 05108055001 | WM 21 | 3/8"NPT    | 140 x 100 x 30 mm | 0,15 kg |



### TUBE PIERCING VALVES

| Ref      | Code     | Model  | Connection | Ø tubing mm          | Min. Qty | Dimensions        | Weight  |
|----------|----------|--------|------------|----------------------|----------|-------------------|---------|
| <b>A</b> | 05004003 | BPV 31 | 1/4"SAE    | 6,3-7,9-9,5          | 12       | 150 x 100 x 65 mm | 1,2 kg  |
| <b>A</b> | 05004002 | BPV 21 | 1/4"SAE    | 12,7-15,8            | 8        | 135 x 85 x 80 mm  | 1,0 kg  |
| <b>B</b> | 05004005 | WPV 31 | 1/4"SAE    | 6,3 - 7,9 - 9,5 - 10 | 10       | 150 x 100 x 65 mm | 0,7 kg  |
| <b>C</b> | 05004004 | W341   | 1/4"SAE    | 4,8 ÷ 9,6            |          | 70 x 30 x 30 mm   | 0,10 kg |

### PIERCING PLIER

The piercing plier allows to have an immediate piercing of the refrigeration system charging hose. As soon as the hose has been perforated, it is possible to perform the vacuum and the refrigerant recharge in the system.

Necessary for HC systems (hydrocarbons) and flammables.

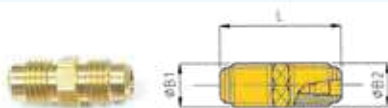
| Ref      | Code     | Model  | Connection | Ø tubing mm         | Dimensions        | Weight  |
|----------|----------|--------|------------|---------------------|-------------------|---------|
| <b>A</b> | 08006007 | PT-109 | 1/4"SAE    | 1/4"-1/2" (6-12 mm) | 340 x 120 x 30 mm | 0,70kg  |
| <b>B</b> | 08006011 | PP-343 | 1/4"SAE    | 6 mm                | 240 x 75 x 25 mm  | 0,43 kg |



The "C" after 1/4" indicates that the connection is suitable to fit the access valve.

## SAE FLARE UNIONS

| Code        | Model    | Description                                     | exag. | L mm | ØB1  | ØB2   | Weight | Min. Qty |
|-------------|----------|-------------------------------------------------|-------|------|------|-------|--------|----------|
| 05102003    | 3BA      | Valve body                                      | 11    | 35   | 1/4" | 1/4"C | 22 g   | 500      |
| 05102030    | 512 3BA  | Valve complete with core and cap                | 11    | 35   | 1/4" | 1/4"C | 22 g   | 500      |
| 05108026001 | 512 3BAK | Kit of 10 pcs. Valve complete with core and cap | 11    | 35   | 1/4" | 1/4"C | 220 g  | 10       |



## SAE FLARE X NPT UNIONS

| Code        | Model       | Description                                     | exag. | L mm | ØB     | ØC   | Weight | Min. Qty |
|-------------|-------------|-------------------------------------------------|-------|------|--------|------|--------|----------|
| 05102004    | 2BA         | Valve body                                      | 11    | 27   | 1/4"C  | 1/8" | 20 g   | 500      |
| 05102029    | 512 2BA     | Valve complete with core and cap                | 11    | 27   | 1/4"C  | 1/8" | 20 g   | 500      |
| 05108025001 | 512 2BAK    | Kit of 10 pcs. Valve complete with core and cap | 11    | 27   | 1/4"C  | 1/8" | 200 g  | 10       |
| 05102075    | 24F5BA      | Valve body                                      | 14    | 27   | 5/16"C | 1/8" | 20 g   | 500      |
| 05108108001 | 512 24F5BAK | Kit of 10 pcs. Valve complete with core and cap | 14    | 27   | 5/16"C | 1/8" | 200 g  | 10       |



## SAE FLARE X O.D.S. UNIONS

| Ref | Code        | Model        | Description                                     | exag. | L mm | ØB     | ØC-ØD-ØE mm | Weight | Min. Qty |
|-----|-------------|--------------|-------------------------------------------------|-------|------|--------|-------------|--------|----------|
| A   | 05102001    | 1BA/6,2      | Valve body                                      | 11    | 26   | 1/4"C  | 6,2         | 12 g   | 500      |
| A   | 05102002    | 1BA/6,4      | Valve body                                      | 11    | 26   | 1/4"C  | 6,4 1/4"    | 12 g   | 500      |
| B   | 05102005    | 4BA          | Valve body                                      | 11    | 29   | 1/4"C  | 6,2-8-10    | 12 g   | 500      |
| B   | 05102070    | 5BA          | Valve body                                      | 11    | 29   | 5/16"C | 6,2-8-10    | 13 g   | 500      |
| A   | 05102028    | 512 1BA/6,2  | Valve complete with core and cap                | 11    | 30,5 | 1/4"C  | 6,2         | 12 g   | 500      |
| A   | 05108023001 | 512 1BA/6,2K | Kit of 10 pcs. Valve complete with core and cap | 11    | 26   | 1/4"C  | 6,2         | 120 g  | 10       |
| A   | 05102033    | 512 1BA/6,4  | Valve complete with core and cap                | 11    | 26   | 1/4"C  | 6,4 1/4"    | 12 g   | 500      |
| A   | 05108024001 | 512 1BA/6,4K | Kit of 10 pcs. Valve complete with core and cap | 11    | 26   | 1/4"C  | 6,4 1/4"    | 120 g  | 10       |
| B   | 05102031    | 512 4BA      | Valve complete with core and cap                | 11    | 29   | 1/4"C  | 6,2-8-10    | 13 g   | 500      |
| B   | 05108027001 | 512 4BAK     | Kit of 10 pcs. Valve complete with core and cap | 11    | 29   | 1/4"C  | 6,2-8-10    | 130 g  | 10       |
| B   | 05102071    | 512 5BA      | Valve complete with core and cap                | 14    | 30,5 | 5/16"C | 6,2-8-10    | 13 g   | 500      |
| B   | 05108089001 | 512 5BAK     | Kit of 10 pcs. Valve complete with core and cap | 14    | 30,5 | 5/16"C | 6,2-8-10    | 130 g  | 10       |



## CORES AND CAPS

### SAE FLARE UNIONS WITH COPPER TUBE

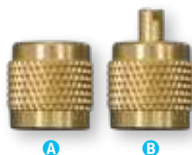
| Code        | Model    | Description                                     | exag. | L mm | ØB    | ØC | Weight | Min. Qty  |
|-------------|----------|-------------------------------------------------|-------|------|-------|----|--------|-----------|
| 05102006    | 50BA     | Valve body                                      | 11    | 77   | 1/4"C | 6  | 29 g   | 500       |
| 05102007    | 100BA    | Valve body                                      | 11    | 126  | 1/4"C | 6  | 29 g   | 500       |
| 05102025    | 512/50   | Valve complete with core and cap                | 11    | 77   | 1/4"C | 6  | 29 g   | 500       |
| 05108028001 | 512/50K  | Kit of 10 pcs. Valve complete with core and cap | 11    | 77   | 1/4"C | 6  | 290 g  | <b>10</b> |
| 05102023    | 512/100  | Valve complete with core and cap                | 11    | 126  | 1/4"C | 6  | 29 g   | 500       |
| 05108029001 | 512/100K | Kit of 10 pcs. Valve complete with core and cap | 11    | 126  | 1/4"C | 6  | 290 g  | <b>10</b> |



### INTERNAL CORE

| Code        | Model             | Description                                             | Min. Qty  |
|-------------|-------------------|---------------------------------------------------------|-----------|
| 14023003    | M1/4"-R22/B       | Internal core for R22                                   | 500       |
| 05108040001 | M1/4"-R22/BK      | Kit 10 pcs. Internal core for R22                       | <b>10</b> |
| 14023002    | M1/4"-R134A/V-R   | Internal core for HFC (R134a-R410A, R32...)             | 500       |
| 05108043001 | M1/4"-R134A/V-RK  | Kit 10 pcs. Internal core for HFC (R134a-R410A, R32...) | <b>10</b> |
| 14023023    | M1/4"-R290/V      | Internal core for HC R290 R600 1/4"                     | 500       |
| 05108110001 | M1/4"-R290/VK-WIG | Kit 10 pcs. Internal core for HC R290 R600 1/4"         | <b>10</b> |

### CAP



| Ref      | Code        | Model      | Description                            | Min. Qty  |
|----------|-------------|------------|----------------------------------------|-----------|
| <b>A</b> | 05063001    | CP1/4"     | 1/4" flare cap with gasket             | 500       |
|          | 05108044001 | CP1/4"K    | Kit 10 pcs. Cap with gasket            | <b>10</b> |
| <b>A</b> | 05063042    | CP5/16"    | 5/16" flare cap with gasket            | 100       |
| <b>B</b> | 05063053    | CP1/4"-CTV | 1/4" flare cap with gasket with wrench | 50        |

### COPPER BONNETS FOR SAE FLARE CONNECTIONS



| Code     | Model | Flare | Weight gr x 100 pc | Min. Qty |
|----------|-------|-------|--------------------|----------|
| 05063024 | B1-4  | 1/4"  | 41                 | 100      |
| 05063025 | B1-5  | 5/16" | 56                 | 100      |
| 05063026 | B1-6  | 3/8"  | 91                 | 100      |
| 05063027 | B1-8  | 1/2"  | 140                | 100      |
| 05063028 | B1-10 | 5/8"  | 186                | 100      |
| 05063029 | B1-12 | 3/4"  | 443                | 100      |

The "C" after 1/4" indicates that the connection is suitable to fit the access valve.  
The "N" after 1/4" indicates the presence of the nut.

