

HVAC/R  
Service Products



ED24



Manfred P. Ulrich  
President / CEO

REFCO Manufacturing (US) Inc. is pleased to introduce our new full line catalog.

REFCO, headquartered in Hitzkirch (Switzerland) has long been recognized as a world leader in the manufacturing of service equipment for the refrigeration and air conditioning industry.

With this full line catalog, our manufacturing facility stocking warehouse in the USA and an excellent sales representative network, we will show North America what the rest of the world already knows, that REFCO Manufacturing (US) Inc. is the highest quality and best value refrigeration and air conditioning service tool manufacturer available today.



Steve Secord  
Vice-President





---

Vacuum Pumps	10 - 13
--------------	---------

---

Recovery and Recycling Equipment	14 - 19
----------------------------------	---------

---

Pressure Gauges	20 - 27
-----------------	---------

---

Vacuum Gauges	28 - 29
---------------	---------

---

Manifolds	30 - 45
-----------	---------

---

Charging Hoses	46 - 51
----------------	---------

---

Leak Detection	52 - 53
----------------	---------

---

Charging Scale	54
----------------	----

---

Thermometers	55
--------------	----

---

A/C and Refrigeration System Tools	56 - 62
------------------------------------	---------

---

Swiss Quality	63
---------------	----

---

Index	64 - 67
-------	---------

---

Copyright by REFCO Manufacturing Ltd.

REFCO is a registered trade mark in the USA and various other countries.

REFCO reserves the right to change designs, specifications and materials without notice.

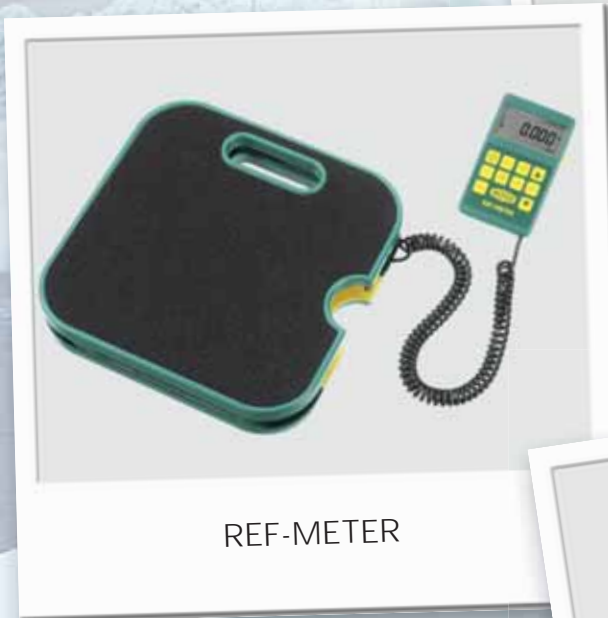
# Highlights



DIGIMON



POWERMAX



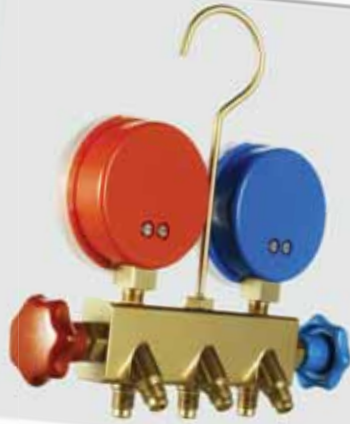
REF-METER



ECO-9



APEX-8



APEX-8



SM2-8



TELL-7



M5-500/250



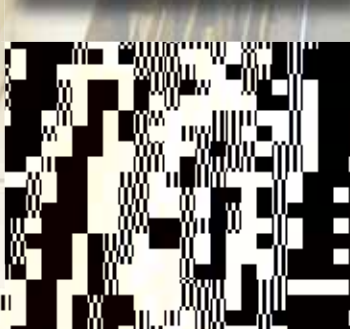
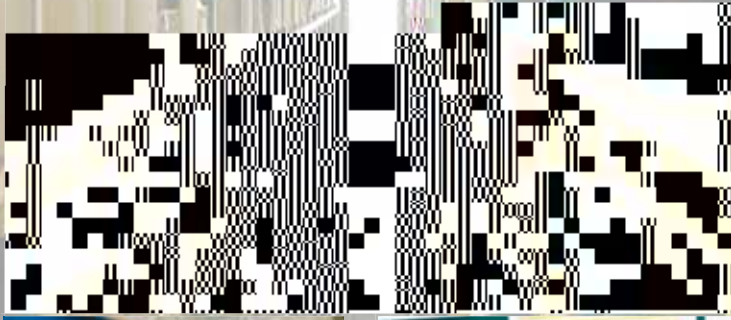