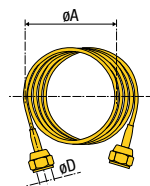
## CONICAL COPPER GASKETS FOR SAE FLARE CONNECTIONS

| Code     | Model | Flare | Weight g x 100 pc | Min. Qty |
|----------|-------|-------|-------------------|----------|
| 14020035 | B2-4  | 1/4"  | 27                | 100      |
| 14020043 | B2-5  | 5/16" | 30                | 100      |
| 14020036 | B2-6  | 3/8"  | 50                | 100      |
| 14020044 | B2-8  | 1/2"  | 66                | 100      |
| 14020045 | B2-10 | 5/8"  | 85                | 100      |
| 14020046 | B2-12 | 3/4"  | 182               | 100      |



## SAE FLARE CAPILLARY ADAPTORS WITHOUT DEPRESSOR

| Code     | Model | ØA mm | ØD mm | L mm | Weight |
|----------|-------|-------|-------|------|--------|
| 06052001 | 87A   | 60    | 1/4"  | 1000 | 85 g   |
| 06052002 | 87B   | 60    | 1/4"  | 500  | 65 g   |



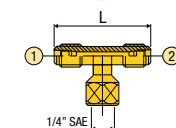
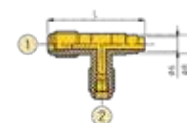
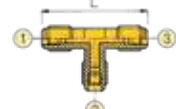
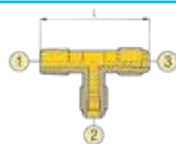
## TEES

| Code        | Model   | L mm | 1 NTP | 2 flare | 3 flare | Weight | Min. Qty |
|-------------|---------|------|-------|---------|---------|--------|----------|
| 05059008    | 889/02  | 45   | 1/8"  | 1/4°C   | 1/4°C   | 25 g   | 100      |
| 05108112001 | 889/02K | 45   | 1/8"  | 1/4°C   | 1/4°C   | 250 g  | 10       |

| Code        | Model   | L mm | 1 flare | 2 flare | 3 flare | Weight | Min. Qty |
|-------------|---------|------|---------|---------|---------|--------|----------|
| 05057061    | 890/02  | 45   | 1/4°C   | 1/4°C   | 1/4"    | 25 g   | 100      |
| 05108113001 | 890/02K | 45   | 1/4°C   | 1/4°C   | 1/4"    | 250 g  | 10       |

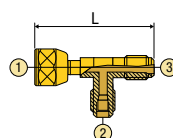
| Code     | Model  | L mm | 1 flare | 2 flare | Weight | Min. Qty |
|----------|--------|------|---------|---------|--------|----------|
| 05057001 | 892/02 | 40   | 1/4°C   | 1/4°C   | 20 g   | 100      |

| Code        | Model     | L mm | 1 flare | 2 flare | Weight | Min. Qty |
|-------------|-----------|------|---------|---------|--------|----------|
| 05057034    | T6-4C/01  | 46   | 1/4°C   | 1/4°C   | 37 g   | 100      |
| 05108114001 | T6-4C/01K | 46   | 1/4°C   | 1/4°C   | 370 g  | 10       |

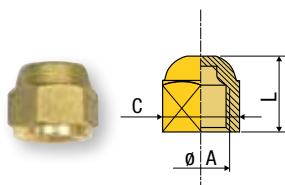


## TEES WITH SWIVEL NUT

| Code        | Model   | L mm | 1 flare | 2 flare | 3 flare | Weight | Min. Qty |
|-------------|---------|------|---------|---------|---------|--------|----------|
| 05057029    | 891/02  | 52   | 1/4"N   | 1/4°C   | 1/4°C   | 47 g   | 100      |
| 05108115001 | 891/02K | 52   | 1/4"N   | 1/4°C   | 1/4°C   | 470 g  | 10       |

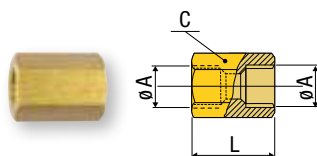


## UNIONS



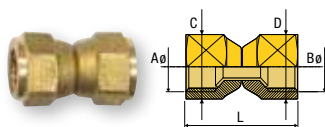
### SAE FLARE CAPS

| Code        | Model | ØA flare | C esag. | L mm | Weight | Min. Qty |
|-------------|-------|----------|---------|------|--------|----------|
| 05062031    | N5-4  | 1/4"     | 14      | 14   | 10 g   | 100      |
| 05108116001 | N5-4K | 1/4"     | 14      | 14   | 100 g  | 10       |
| 05062060    | N5-5  | 5/16"    | 19      | 18   | 22 g   | 100      |
| 05108117001 | N5-5K | 5/16"    | 19      | 18   | 220 g  | 10       |
| 05062032    | N5-6  | 3/8"     | 22      | 18   | 33 g   | 100      |



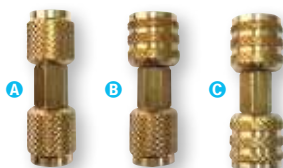
### SAE FLARE COUPLING UNIONS

| Code        | Model  | ØA flare | C esag. | L mm | Weight | Min. Qty |
|-------------|--------|----------|---------|------|--------|----------|
| 05053003    | U4-4   | 1/4"     | 17      | 26   | 38 g   | 100      |
| 05108118001 | U4-4K  | 1/4"     | 17      | 26   | 380 g  | 10       |
| 05053004    | U4-5   | 5/16"    | 19      | 28   | 47 g   | 100      |
| 05108119001 | U4-5K  | 5/16"    | 19      | 28   | 470 g  | 10       |
| 05053005    | U4-6   | 3/8"     | 22      | 30   | 64 g   | 100      |
| 05108120001 | U4-6K  | 3/8"     | 22      | 30   | 320 g  | 5        |
| 05053007    | U4-10  | 5/8"     | 28      | 40   | 124 g  | 100      |
| 05108122001 | U4-10K | 5/8"     | 28      | 40   | 645 g  | 5        |



### SAE FLARE SWIVEL NUTS UNIONS

| Code        | Model   | ØA flare | C esag. | L mm | Weight | Min. Qty |
|-------------|---------|----------|---------|------|--------|----------|
| 05062007    | US4-4   | 1/4"     | 17      | 30   | 38 g   | 100      |
| 05108123001 | US4-4K  | 1/4"     | 17      | 30   | 380 g  | 10       |
| 05062036    | US4-6   | 3/8"     | 22      | 37   | 65 g   | 50       |
| 05108124001 | US4-6K  | 3/8"     | 22      | 37   | 650 g  | 10       |
| 05062037    | US4-8   | 1/2"     | 24      | 41   | 78 g   | 50       |
| 05108125001 | US4-8K  | 1/2"     | 24      | 41   | 780 g  | 10       |
| 05062038    | US4-10  | 5/8"     | 27      | 42   | 91 g   | 25       |
| 05108126001 | US4-10K | 5/8"     | 27      | 42   | 910 g  | 10       |

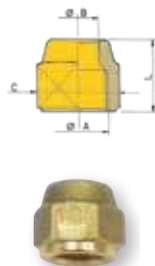


### SWIVEL COUPLING

| Ref | Code        | Model | Connection          |
|-----|-------------|-------|---------------------|
| A   | 05053012001 | MG4-4 | 1/4" SAE x 1/4" SAE |
| B   | 05053013001 | MG4-6 | 1/4" SAE x 3/8" SAE |
| C   | 05053014001 | MG6-6 | 3/8" SAE x 3/8" SAE |

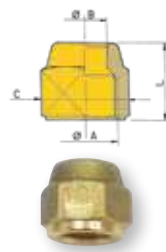
## SAE FLARE NUTS FOR INCH TUBES

| Code        | Model   | Description                     | ØA   | ØB   | C esag. | L mm | Weight | Min. Qty |
|-------------|---------|---------------------------------|------|------|---------|------|--------|----------|
| 05062008    | NS4-4   | Nuts for inch tubes             | 1/4" | 1/4" | 17      | 15   | 18 g   | 100      |
| 05108002001 | NS4-4K  | Kit 10 pcs. nuts for inch tubes | 1/4" | 1/4" | 17      | 15   | 180 g  | 10       |
| 05062009    | NS4-6   | Nuts for inch tubes             | 3/8" | 3/8" | 22      | 18   | 31 g   | 100      |
| 05108003001 | NS4-6K  | Kit 10 pcs. nuts for inch tubes | 3/8" | 3/8" | 22      | 18   | 310 g  | 10       |
| 05062010    | NS4-8   | Nuts for inch tubes             | 1/2" | 1/2" | 24      | 20   | 36 g   | 100      |
| 05108004001 | NS4-8K  | Kit 10 pcs. nuts for inch tubes | 1/2" | 1/2" | 24      | 20   | 360 g  | 10       |
| 05062011    | NS4-10  | Nuts for inch tubes             | 5/8" | 5/8" | 28      | 23   | 43 g   | 100      |
| 05108005001 | NS4-10K | Kit 10 pcs. nuts for inch tubes | 5/8" | 5/8" | 28      | 23   | 430 g  | 10       |
| 05062013    | NS4-12  | Nuts for inch tubes             | 3/4" | 3/4" | 33      | 30   | 87 g   | 100      |
| 05108006001 | NS4-12K | Kit 10 pcs. nuts for inch tubes | 3/4" | 3/4" | 33      | 30   | 435 g  | 5        |
| 05062014    | NS4-14  | Nuts for inch tubes             | 7/8" | 7/8" | 41      | 36   | 179 g  | 10       |
| 05062015    | NS4-16  | Nuts for inch tubes             | 1"   | 1"   | 41      | 36   | 149 g  | 10       |



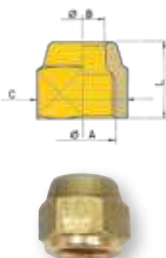
## SAE FLARE REDUCED NUTS FOR INCH TUBES

| Code        | Model     | Description                 | ØA   | ØB   | C esag. | L mm | Weight | Min. Qty |
|-------------|-----------|-----------------------------|------|------|---------|------|--------|----------|
| 05062018    | NRS4-64   | Reduced nuts for inch tubes | 3/8" | 1/4" | 22      | 18   | 31 g   | 100      |
| 05108127001 | NRS4-64K  | Reduced nuts for inch tubes | 3/8" | 1/4" | 22      | 18   | 310 g  | 10       |
| 05062020    | NRS4-86   | Reduced nuts for inch tubes | 1/2" | 3/8" | 24      | 20   | 37 g   | 100      |
| 05108128001 | NRS4-86K  | Reduced nuts for inch tubes | 1/2" | 3/8" | 24      | 20   | 370 g  | 10       |
| 05062021    | NRS4-108  | Reduced nuts for inch tubes | 5/8" | 1/2" | 27      | 25   | 47 g   | 100      |
| 05108129001 | NRS4-108K | Reduced nuts for inch tubes | 5/8" | 1/2" | 27      | 25   | 470 g  | 10       |

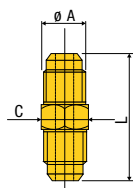


## SAE FLARE NUTS FOR METRIC TUBES

| Code        | Model      | Description                     | ØA   | ØB | C esag. | L mm | Weight | Min. Qty |
|-------------|------------|---------------------------------|------|----|---------|------|--------|----------|
| 05062002    | NS4-4/6    | Nuts for inch tubes             | 1/4" | 6  | 17      | 15   | 19 g   | 100      |
| 05108007001 | NS4-4/6K   | Kit 10 pcs. nuts for inch tubes | 1/4" | 6  | 17      | 15   | 190 g  | 10       |
| 05062006    | NS4-6/8    | Nuts for inch tubes             | 3/8" | 8  | 22      | 18   | 33 g   | 100      |
| 05108058001 | NS4-6/8K   | Kit 10 pcs. nuts for inch tubes | 3/8" | 8  | 22      | 18   | 330 g  | 10       |
| 05062005    | NS4-6/10   | Nuts for inch tubes             | 3/8" | 10 | 22      | 8    | 31 g   | 100      |
| 05108059001 | NS4-6/10K  | Kit 10 pcs. nuts for inch tubes | 3/8" | 10 | 22      | 18   | 310 g  | 10       |
| 05062001    | NS4-8/10   | Nuts for inch tubes             | 1/2" | 10 | 24      | 20   | 38 g   | 100      |
| 05108008001 | NS4-8/10K  | Kit 10 pcs. nuts for inch tubes | 1/2" | 10 | 24      | 20   | 380 g  | 10       |
| 05062003    | NS4-8/12   | Nuts for inch tubes             | 1/2" | 12 | 24      | 20   | 37 g   | 100      |
| 05108060001 | NS4-8/12K  | Kit 10 pcs. nuts for inch tubes | 1/2" | 12 | 24      | 20   | 370 g  | 10       |
| 05062024    | NS4-10/12  | Nuts for inch tubes             | 5/8" | 12 | 27      | 23   | 47 g   | 100      |
| 05108062001 | NS4-10/12K | Kit 10 pcs. nuts for inch tubes | 5/8" | 12 | 27      | 23   | 470 g  | 10       |

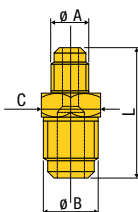


## UNIONS



### SAE FLARE UNIONS

| Code        | Model  | Description        | ØA    | C esag. | L mm | Weight | Min. Qty |
|-------------|--------|--------------------|-------|---------|------|--------|----------|
| 05051014    | U2-4   | Unions             | 1/4"  | 11      | 33   | 17 g   | 100      |
| 05108010001 | U2-4K  | Kit 10 pcs. unions | 1/4"  | 11      | 33   | 170 g  | 10       |
| 05051011    | U2-5   | Unions             | 5/16" | 14      | 36   | 27 g   | 100      |
| 05108014001 | U2-5K  | Kit 10 pcs. unions | 5/16" | 14      | 36   | 270 g  | 10       |
| 05051016    | U2-6   | Unions             | 3/8"  | 17      | 36   | 40 g   | 100      |
| 05108009001 | U2-6K  | Kit 10 pcs. unions | 3/8"  | 17      | 39   | 400 g  | 10       |
| 05108011001 | U2-8K  | Kit 10 pcs. unions | 1/2"  | 20      | 45   | 34 g   | 5        |
| 05108012001 | U2-10K | Kit 10 pcs. unions | 5/8"  | 23      | 50   | 47 g   | 5        |
| 05108013001 | U2-12K | Kit 10 pcs. unions | 3/4"  | 27      | 57   | 292 g  | 2        |



### SAE FLARE REDUCED UNIONS

| Code        | Model    | Description                | ØA   | ØB   | C esag. | L mm | Weight | Min. Qty |
|-------------|----------|----------------------------|------|------|---------|------|--------|----------|
| 05052020    | UR2-64   | Reduced unions             | 1/4" | 3/8" | 17      | 39   | 36 g   | 100      |
| 05108015001 | UR2-64K  | Kit 10 pcs. Reduced unions | 1/4" | 3/8" | 17      | 39   | 360 g  | 10       |
| 05052022    | UR2-84   | Reduced unions             | 1/4" | 1/2" | 20      | 42   | 52 g   | 100      |
| 05108016001 | UR2-84K  | Kit 10 pcs. Reduced unions | 1/4" | 1/2" | 20      | 42   | 260 g  | 5        |
| 05052021    | UR2-86   | Reduced unions             | 3/8" | 1/2" | 20      | 44   | 75 g   | 100      |
| 05108017001 | UR2-86K  | Kit 10 pcs. Reduced unions | 3/8" | 1/2" | 20      | 44   | 375 g  | 5        |
| 05052027    | UR2-104  | Reduced unions             | 1/4" | 5/8" | 23      | 43   | 66 g   | 100      |
| 05108018001 | UR2-104K | Kit 10 pcs. Reduced unions | 1/4" | 5/8" | 23      | 43   | 330 kg | 5        |
| 05052028    | UR2-106  | Reduced unions             | 3/8" | 5/8" | 23      | 45   | 74 g   | 100      |
| 05108065001 | UR2-106K | Kit 5 pcs. Reduced unions  | 3/8" | 5/8" | 23      | 45   | 370 g  | 5        |
| 05052029    | UR2-108  | Reduced unions             | 1/2" | 5/8" | 23      | 48   | 80 g   | 100      |
| 05108019001 | UR2-108K | Kit 5 pcs. Reduced unions  | 1/2" | 5/8" | 23      | 48   | 400 g  | 5        |
| 05052030    | UR2-128  | Reduced unions             | 1/2" | 3/4" | 27      | 52   | 114 g  | 50       |
| 05052031    | UR2-1210 | Reduced unions             | 5/8" | 3/4" | 27      | 54   | 132 g  | 50       |