Vacuumpumpe  
Pompe à vide  
REFCO  
Refrigeration Service Products and Components

Vacuumpumpe  
Pompe à vide  
REFCO  
Refrigeration Service Products and Components





# Vacuum Pumps

## Features for all RL-Vacuum Pumps

- Built specifically for the AC/R Industry
- Latest technology allows extremely compact size
- High-end materials result in low weight but top quality
- Compact, practical, long lifetime
- Sturdy ergonomic handle stays cool to the touch
- Large, easily accessible oil fill port to prevent spillage when filling
- Sight glass for easy viewing of the oil level
- Two-stage rotary vane pump in state of the art design for greater efficiency
- Easy to start, compact motor operates efficiently
- Internal oil pump with unique device to prevent any oil back suction
- Built-in on/off switch to prevent breakage or accidental shut off
- Gas ballast valve feature to help keep the oil clean and to reduce water vapor in the oil compartment
- Easily field replaceable one piece cartridge allows for rebuild without special tooling
- Special designed oil exhaust filter to reduce oil mist
- Quiet operation
- Swiss Quality product manufactured under ISO 9001

## RL - 2 1.35 cfm

- Includes DV-44 vacuum pump oil (0.5 pt. / 250 ml)

## RL - 4 2.7 cfm

- Large oil drain valve located at the front bottom of oil pan to allow for fast and easy oil change
- Both 1/4" and 3/8" SAE inlet connections allows for flexibility of connections
- Includes DV-44 vacuum pump oil (0.5 pt. / 250 ml)

## RL - 8 6.4 cfm

- Large oil drain valve located at the front bottom of oil pan to allow for fast and easy oil change
- Modern metal, rugged pump design with high-tech plastic housing to absorb shocks
- Ergonomical design for even easier handling
- Lower point of gravity for higher stability
- Both 1/4" and 3/8" SAE inlet connections allow for flexibility of connections
- Integrated blank off ball-valve to isolate pump from system
- Includes DV-45 vacuum pump oil (1pt. / 500 ml)



RL - 2



RL - 4



RL - 8

Technical Data	RL-2	RL-4	RL-8
Free air displacement:	1.35 cfm	2.7 cfm	6.4 cfm
Number of stages:	2	2	2
Microns:	15	15	15
Intake threads:	1/4" SAE Flare	1/4" and 3/8" SAE Flare	1/4" and 3/8" SAE Flare with integrated ball valve
Motor:	1/5 horsepower, 2700 rpm	1/4 horsepower, 3230 rpm	1/2 horsepower, 3300 rpm
Voltage:	115 Volt, 60 Hz	115 Volt, 60 Hz	115 Volt, 60 Hz
Power Cord Length:	78"	78"	78"
Oil Capacity:	0.25 pt.	0.5 pt.	1 pt.
Recommended oil change:	Every 20 working hours	Every 20 working hours	Every 20 working hours
Dimensions:	10.5 x 6.5 x 7.5 inch	11.8 x 6 x 8 inch	14 x 8.6 x 9.8 inch
Weight:	8.3 lbs	12.4 lbs	26 lbs
Part No.	4661601	4661759	4507356



## Spare Parts for RL-2, RL-4 and RL-8

### Spare Parts for RL-2

Pos.	Designation	Description	Part No.
3	RL-2-3000	Oil basin complete with gasket	4661589
20	RL-2-3011	Oil sight glass with gasket + counter nut	4661597
19	RL-2/4-303	Oil mist filter with gasket	4495471
24	RL-2/4-3060	Gas ballast valve complete	4661423
53	RL-8-4071	Rubber pad set (4 pieces)	4507631
55	RL-2-406	Capacitor	4661040
48	RL-4-415	Switch	4496770
52	RL-2-4000	Housing complete	4661538
1	RL-2-2A	Vacuum stage complete	4661482
64	RL-2-64	Intake port w/cap	4668028

### Spare Parts for RL-4

Pos.	Designation	Description	Part No.
3	RL-4-3000	Oil basin complete with gasket	4507674
20	RL-4-3011	Oil sight glass with gasket + counter nut	4507682
23	RL-4/8-310	Oil drain plug with gasket	4496761
19	RL-2/4-303	Oil mist filter with gasket	4495471
24	RL-2/4-3060	Gas ballast valve complete	4661423
53	RL-8-4071	Rubber pad set (4 pieces)	4507631
55	RL-4-406	Capacitor	4505051
48	RL-4-415	Switch	4496770
52	RL-4-4000	Housing complete	4661474
1	RL-4-2A	Vacuum stage complete	4661954
64	RL-4-64	Intake port w/caps	4668036
65	RL-4/8-65	Intake elbow	4668053

### Spare Parts for RL-8

Pos.	Designation	Description	Part No.
3	RL-8-3000	Oil basin complete with gasket	4507607
20	RL-8-3011	Oil sight glass with gasket + counter nut	4507615
23	RL-4/8-310	Oil drain plug with gasket	4496761
19	RL-8-303	Oil mist filter with gasket	4507445
24	RL-8-3060	Gas ballast valve complete	4507623
53	RL-8-4071	Rubber pad set (4 pieces)	4507631
55	RL-8-426	Capacitor set (2 pieces)	4508203
48	RL-4-415	Switch	4496770
52	RL-8-4000	Housing complete	4507640
1	RL-8-2A	Vacuum stage complete	4507658
64	RL-8-64	Intake port w/caps, handle, screw	4668045
65	RL-4/8-65	Intake elbow	4668053





## Spare Parts for ECO Series

Pos.	Designation	Description	Part No.
1	ECO-3/5/9-1	Rubber feet	4667757
2	ECO-3/5/9-2	Sight glass complete	4667766
3	ECO-3/5/9-3	Oil drain plug	4667774
4	ECO-3/5/9-4	Handle	4667782
5	ECO-3/5/9-5	Oil fill cap (yellow)	4667790
6	NFT5-4-K-Green	Seal flare cap 1/4" for ECO-3/5/9	4676110
7	NFT5-6-K-Green	Seal flare cap 3/8" for ECO-5/9	4676128
8	ECO-3/5/9-8	Protection cap	4667820



DV-44/45/46

## Vacuum Pump Oil for RL-2, RL-4, RL-8, ECO Series

- REFCO Vacuum pump oil is specifically manufactured to allow your vacuum pump to operate efficiently in different types of operating conditions

Designation	Description	Part No.
DV-44	0.5 pint (250 ml) Vacuum pump oil	4495340
DV-45	1 pint (500 ml) Vacuum pump oil	4495358
DV-46	1 quart (1000 ml) Vacuum pump oil	4495366

# Compressor

## WIZARD

The Most Powerful Oil-less Compressor  
Available for Refrigerant Recovery

The advantage of Thermaflo refrigerant recovery equipment is the powerful Wizard compressor.

The Wizard compressor has a 1 horsepower variable speed motor which allows the compressor to automatically slow down during liquid recovery and speed up during vapor recovery. This patented oil-less design allows maximum start-up torque and easily recovers all high pressure refrigerants including R410A.

The Wizard introduces the liquid refrigerant into the crankcase before it flows to the valve plate and head assembly which gives the compressor maximum start-up torque and longer life.