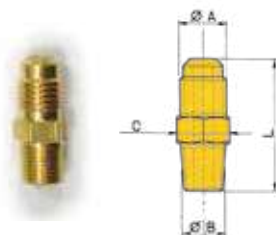
### UNIVERSAL OIL FOR FLARE

Universal oil essential for the flare lubrication, during flaring operation and before clamping with torque wrenches.

| Code     | Model  | Min. Qty | Capacity | Dimensions       | Weight |
|----------|--------|----------|----------|------------------|--------|
| 12002015 | FO-200 | 12       | 200 ml   | 170 x 50 x 50 mm | 0,2 kg |

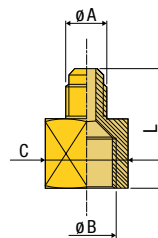
## SAE FLARE M X NPT M UNIONS

| Code        | Model        | ØA   | ØB NPT | C esag. | L mm | Weight | Min. Qty |
|-------------|--------------|------|--------|---------|------|--------|----------|
| 05052001    | U1-4A (24F4) | 1/4" | 1/8"   | 11      | 31   | 16 g   | 100      |
| 05052011    | U1-4B (48F4) | 1/4" | 1/4"   | 14      | 36   | 29 g   | 100      |
| 05052026    | U1-4C        | 1/4" | 3/8"   | 17      | 38   | 41 g   | 100      |
| 05108130001 | U1-4CK       | 1/4" | 3/8"   | 22      | 42   | 410 g  | 10       |
| 05052013    | U1-6A (24F6) | 3/8" | 1/8"   | 17      | 36   | 33 g   | 50       |
| 05052012    | U1-6B (48F6) | 3/8" | 1/4"   | 17      | 39   | 36 g   | 50       |
| 05052033    | U1-6C        | 3/8" | 3/8"   | 17      | 39   | 46 g   | 50       |
| 05108131001 | U1-6CK       | 3/8" | 3/8"   | 17      | 39   | 460 g  | 10       |
| 05052025    | U1-6D        | 3/8" | 1/2"   | 22      | 45   | 76 g   | 50       |
| 05052034    | U1-8B        | 1/2" | 1/4"   | 20      | 43   | 54 g   | 50       |
| 05052016    | U1-8C        | 1/2" | 3/8"   | 20      | 43   | 60 g   | 50       |
| 05052035    | U1-8D        | 1/2" | 1/2"   | 22      | 45   | 83 g   | 50       |
| 05052038    | U1-10D       | 5/8" | 1/2"   | 23      | 49   | 88 g   | 50       |
| 05052039    | U1-10E       | 5/8" | 3/4"   | 27      | 54   | 132 g  | 50       |
| 05052041    | U1-12E       | 3/4" | 3/4"   | 27      | 53   | 138 g  | 50       |

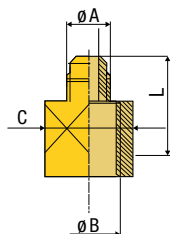


## SAE FLARE M X SAE FLARE F REDUCED UNIONS

| Code        | Model    | ØA   | ØB   | C esag. | L mm | Weight | Min. Qty |
|-------------|----------|------|------|---------|------|--------|----------|
| 05055018    | UR3-46   | 1/4" | 3/8" | 22      | 33   | 50 g   | 50       |
| 05108133001 | UR3-46   | 1/4" | 3/8" | 22      | 33   | 500 g  | 10       |
| 05055024    | UR3-48   | 1/4" | 1/2" | 25      | 37   | 73 g   | 50       |
| 05108134001 | UR3-48K  | 1/4" | 1/2" | 25      | 37   | 730 g  | 10       |
| 05055017    | UR3-64   | 3/8" | 1/4" | 17      | 33   | 40 g   | 50       |
| 05108132001 | UR3-64K  | 3/8" | 1/4" | 17      | 33   | 400 g  | 10       |
| 05055025    | UR3-68   | 3/8" | 1/2" | 25      | 38   | 73 g   | 50       |
| 05108135001 | UR3-68K  | 3/8" | 1/2" | 25      | 38   | 365 g  | 10       |
| 05055026    | UR3-84   | 1/2" | 1/4" | 20      | 35   | 58 g   | 50       |
| 05108136001 | UR3-84K  | 1/2" | 1/4" | 20      | 35   | 290 g  | 10       |
| 05055027    | UR3-86   | 1/2" | 3/8" | 22      | 35   | 60 g   | 50       |
| 05108137001 | UR3-86K  | 1/2" | 3/8" | 22      | 35   | 300 g  | 10       |
| 05055028    | UR3-810  | 1/2" | 5/8" | 27      | 43   | 97 g   | 50       |
| 05108138001 | UR3-810K | 1/2" | 5/8" | 27      | 43   | 485 g  | 10       |
| 05055029    | UR3-108  | 5/8" | 1/2" | 25      | 43   | 83 g   | 50       |
| 05108139001 | UR3-108K | 5/8" | 1/2" | 25      | 43   | 415 g  | 10       |
| 05055030    | UR3-1012 | 5/8" | 3/4" | 32      | 45   | 129 g  | 40       |
| 05055031    | UR3-1210 | 3/4" | 5/8" | 27      | 41   | 102 g  | 40       |

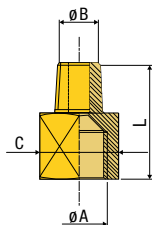


## REDUCED UNIONS



### REDUCED UNIONS SAE FLARE M X NPT F

| Code        | Model  | ØA   | ØB NPT | C esag. | L mm | Weight | Min. Qty |
|-------------|--------|------|--------|---------|------|--------|----------|
| 05055008    | 46F    | 1/4" | 1/8"   | 14      | 28   | 20 g   | 100      |
| 05108140001 | 46F/K  | 1/4" | 1/8"   | 14      | 28   | 200 g  | 10       |
| 05055019    | U3-4B  | 1/4" | 1/4"   | 19      | 33   | 41 g   | 100      |
| 05108141001 | U3-4BK | 1/4" | 1/4"   | 19      | 33   | 410 g  | 10       |
| 05055033    | U3-4C  | 1/4" | 3/8"   | 22      | 36   | 55 g   | 100      |
| 05108142001 | U3-4CK | 1/4" | 3/8"   | 22      | 36   | 550 g  | 10       |
| 05055035    | U3-6B  | 3/8" | 1/4"   | 19      | 33   | 49 g   | 100      |
| 05055036    | U3-6C  | 3/8" | 3/8"   | 22      | 35   | 54 g   | 100      |
| 05055046    | U3-6D  | 3/8" | 1/2"   | 27      | 40   | 85 g   | 50       |
| 05055038    | U3-8C  | 1/2" | 3/8"   | 22      | 38   | 63 g   | 50       |
| 05055039    | U3-8D  | 1/2" | 1/2"   | 27      | 44   | 100 g  | 50       |

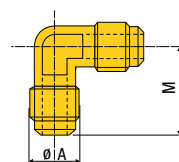


### REDUCED UNIONS SAE FLARE F X NPT M

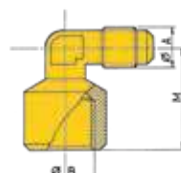
| Code        | Model  | ØA   | ØB NPT | C esag. | L mm | Weight | Min. Qty |
|-------------|--------|------|--------|---------|------|--------|----------|
| 05055040    | U5-4A  | 1/4" | 1/8"   | 17      | 28   | 21 g   | 100      |
| 05108143001 | U5-4AK | 1/4" | 1/8"   | 17      | 28   | 210 g  | 10       |
| 05055041    | U5-4B  | 1/4" | 1/4"   | 17      | 30   | 39 g   | 100      |
| 05108144001 | U5-4BK | 1/4" | 1/4"   | 17      | 30   | 390 g  | 10       |
| 05055042    | U5-6B  | 3/8" | 1/4"   | 22      | 34   | 51 g   | 100      |
| 05108145001 | U5-6BK | 3/8" | 1/4"   | 22      | 34   | 255 g  | 5        |
| 05055043    | U5-6C  | 3/8" | 3/8"   | 22      | 34   | 65 g   | 100      |
| 05108146001 | U5-6CK | 3/8" | 3/8"   | 22      | 34   | 325 g  | 5        |

**SAE FLARE ELBOWS**

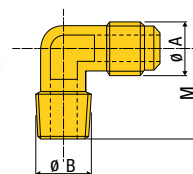
| Code     | Model | ØA flare | M mm | Weight | Min. Qty |
|----------|-------|----------|------|--------|----------|
| 05056009 | E2-4  | 1/4"     | 23   | 20 g   | 100      |
| 05056022 | E2-6  | 3/8"     | 30   | 52 g   | 50       |
| 05056023 | E2-8  | 1/2"     | 34   | 86 g   | 50       |
| 05056024 | E2-10 | 5/8"     | 34   | 92 g   | 50       |


**SAE FLARE M X SAE F ELBOWS**

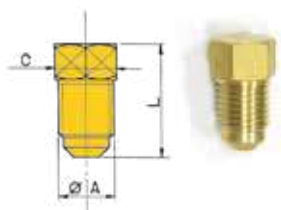
| Code     | Model  | ØA flare | ØB flare | M mm | Weight | Min. Qty |
|----------|--------|----------|----------|------|--------|----------|
| 05056030 | ER3-44 | 1/4"     | 1/4"     | 27   | 59 g   | 50       |


**SAE FLARE M X NPT M ELBOWS**

| Code        | Model  | ØA flare | ØB NPT | M mm | Weight | Min. Qty |
|-------------|--------|----------|--------|------|--------|----------|
| 05056011    | E1-4A  | 1/4"     | 1/8"   | 23   | 20 g   | 100      |
| 05056012    | E1-4B  | 1/4"     | 1/4"   | 25   | 31 g   | 100      |
| 05108147001 | E1-4BK | 1/4"     | 1/4"   | 25   | 310 g  | 10       |
| 05056010    | E1-6B  | 3/8"     | 1/4"   | 27   | 44 g   | 50       |
| 05056039    | E1-6C  | 3/8"     | 3/8"   | 27   | 55 g   | 50       |

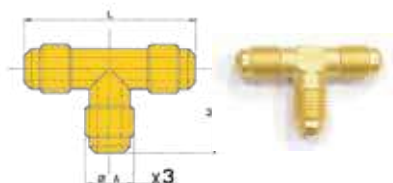


## FLARE PLUGS AND TEES



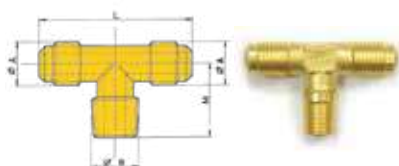
### SAE FLARE PLUGS

| Code     | Model | ØA flare | C esag. | L mm | Weight | Min. Qty |
|----------|-------|----------|---------|------|--------|----------|
| 05063030 | P2-4  | 1/4"     | 12      | 20   | 13 g   | 200      |
| 05063032 | P2-6  | 3/8"     | 17      | 23   | 36 g   | 200      |
| 05063033 | P2-8  | 1/2"     | 20      | 26   | 55 g   | 200      |



### SAE FLARE TEES

| Code        | Model | ØA flare | L mm | M mm | Weight | Min. Qty |
|-------------|-------|----------|------|------|--------|----------|
| 05057017    | T2-4  | 1/4"     | 46   | 22   | 30 g   | 100      |
| 05108148001 | T2-4K | 1/4"     | 46   | 22   | 300 g  | 10       |
| 05057018    | T2-6  | 3/8"     | 52   | 26   | 59 g   | 100      |
| 05108149001 | T2-6K | 3/8"     | 52   | 26   | 590 g  | 5        |
| 05057019    | T2-8  | 1/2"     | 60   | 31   | 95 g   | 50       |
| 05057020    | T2-10 | 5/8"     | 70   | 35   | 145 g  | 50       |
| 05057041    | T2-12 | 3/4"     | 80   | 41   | 225 g  | 50       |



### SAE FLARE X NPT BRANCH TEES

| Code        | Model  | ØA flare | ØB NPT | L mm | M mm | Weight | Min. Qty |
|-------------|--------|----------|--------|------|------|--------|----------|
| 05057025    | T1-4A  | 1/4"     | 1/8"   | 46   | 22   | 29 g   | 100      |
| 05108151001 | T1-4AK | 1/4"     | 1/8"   | 46   | 22   | 290 g  | 10       |



# CONDENSATION WATER PUMPS



## WATER DISSIPATER



SI RACCOMANDA ALL'INSTALLATORE DI MISURARE IL VOLUME D'ACQUA ORARIO PRODOTTO DALL'IMPIANTO



### HYPO

#### Water dissipater

It eliminates the water produced by air-conditioning systems.

Usable with all air-conditioning equipments, with or without heat pump.

Outer container is fireproof and resistant to UV rays.

Single or in series assembly.

The unit must always be connected to the power supply.

Power consumption only when there's water condensate and in proportion to quantity of it.

Water dissipater must be installed exclusively outside the house (outside walls, balconies, etc...) by a qualified installer.

Practical and easy installation.

Economical.

Evaporation capacity: 1,5 l/h (25 cc/min).

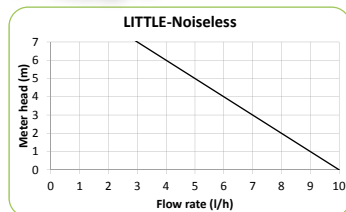
Designed and approved in compliance with the CE rules of the European community and IEC 60335.

| Code     | Model | Dimensions        | Weight  |
|----------|-------|-------------------|---------|
| 02042019 | HYPO  | 170 x 110 x 55 mm | 0,56 kg |



#### Spare parts and accessories

| Code     | Description                     |
|----------|---------------------------------|
| 02042034 | Completion fitting kit for HYPO |



### LITTLE-NOISELESS

#### Condensation water pump

Little is a small condensation water pump that can be incorporated in air conditioners including ceiling and wall-mounted mini-split units. The pump consists of two parts: the pump unit and the detection unit.

| Code     | Model            | Dimensions         | Weight |
|----------|------------------|--------------------|--------|
| 02042003 | LITTLE-NOISELESS | 130 x 100 x 100 mm | 0,3 kg |



#### Technical features

|                           |                         |
|---------------------------|-------------------------|
| For split units up to     | 10 kW                   |
| Maximum flow rate         | 10 l/h                  |
| Maximum discharge head    | 8 m                     |
| Maximum suction           | 2,5 m                   |
| Voltage                   | 230V - 50/60Hz          |
| Alarm contact             | NO / NC 230 [V] / 8 [A] |
| Dimensions pump body      | 78 x 35,5 x 65 mm       |
| Dimensions detection unit | 72 x 38,5 x 39 mm       |



#### Spare parts and accessories

| Rif | Code     | Description                     |
|-----|----------|---------------------------------|
| A   | 02042010 | Detection unit with 1,5 m cable |
| B   | 02042011 | No return valve 30 x Ø8         |



## SMART-12

### Mini condensation water pump

SMART-12, with its SLIM conformation, can be easily installed inside the air conditioners indoor unit or trunking. Its elongated body has a height of only 3 cm and a width of 3.4 cm.

Easy installation thanks to the complete set of electrical / hydraulic connections.

Extremely quiet operation.

Integrated alarm contact.

| Code     | Model    | Dimensions       | Weight |
|----------|----------|------------------|--------|
| 02042033 | SMART-12 | 154 x 30 x 34 mm | 0,5 kg |



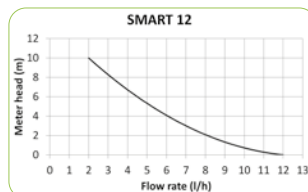
### Technical features

|                           |                  |
|---------------------------|------------------|
| For split units up to     | 10 kW            |
| Maximum flow rate         | 12 l/h           |
| Maximum discharge head    | 7 m              |
| Maximum suction           | 2 m              |
| Voltage                   | 100-230V/50-60Hz |
| Alarm contact             | NC 2A-230V       |
| Dimensions pump body      | 154 x 30 x 34 mm |
| Dimensions detection unit | 86 x 40 x 45 mm  |



### Spare parts and accessories

| Code     | Description                   |
|----------|-------------------------------|
| 02042022 | Detection unit with 1.5 cable |



## CUB-18

### Condensation water pump

Cub is a small condensation water pump that can be incorporated in air conditioners including ceiling and wall-mounted mini-split units.

Very low noise.