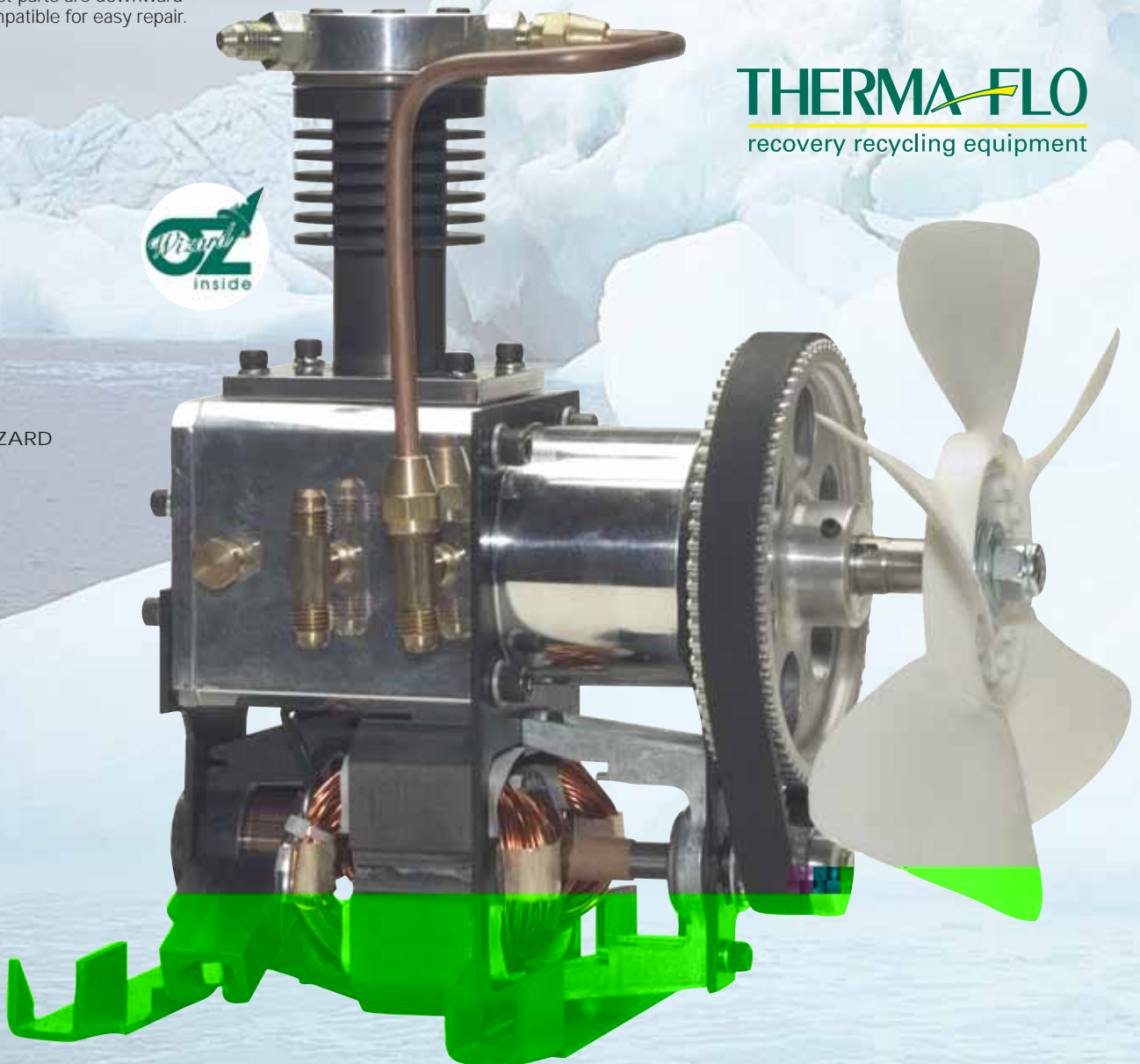
The Wizard compressor is available in the POWERMAX and OZ-4000 refrigerant recovery systems.

Most parts are downward compatible for easy repair.



**THERMA-FLO**  
recovery recycling equipment

WIZARD



# Recovery



## POWERMAX Refrigerant Recovery Machine

The POWERMAX is a lightweight 22 lbs recovery system with the 1 horsepower oil-less Wizard compressor. No other recovery system on the market is this light with a 1 horsepower compressor. The unit has a durable plastic case design which recovers all high pressure refrigerants including R12, R134a, R22, R401, R402, R404, R406, R407, R409, R410A, R411, R412, R500, R502, R507, R509 as well as many other blends.

### Features

- 1 horsepower oil-less compressor
- Easy two-hose refrigerant recovery system
- Two connection systems provides automatic, straight through, liquid vapor operation
- Self-evacuation feature
- Recovery rates up to 5 lbs/minute liquid and 1/2 lbs/minute vapor
- Weighs only 22 lbs
- Durable plastic case, well balanced and portable

### Additional Features

- Made in the USA
- High pressure safety switch
- Re-settable circuit breaker
- Over-sized condenser
- Large air cooled 7 inch fan
- Cylinder overfill protection
- Connection fittings point away from operator
- Easy to operate, oversized control knobs
- 2 year warranty
- UL certified to ARI 740

### Recovery Ratings POWERMAX:

Refrigerant	Push/Pull Liquid (lbs/min)	Standard Liquid (lbs/min)	Standard Vapor (lbs/min)
R-12	10.25	3.75	.41
R-22	11.97	5.00	.53
R-502	10.70	4.20	.42
R134a	10.45	4.10	.41
R-410A	17.97	4.56	.48

Part No. 4663239



POWERMAX

**THERMA-FLO**  
recovery recycling equipment

## Spare Parts POWERMAX

Designation	Description	Part No.
ALF-032	Inlet filter	4670414
2277	Tune-up kit	4674079
400-15	Circuit breaker (12-Amp)	4671011
1997-1	Safety cable	4670406
1997-10	Jumper plug for safety cable (2 pieces)	4674087
2070-10	Power cord	4671526
3000-60	Drive belt	4670562
3000-72	Valve plate w/gaskets	4672441
3000-73	Gasket kit	4674096
AA-30	30# Recovery tank	4674681
AA-50	50# Recovery tank	4674699
AW-30	30# Recovery tank with float	4674495
AW-50	50# Recovery tank with float	4674711

Recovery Ratings OZ-4000:

Refrigerant	Push/Pull Liquid (lbs/min)	Standard Liquid (lbs/min)	Standard Vapor (lbs/min)
R-12	10.00	3.24	.25
R-22	10.25	3.50	.40
R-502	10.50	4.09	.46
R134a	10.00	3.42	.25
R-410A	10.25	3.50	.35

Part No. 4663247

## Spare Parts OZ-4000

Designation	Description	Part No.
ALF-032	Inlet filter	4670414
2277	Tune-up kit	4674079
400-15	Circuit breaker (12-Amp)	4671011
1997-1	Safety cable	4670406
1997-10	Jumper plug for safety cable (2 pieces)	4674087
2070-10	Power cord	4671526
3000-9-1	Ball valve	4671801
3000-60	Drive belt	4670562
3000-72	Valve plate w/gaskets	4672441
3000-73	Gasket kit	4674096
AA-30	30# Recovery tank	4674681
AA-50	50# Recovery tank	4674699
AW-30	30# Recovery tank with float	4674495
AW-50	50# Recovery tank with float	4674711



# Recycling



## CYCLEPAK Refrigerant Recycling Machine

The CYCLEPAK is an advanced recycling product. It is engineered as a compatible add on module for the POWERMAX, OZ-4000 and many other refrigerant recovery systems with a pumping capacity of .5 CFM or less.

The easy to use CYCLEPAK does not require any modifications or special adapters to operate; you need only a four-hose hook up from the system being serviced to the CYCLEPAK and the recovery station.

Highly compact for easy carrying, this is the ideal companion for the portable POWERMAX for on-site recovery and recycling.

### Features

- Distills and filters refrigerants, separates oil and acids continuously
- Recycles all high pressure refrigerants including R410A
- Compact and lightweight 15 lbs
- 2 year warranty

**THERMA-FLO**  
recovery recycling equipment



CYCLEPAK

### Recycling Ratings CYCLEPAK:

Refrigerant	Liquid Refrigerant Recovery Rate (lbs/min)	Vapor Refrigerant Recovery Rate (lbs/min)	Shutoff Vacuum (in. Hg)	Recycle Flow Rate (lbs/min)	Moisture Content (ppm by wt)	Acidity (ppm by wt)	High Boiling Residue (% by vol)	Non condensables (% by vol)
R12	12.9	0.90	20	.40	3	1	.01	1.0
R-22	14.4	1.10	20	.50	1	1	.01	1.0
R-500	13.5	0.80	20	.30	1	1	.01	1.2
R-502	15.6	1.30	20	.60	2	1	.01	1.1
R-134a	12.9	0.90	20	.40	3	1	.01	1.0

Part No. 4663256

### Spare Parts CYCLEPAK

Designation	Description	Part No.
FTP-100-4	CYCLEPAK filter	4673188
2070-10	Power cord	4671526
3000-9-1	Ball valve	4671801

# Recovery Machine

## PLUS-12 Refrigerant Recovery Machine

Recovery machine with an advanced oil free compressor, maintenance free and has no cross contamination or oil to check.

True multipurpose, it recovers R12, R134a, R22, R401, R402, R404, R406, R407, R408, R409, R410A, R411, R412, R500, R502, R507, R509, in fact a whole range of CFC's HCFC's and HFC's with blends and A & B variations of most. The PLUS-12 is one of the most accomplished machines ever built.

The PLUS-12 has a comprehensive built-in manifold that puts control in your hands, for vapor, liquid or combined recovery and with fully automatic pressure regulation.

Purge, self-cleaning, is on the fly, no need to shut down, you can flush, push-pull and subcool by using this advanced feature.

The high performance condenser with forced fan cooling, recovers with confidence on hot and very hot days, plus high pressure capability to 470 psi discharge with high pressure start capability.