Easy installation thanks to the complete set of electrical and hydraulic connections.

| Code     | Model  | Dimensions        | Weight |
|----------|--------|-------------------|--------|
| 02042028 | CUB-18 | 260 x 170 x 60 mm | 0,7 kg |



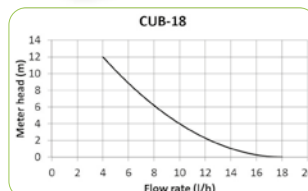
### Technical features

|                           |                  |
|---------------------------|------------------|
| For split units up to     | 12 kW            |
| Maximum flow rate         | 18 l/h           |
| Maximum discharge head    | 10 m             |
| Maximum suction           | 2 m              |
| Voltage                   | 100-230V/50-60Hz |
| Alarm contact             | NC 3A-250V       |
| Dimensions pump body      | 104 x 49 x 46 mm |
| Dimensions detection unit | 86 x 40 x 45 mm  |



### Spare parts and accessories

| Code     | Description                   |
|----------|-------------------------------|
| 02042022 | Detection unit with 1.5 cable |



## CONDENSATION WATER PUMP



### SMILE-EVO

#### Wall mounted condensation pump

Designed for installation below the air conditioners.

Effective even in the presence of water with impurities.

Minimum sound level.

Safety connection to interrupt the supply in case of overflow.

| Code     | Model     | Dimensions         | Weight |
|----------|-----------|--------------------|--------|
| 02042027 | SMILE-EVO | 160 x 100 x 130 mm | 0,6 kg |



#### Technical features

|                        |                |
|------------------------|----------------|
| Maximum flow rate      | 40 l/h         |
| Maximum discharge head | 10 m           |
| Voltage                | 230V - 50/60Hz |
| Tank capacity          | 200 ml         |
| Power consumption      | 3W             |



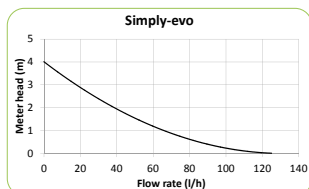
### SIMPLY-EVO

#### Water tank condensation pump

With a flow rate of 125 l/h and Heavy duty construction, SIMPLY-EVO is suitable for both air conditioning and refrigeration solutions.

Equipped with forced air cooling, it guarantees great reliability and stable operation.

| Code     | Model      | Dimensions         | Weight |
|----------|------------|--------------------|--------|
| 02042004 | SIMPLY-EVO | 286 x 136 x 163 mm | 2,4 kg |



#### Technical features

|                        |                |
|------------------------|----------------|
| Maximum flow rate      | 125 l/h        |
| Maximum discharge head | 4 m            |
| Voltage                | 230V - 50/60Hz |
| Tank capacity          | 1,8 l          |
| Power consumption      | NO/NC 230-5A   |

## SILENT

### Condensate water pump without neutralization system

Usable for air-conditioner and evaporator coils and cold show windows.

Usable for gaz boilers up to 400 kW.

Made from ABS plastic and is resistant to acidic condensate (PH3).

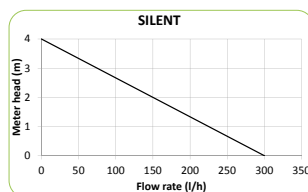
Extremely quiet.

| Code     | Model  | Dimensions        | Weight |
|----------|--------|-------------------|--------|
| 02042002 | SILENT | 185 x 85 x 100 mm | 1,6 kg |



## Technical features

|                       |                           |
|-----------------------|---------------------------|
| For gaz boilers up to | 400 kW                    |
| Maximum flow rate     | 350 l/h                   |
| Max delivery height   | 4 m                       |
| Tank capacity         | 0,5 l                     |
| Fluid temperature     | 70°C                      |
| Voltage               | 230V - 50/60Hz            |
| Alarm contact         | Máx 24V. 6VA(NA) Ohm load |



## CLIMA-CAP

### Protective covers for external units

Optimized dimensions for the main R32 units.

| Code     | Model         | Dimensions         | Suitable for                 |
|----------|---------------|--------------------|------------------------------|
| 16010010 | CLIMA-CAP-M/D | 550 x 860 x 340 mm | Mono 20-35 / Multi 2-R32     |
| 16010011 | CLIMA-CAP-MUL | 735 x 980 x 400 mm | Mono 42-60 / Multi 3-4-5-R32 |



# **WIGAM** AIR CONDITIONING AND REFRIGERATION SYSTEMS AND INSTRUMENTS



HIGH VACUUM PUMPS



PRESSURIZATION  
SYSTEMS



RECOVERY AND  
RECYCLING UNITS



TOOLS



MANIFOLD, HOSES  
AND ACCESS VALVES



CONDENSATION  
WATER PUMPS



LEAK  
DETECTORS



FLUSHING  
SYSTEMS



# WELDING-CONSUMABLES



RECYCLING  
RECOVERY UNITS

FLUSHING-SAUPTICATION

RESURFACING  
TEST SYSTEMS

VACUUM-CHARGE

CO (7474)  
HC (8000) PUMPS

INSTRUMENTS

TOOLS-VALVES  
FITTINGS

CONVERSION  
WATER PUMPS

WELDING  
CONSUMABLES

## WELDING

**SPITFIRE/PRO**

Complete kit with 1 torch SPITFIRE and 2 MAP-HP cartridges

Features:

Large and high intensity flame.

Up to 2200°C high temperature powerful swirl flame.

For use with MAP-HP and Propane gas.

Piezo igniter for instant flame.

Safety lock feature to prevent accidental ignition.

Ignition button lock for continuous use.

Replaceable brass tip.

Ergonomic handle design.

| Code     | Model        | Dimensions         | Weight |
|----------|--------------|--------------------|--------|
| 10001037 | SPITFIRE/PRO | 310 x 270 x 120 mm | 2,8 kg |

**SPITFIRE**

Torch welders

Features:

Large and high intensity flame.

Up to 2200°C high temperature powerful swirl flame.

For use with MAP-HP and Propane gas.

Piezo igniter for instant flame.

Safety lock feature to prevent accidental ignition.

Ignition button lock for continuous use.

Replaceable brass tip.

Ergonomic handle design.

| Code     | Model    | Dimensions        | Weight  |
|----------|----------|-------------------|---------|
| 10001036 | SPITFIRE | 320 x 160 x 40 mm | 0,46 kg |

**MAP-HP**

New-generation cartridges MAP-HP

| Ref | Code     | Model  | Description                       | Capacit | Min. Qty |
|-----|----------|--------|-----------------------------------|---------|----------|
| A   | 11003022 | MAP-HP | Cartridge                         | 400 g   | 12       |
| B   | 05055071 | -      | Adapter for use with TURBO SET 90 | -       | -        |

| Ref | Code     | Temperature | Dimensions         | Weight  |
|-----|----------|-------------|--------------------|---------|
| A   | 11003022 | 1982°C      | 470 x 160 x 280 mm | 11,1kg  |
| B   | 05055071 |             | 140 x 100 x 20 mm  | 0,10 kg |

## SPITFIRE FLEX/PRO

**Complete kit with 1 SPITFIRE-FLEX torch and 2 MAP-HP cartridges**

**SPITFIRE-FLEX** torch with integrated hose to work even in hard-to-reach areas.

Piezo igniter for instant flame

Flame adjustment.

Powerful swirl flame up to a temperature of 2200 °C.

For use with **MAP-HP** and **Propane gas**.

| Codice   | Modello           | Dimensioni         | Peso   |
|----------|-------------------|--------------------|--------|
| 10001041 | SPITFIRE FLEX/PRO | 310 x 270 x 120 mm | 2,8 kg |

**NEW**



## SPITFIRE-FLEX

**Torch welder with flexible nozzle**

Thanks to its flexible nozzle, the new **SPITFIRE-FLEX** torch welder allows you to work comfortably even in hard-to-reach areas of installations.

Integrated hose of 200 mm (total length of 440mm).

Piezo igniter for instant flame.

Flame adjustment.

Powerful swirl flame up to a temperature of 2200°C.

For use with **MAP-HP** and **Propane gas**.

| Codice   | Modello       | Dimensioni       | Peso   |
|----------|---------------|------------------|--------|
| 10001040 | SPITFIRE FLEX | 75 x 35 x 457 mm | 0,6 kg |

**NEW**



## BELT HOSE KIT

**Extension and belt hook for SPITFIRE and SPITFIRE-FLEX**

The **BELT HOSE KIT** extension allows you to operate more comfortably by freeing yourself from the load and size of the cartridge.

The **MAP-HP** cartridge is attached to the belt by means of the belt holder and the SPITFIRE or SPITFIRE-FLEX torch is connected to the cartridge by means of a handy 1300mm hose with valve.

The kit includes:

- 1300mm connecting hose with valve.
- Hook for hanging the **MAP-HP** cartridge on the belt.

| Codice   | Modello       | Dimensioni        | Peso   |
|----------|---------------|-------------------|--------|
| 10001039 | BELT-HOSE-KIT | 135 x 60 x 135 mm | 0,5 kg |

**NEW**



## PROPANE AND OXYGEN WELDING KIT



### TURBO SET 90

#### Autogen welding rack

The smallest autogenous welding system with disposable cylinder and cartridge in metal frame.

Compact, it allows professional welding. The system is particularly suitable for hydraulics, conditioning and refrigeration.

Standard equipment

- mignon OXYGEN pressure regulator and gas valve with double protection check valves.
- 2000 mm hoses with double protection valves.
- handle with regulating valves and lance. 80 l.
- Kit of 4 lances for head (63, 100, 160, 225 l).
- Protection goggles.
- Multipurpose wrench.
- Brazing alloy.

| Code     | Model           | Description             | Temp. °C | Min. Qty |
|----------|-----------------|-------------------------|----------|----------|
| 10001013 | TURBO SET 90    | Complete rack           | 3000     | 2 pz     |
| 10001030 | TURBO SET 90/SB | Rack without cartridges | 3000     | 2 pz     |

| Code     | Dimensions         | Weight |
|----------|--------------------|--------|
| 10001013 | 400 x 245 x 370 mm | 11 kg  |
| 10001030 | 400 x 245 x 370 mm | 7,4 kg |



### Spare parts and accessories

| Code     | Model     | Description                                            | Min. Qty | Dimensions         | Weight  |
|----------|-----------|--------------------------------------------------------|----------|--------------------|---------|
| 11002001 | OXIGEN110 | Oxygen cartridge                                       | 12       | 310 x 240 x 330 mm | 16,3 kg |
| 11003003 | MAXIGAS   | Maxigas cartridge                                      | 12       | 300 x 240 x 290 mm | 5,9 kg  |
| 10002014 | 220500    | Oxygen regulator                                       | -        | 60 x 30 x 30 mm    | 0,15 kg |
| 10002015 | 201500    | Propylene regulator                                    | -        | 60 x 30 x 30 mm    | 0,15 kg |
| 10005013 | 110005    | Handgrip with head, lance 80 l, check valves and hoses | -        | 240 x 230 x 50 mm  | 0,65 kg |
| 10004021 | 110600    | Head and lance 80 l                                    | -        | 130 x 100 x 10 mm  | 0,05 kg |
| 10004033 |           | Kit 4 spare lances for head                            | -        | -                  | -       |



### 11509-COOL GEL

#### Heat dissipating spray

Helps prevent heat damage to components and surrounding materials during soldering.

Helps protect rubber, plastic, painted and finished surfaces during soldering.

Unique gelled formula sticks to surfaces without dripping or running off.

Safe, non-toxic, harmless to skin and odorless.

Reduces danger of fire to surrounding surfaces.

Convenient trigger spray.

| Code     | Model | Capacity | Dimensions       | Weight  |
|----------|-------|----------|------------------|---------|
| 12003007 | 11509 | 0,947 lt | 320 x 80 x 80 mm | 1,06 kg |

## 80P/B

### Propane and oxygen bottles kit on metal frame

| Rif | Code     | Model | Empty oxygen bottle | Empty propane bottle |
|-----|----------|-------|---------------------|----------------------|
| A   | 10001022 | 80P/B | 5 l                 | 2 kg                 |

| Rif | Code     | Dimensions         | Weight  |
|-----|----------|--------------------|---------|
| A   | 10001022 | 690 x 430 x 280 mm | 14,6 kg |

## 80P/R

### Propane and oxygen pressure regulator kit

Propane pressure regulator and oxygen pressure regulator kit complete with gauges, check valve, handle with one 160 lt LP lance and hoses.

| Rif | Code     | Model | Dimensions         | Weight |
|-----|----------|-------|--------------------|--------|
| B   | 10001023 | 80P/R | 360 x 360 x 210 mm | 4,7 kg |



## 80A/B

### Acetylene and oxygen bottles kit on metal frame

| Rif | Code     | Model | Empty oxygen bottle | Full acetylene bottle |
|-----|----------|-------|---------------------|-----------------------|
| A   | 10001026 | 80A/B | 5 l                 | 5 l                   |

| Rif | Code     | Dimensions         | Weight  |
|-----|----------|--------------------|---------|
| A   | 10001026 | 690 x 430 x 280 mm | 14,6 kg |

## 80A/R

### Acetylene and oxygen pressure regulator kit

Acetylene pressure regulator and oxygen pressure regulator kit complete with gauges, check valve, handle with 3 LP lances of 160, 225 and 315 l and hoses.

| Rif | Codice   | Modello | Dimensioni         | Peso   |
|-----|----------|---------|--------------------|--------|
| B   | 10001027 | 80A/R   | 360 x 360 x 210 mm | 5,2 kg |



## Spare parts and accessories

| Rif | Code     | Model    | Description             | Capacity | Dimensions         | Weight  |
|-----|----------|----------|-------------------------|----------|--------------------|---------|
| A   | 11002002 | BOS 50   | Empty oxygen bottle     | 5 l      | 550 x 150 x 150 mm | 7,6 kg  |
| B   | 05002026 | VO 5     | Oxygen valve for BOS 50 | -        | -                  | -       |
| C   | 11003017 | BAC 50/C | Full acetylene bottle   | 5 l      | 550 x 150 x 150 mm | 11,6 kg |
| D   | 11003004 | BOP 5    | Empty propane bottle    | 2 kg     | 270 x 200 x 200 mm | 3,3 kg  |

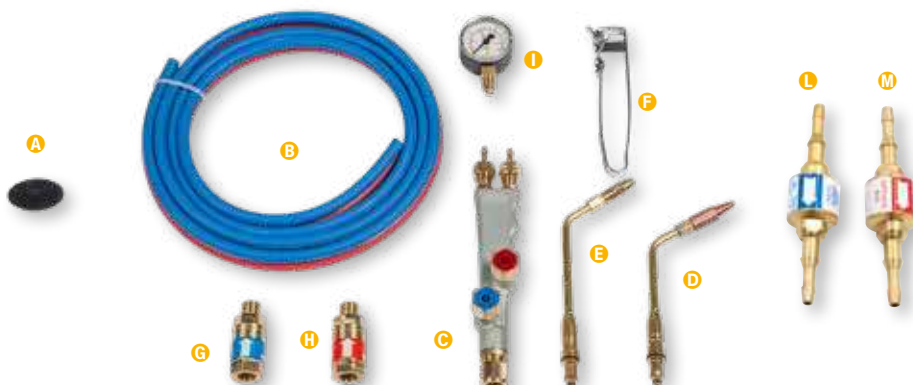


## SPARE PARTS AND ACCESSORIES FOR PRESSURE REDUCERS



## Pressure regulators

| Rif | Code     | Model   | Description                 | High pressure bar | Low pressure bar | Working pressure bar |
|-----|----------|---------|-----------------------------|-------------------|------------------|----------------------|
| A   | 10002001 | RPM     | Miniature propane regulator | -                 | -                | -                    |
| B   | 10002005 | PR 04   | Propane regulator           | -                 | 0÷6              | 4                    |
| C   | 10002003 | AC 14   | Acetylene regulator         | 0÷315             | 0÷16             | 10                   |
| D   | 10002009 | AC 14/P | Acetylene regulator for 80A | 0÷40              | 0÷2,5            | 1,5                  |
| E   | 10002002 | OS15    | Oxygen regulator            | 0÷315             | 0÷16             | 10                   |
| F   | 10002008 | OS 15/P | Oxygen regulator for 80A    | 0÷315             | 0÷16             | 4                    |
| G   | 10002004 | AZ 11   | Nitrogen regulator          | 0÷315             | 0÷16             | 10                   |



## Spare parts and accessories for pressure regulators

| Rif | Code     | Model | Description                           |
|-----|----------|-------|---------------------------------------|
| A   | 10010023 | 95513 | Diaphragm for regulator               |
| B   | 10010015 | TB    | Twin hose                             |
| C   | 10005001 | IM    | Handle                                |
| D   | 10004XXX | LA    | Acetylene welding head 25÷315 l       |
| E   | 10004XXX | LP    | Propane welding head 25÷500 l         |
| F   | 10010002 |       | Lighter                               |
| G   | 10010012 | VO    | Straight oxygen check valve           |
| H   | 10010013 | VSP   | Traight propane- acetylen check valve |
| I   | 10010XXX |       | Replacement gauge for regulator       |
| L   | 10005008 |       | Intermedia oxygen valve               |
| M   | 10005009 |       | Intermedia gas valve                  |

## 734

Brazing alloy for copper-brass welding

| Code     | Model | Diameter | Alloys compositions% |      |      | Fusion temp. | Conf. |
|----------|-------|----------|----------------------|------|------|--------------|-------|
|          |       |          | Ag                   | Cu   | Zn   |              |       |
| 10003013 | 734   | 1,5 m    | 34                   | 36,2 | 27,1 | 630-730 °C   | 500 g |