Ergonomics and safety, easy to carry, no sharp edges, cool to touch, refrigerant connections that point down not into your eyes, convenient connection points all on one side, plus safety pressure switches, thermal overloads, circuit breakers. Needless to say the PLUS-12 has these bases covered and is built to stringent standards of quality and performance. Compare and you will be surprised.

### Features

- Automatic pressure regulation
- Quiet operation
- New compressor
- Improved cooling
- Easier to service
- Purge "on the fly"

### Oil-less Compressor

- No cross contamination of refrigerants
- No maintenance
- Up to 470 psi discharge pressure
- High start pressure

### New Blow Molded Case

- New single piece case
- Lightweight
- Ergonomic - easy to carry
- No sharp edges
- Easy to disassemble for service

### Control Manifold

- Built in analyzer
- Integrated inlet filter, easy to clean
- HP & LP gauges fully enclosed
- Inlet isolation & throttle valve
- Discharge isolation
- Integrated self purge

### Additional Features

- Automatic liquid & vapor regulation
- High-pressure safety switch
- Re-settable circuit breaker
- Twin pass high capacity condenser
- High capacity fan
- Connection fittings point away from operator
- Independent certification CE and ARI

PLUS-12





Technical Data PLUS-12

Model	Refrigerant	Category	Push/Pull	Liquid	Vapor	Combined
PLUS-12	R134a	III lbs/min	9	2	.33	.73
	R22	IV lbs/min	11	3	.40	1.1
	R410A	V lbs/min	13	2	.45	.92

Part No. 4508221

PLUS-12



Spare Parts PLUS-12

Designation	Description	Part No.
PLUS-12-6-09-R	Knob red	4662411
PLUS-12-6-09-B	Knob blue	4662429
PLUS-12-6-09-G	Knob grey	4662437
PLUS-12-KM-HP	Gauge high pressure	4662446
PLUS-12-KM-BP	Gauge low pressure	4662454
AA-30	30# Recovery tank	4674681
AA-50	50# Recovery tank	4674699

# Pressure and Vacuum Gauges

## REFCO Gauges General Information

### Class 1 vs. Class 1.6 vs. Class 2 accuracy gauges

Class 1 gauges are accurate within +/- 1 percent reading all the way around the gauge dial. These gauges are the most accurate offered by REFCO.

Class 1.6 gauges are accurate within +/- 1.6 percent reading all the way around the gauge dial. These gauges are also very accurate and are the standard accuracy gauge offered by REFCO.

Class 2.0 gauges are accurate within +/-2 percent over the first 1/3 of the gauge dial, +/-3 percent over the next 1/3 of the gauge dial and then +/-2 percent over the last 1/3 of the gauge dial. This is commonly called 2-3-2 accuracy. These gauges are least accurate where most of the readings are taken.

REFCO uses as standard on manifolds Class 1.6 accuracy gauges and on higher end manifolds Class 1.0 accuracy gauges. Most competitors use as standard the Class 2 or 2-3-2 accuracy gauges. This makes REFCO manifolds more accurate.  
REFCO DOES NOT USE ANY CLASS 2 or 2-3-2 accuracy GAUGES ON ITS MANIFOLDS. Unlike many service tool suppliers REFCO manufactures their own gauges.

### Standard Refrigerant Temperature Scales:

R12 = R12/R22/R502  
R22 = R22/R134a/R404A  
R134a = R134a/R404A/R507  
R410A = R410A  
R410A-FG = R410A/R134a/R22

### Standard Pressure Scales:

R12, R22 and R134a gauges:  
Low side 30" vacuum up to 120 psi, retard protection to 350 psi  
High side 0 psi up to 500 psi

R410A gauges:  
Low side 30" vacuum up to 500 psi  
High side 0 psi up to 800 psi



R3-320





## Standard Features of REFCO KM2 and M2 Series Class 1.6 Bourdon Tube Gauges are:

- Class 1.6 accuracy
- 2 3/4" or 68 mm outside diameter
- Zero point adjustable
- Pulse free
- Color-coded for pressure and compound
- Standard 1/8" NPT bottom connection
- All brass internal parts, no plastic

## Standard Features of REFCO GR Series, Glycerine, Class 1.6 Bourdon Tube Gauges are:

- Class 1.6 accuracy
- 2 3/4" or 68 mm outside diameter
- Glycerine-filled
- Standard 1/8" NPT bottom connection
- All brass internal parts, no plastic