## DP250

Flux powder

| Code     | Model | Conf. |
|----------|-------|-------|
| 10003004 | DP250 | 250 g |



## 734R

Brazing alloy for copper-brass welding covered with flux

| Code     | Model | Diameter | Alloys compositions% |    |    | Temp. fusione | Conf. |
|----------|-------|----------|----------------------|----|----|---------------|-------|
|          |       |          | Ag                   | Cu | Zn |               |       |
| 10003014 | 734R  | 1,5 m    | 34                   | 36 | 27 | 630-730 °C    | 500 g |



## 615/654

Brazing alloy for copper-copper welding

| Rif | Code     | Model | Diameter | Alloys compositions% |      |     | Temp. fusione | Conf.  |
|-----|----------|-------|----------|----------------------|------|-----|---------------|--------|
|     |          |       |          | Ag                   | Cu   | Zn  |               |        |
| A   | 10003001 | 615   | 2,0      | -                    | 92,4 | 7,6 | 705-800 °C    | 1000 g |
| B   | 10003006 | 654   | 2,0      | 0,4                  | 92,6 | 7   | 680-745 °C    | 1000 g |



## SEALERS



## 10001

## Thread locker

| Code     | Model | Capacity | Dimensions         | Weight | Min. Qty |
|----------|-------|----------|--------------------|--------|----------|
| 12003002 | 10001 | 40 cc    | 145 x 100 x 100 mm | 0,6 kg | 12       |



## HST

## Epoxy Sealer

Stops leaks fast.

Makes tough, cured, epoxy repairs in as little as 90 seconds.

Melts and cures in one operation.

Restores service immediately.

Effective for all refrigeration systems.

Withstands pressure to 600 psi.

Resists temperatures to 350°F (177°C).

Works on all metals, ceramics, even glass.

Seals all refrigeration systems.

| Code     | Model | Capacity | Dimensions         | Weight  | Min. Qty |
|----------|-------|----------|--------------------|---------|----------|
| 12003004 | HST   | 11,7 g   | 140 x 120 x 150 mm | 0,35 kg | 12       |

A



B

## L542/LX53-14

## Threaded sealers

| Rif | Code     | Model   | Capacity | Dimensions        | Weight | Min. Qty |
|-----|----------|---------|----------|-------------------|--------|----------|
| A   | 12003005 | L542    | 50 cc    | 180 x 110 x 60 mm | 1 kg   | 12       |
| B   | 12003008 | LX53-14 | 50 cc    | 150 x 55 x 30 mm  | 0,8 kg | 10       |



## NAC10

## Anti-condensation flexible and reinforced ribbon for heat insulation

Anti-condensation ribbon in synthetic rubber.

Rolls dimensions: 0,03 x 50 mm x 10 m.

| Code     | Model | Operating temp. | Dimensions Pack    | Weight Pack | Min. Qty |
|----------|-------|-----------------|--------------------|-------------|----------|
| 12004001 | NAC10 | -25°C +120°C    | 450 x 450 x 320 mm | 4,5kg       | 24       |



## NAL50

## Aluminium adhesive ribbon

Aluminium adhesive ribbon with silicon paper support.

Rolls dimensions: 0,03 x 50 mm x 50 m

| Code     | Model | Dimensions         | Weight | Min. Qty |
|----------|-------|--------------------|--------|----------|
| 12004002 | NAL50 | 270 x 270 x 320 mm | 11 kg  | 24       |

## ATK-4

### Acid kit test

Acid test for oil samples taken from refrigeration and air conditioning systems.

The kit consists of 4 vials useful to perform 4 tests.

The test can be carried out on both mineral and polyester oils.

| Code     | Model | Dimensions      | Weight  |
|----------|-------|-----------------|---------|
| 12001033 | ATK-4 | 95 x 55 x 55 mm | 0,09 kg |



## QWIKCHECK

### QwikCheck rapid acidity test

Quick and simple to use, QwikCheck supports the refrigeration technicians in identifying acidity problems promptly. It is ideal both in the preventive maintenance phase and to check the status of the plant following the replacement of a compressor.

QwikCheck detects the presence of inorganic acids in a few seconds thanks to a simple test performed on the refrigerating unit in operation.

QwikCheck operates with all refrigerants and oils and is not subject to the false positives typical of POE oils.

The color change from Yellow to Red selects underlines the presence of inorganic acids in the system. system: (test for inorganic acids to the ARI-700 limit of 1ppm).

| Code     | Model      | Description        | Dimensions      | Weight  | Min. Qty |
|----------|------------|--------------------|-----------------|---------|----------|
| 12001069 | QWIK-CHECK | Rapid acidity test | 40 x 40 x 20 mm | 0,03 kg | 25       |



Acids are typically formed by chemical reactions with components and / or materials present in the circuit, lubricating oils and / or impurities. Performing preventive acidity tests is a recommended practice as acidity conditions that are not managed promptly can lead to malfunctions and premature rupture of the compressor.

The esterification process used for the production of POE oils (a synthetic aesthetic base) and the possibility of residual presence of organic acids can lead, with traditional acidity kits, to false positives.

Systems equipped with hermetic compressors, typically more prone to breakage, are rarely subject to control as they are normally without oil withdrawal points.



## CHEMICALS AND CONSUMABLES



### 18004

#### Acid neutralizer liquid

Completely eliminates and prevents acid in HVAC system.

| Code     | Model | Capacity | Dimensions pack    | Weight pack | Min. Qty |
|----------|-------|----------|--------------------|-------------|----------|
| 12001036 | 18004 | 118 cc   | 195 x 145 x 135 mm | 1,7 kg      | 24       |



### THAWZONE

#### Dehydrating fluid

Neutralizes water and acid inside the cooling system forming neutral compounds

Easy to use, available in bottles of different capacity

| Rif | Code     | Model | Capacity | Dimensions pack    | Weight pack | Min. Qty |
|-----|----------|-------|----------|--------------------|-------------|----------|
| A   | 12001013 | 17001 | 29 cc    | 195 x 140 x 110 mm | 1 kg        | 24       |
| B   | 12001014 | 17004 | 118 cc   | 195 x 145 x 135 mm | 1,5 kg      | 12       |



### 21004

#### Tracer fluid

Added to the refrigerant, it pinpoints the leakage.

Suitable for halogenated refrigerants, ammonia, amethyl chloride, sulfur dioxide.

With additive for any type of UV lamp.

| Code     | Model | Capacity | Dimensions pack    | Weight pack | Min. Qty |
|----------|-------|----------|--------------------|-------------|----------|
| 12001032 | 21004 | 118 cc   | 195 x 145 x 135 mm | 1,6 kg      | 12       |



### OIL CHECKER

Identifies:

Polyol Ester (POE).

Alkibenzene (ABZ).

Mineral oil.

| Code     | Model       | Dimensions      | Weight  | Min. Qty |
|----------|-------------|-----------------|---------|----------|
| 12001054 | OIL-CHECKER | 95 x 55 x 55 mm | 0,09 kg | 12       |

## ETO-4

### Electric oil transfer and flushing pump

Suitable for all the common refrigeration oils.

Suitable for the charge of the oil in HVAC systems.

Suitable for the removal of the oils from the HVAC systems.

Complete with aspiration hose and a pressure hose with adapters.

Suitable for the flushing of the systems using FORMULA fluid and the connecting kit KIT-ETO-HVAC (see pag. 22).

| Code     | Model | Dimensions         | Weight |
|----------|-------|--------------------|--------|
| 02041028 | ETO-4 | 290 x 200 x 275 mm | 7 kg   |



## W52013

### Oil charging pump

The W52013, for all oil containers, allows to charge oil inside the compressor of refrigeration systems, thus avoiding the danger of introducing air and humidity.

| Code     | Model  | Capacity for stroke | Dimensions        | Weight  |
|----------|--------|---------------------|-------------------|---------|
| 02041025 | W52013 | 52 ml               | 500 x 160 x 90 mm | 1,44 kg |



## R-ECOPUMP

### Oils and refrigerants charging and recovery pump

R-ECOPUMP has such design features as to allow the recovery/ transfer/charge not only of oils but also of flammable refrigerants such as A3, or A2L reaching an excellent vacuum. (See at R290/R600 section also).

The unit is extremely flexible as it has a convenient pedestal, hoses with valves and non-return valve.

| Code     | Model     | Cap. for each run | Dimensions         | Weight |
|----------|-----------|-------------------|--------------------|--------|
| 13001026 | R-ECOPUMP | 125 ml            | 580 x 255 x 140 mm | 3 kg   |



# GENERAL SALES CONDITIONS

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Symbol indicates the pieces included in the kit.

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