Same features for GR Series but with:

- Zero point adjustable
- Color-coded for pressure and compound

## Standard Features of REFCO M5 Series Class 1.0 Bourdon Tube Gauges are:

- Class 1 accuracy
- 3 1/4" or 80 mm outside diameter
- Easy to read
- Retard protection
- Zero point adjustable
- Pulse free
- All brass internal parts, no plastic

## Standard Features of REFCO R3 and R5 Class 1.0 Bellow Gauges are:

- ◆ Bellow type gauges are extremely over-pressure resistant. A bellow type gauge can withstand up to 2.5 times over-pressurization of the printed pressure scale without damage to the gauge. A bourdon tube gauge cannot withstand this type of over-pressurization
- ◆ Class 1.0 accuracy
- ◆ Available in 2 3/4" (68 mm) or 3 1/4" (80 mm), both large and easy to read. PM series only available in 3" (76 mm)
- ◆ Zero point adjustable
- ◆ Silicone oil-filled, except PM series
- ◆ Aluminum anodized body for R3 and R5 series
- ◆ PM series is made with a fiberglass body
- ◆ Hermetically sealed, no oil fill plug on the top of the gauge to allow seepage or leakage for R3 and R5 series
- ◆ Color-coded for pressure and compound
- ◆ Standard 1/8" NPT bottom connection
- ◆ All brass or steel internal parts, no plastic
- ◆ Relief device on back of gauge in case of extreme over-pressurization for R3 and R5 series

## Pressure and Vacuum Gauges General Information:

Standard threaded connection - 1/8" NPT

F = pressure scale on gauge in psi and temperature scale in degrees F

Temperature scales:

R12	= R12/R22/R502
R22	= R22/R134a/R404A
R134a	= R134a/R404A/R507
R410A	= R410A
R410A-FG	= R410A/R134a/R22

Pressure scales:

R12, R22, R134a gauges:

Low side 30" vacuum up to 120 psi, retard to 350 psi

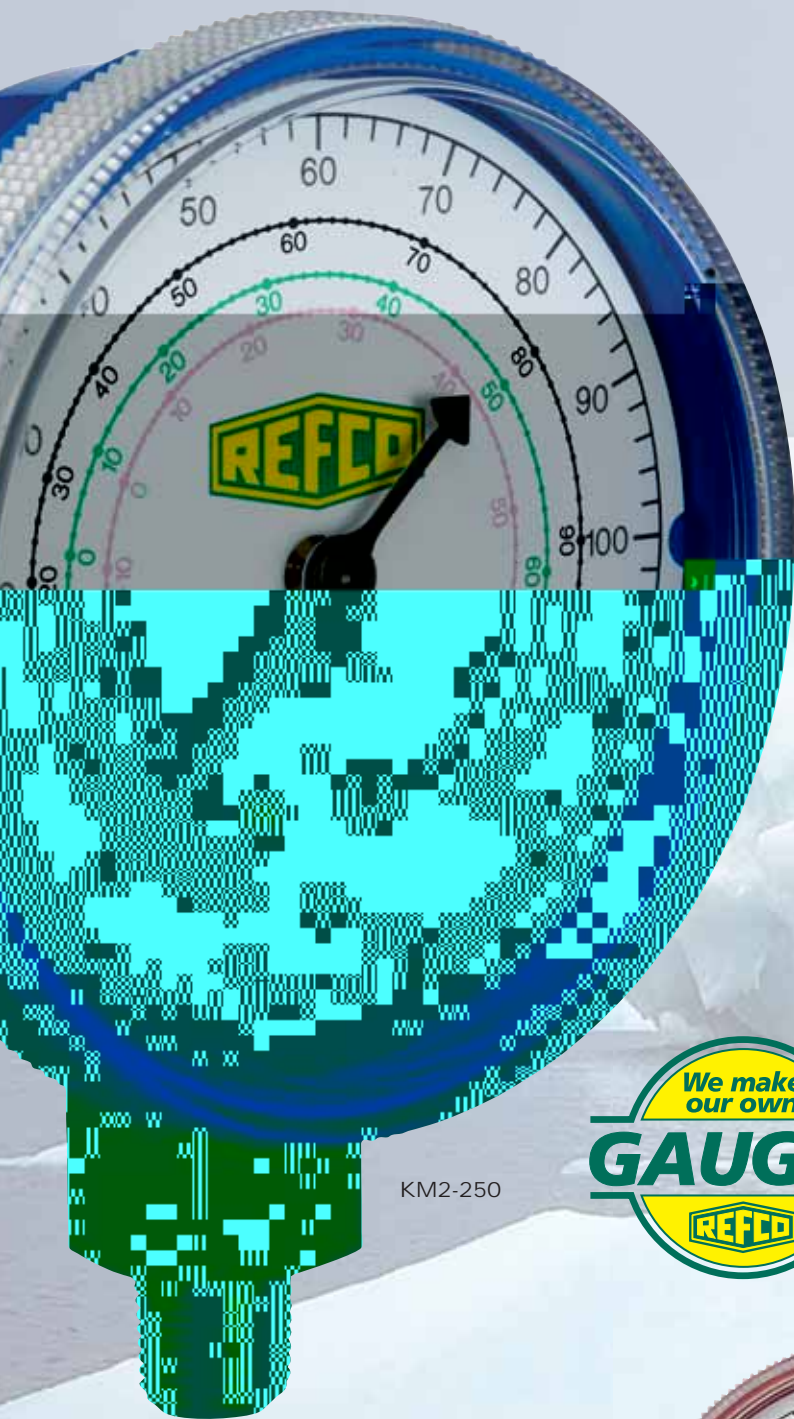
High side 0 psi up to 500 psi

R410A:

Low side 30" vacuum up to 500 psi

High side 0 psi up to 800 psi

M2-500



KM2-250



## Standard Bourdon Tube Pressure Gauges

### KM2 standard series

- Class 1.6 accuracy, bourdon tube design
- 2 3/4" (68 mm) outside diameter, easy to read
- Zero point adjustable
- Pulse free
- Color coded for easy high and low side identification
- Composite housing
- Standard 1/8" NPT connection
- Gauge internals are all brass, no plastic pieces

Designation	Description	Part No.
KM2-250-F-R12	R12/R22/R502 scales, compound	4530152
KM2-500-F-R12	R12/R22/R502 scales, pressure	4530161
KM2-250-F-R22	R22/R134a/R404A scales, compound	4505417
KM2-500-F-R22	R22/R134a/R404A scales, pressure	4505425
KM2-250-F-R134a	R134a/R404A/R507 scales, compound	4530179
KM2-500-F-R134a	R134a/R404A/R507 scales, pressure	4530187
KM2-001	Replacement lens cover	4503350



KM2-250



KM2-500



M2-500



M2-250



M2-500



M2-GS

## M2 Premium Series

- Standard all metal housing and easy to read through lens cover
- Class 1.6 accuracy, bourdon tube design
- 2 3/4" (68 mm) outside diameter, easy to read
- Zero point adjustable
- Pulse free
- Color-coded for easy high and low side identification
- Standard 1/8" NPT connections
- Gauge internals are all brass, no plastic pieces

Designation	Description	Part No.
M2-250-F-R12	R12/R22/R502 scales, compound	7829168
M2-500-F-R12	R12/R22/R502 scales, pressure	7829567
M2-250-F-R22	R22/R134a/R404A scales, compound	7635083
M2-500-F-R22	R22/R134a/R404A scales, pressure	7635147
M2-250-F-R410A	R410A scale, compound	7829982
M2-500-F-R410A	R410A scale, pressure	7830000
M2-250-F-R410A-FG	R410A/R134a/R22 scales, compound	7218188
M2-500-F-R410A-FG	R410A/R134a/R22 scales, pressure	7218358
M2-001	Replacement Lens cover	1212648
M2-GS	Gauge protector set	4677451



Zero point adjustment

Bourdon Tube Gauges  
Glycerin Filled and dry  
Execution

GR Series  
Glycerin Filled Gauges

- Class 1.6, glycerin filled, bourdon tube gauge
- Zero point adjustable
- Color-coded for easy high and low side identification
- 2 3/4" (68 mm) outside diameter, easy to read
- Pulse free
- Standard 1/8" NPT connection

Designation	Description	Part No.
GR-220-F-R12	R12/R22/R502 scales, glycerin-filled, compound	7714013
GR-320-F-R12	R12/R22/R502 scales, glycerin-filled, pressure	7714098
GR-220-F-R134a	R134a/R404A/R507 scales, glycerin-filled, compound	7714064
GR-320-F-R134a	R134a/R404A/R507 scales, glycerin-filled, pressure	7714102

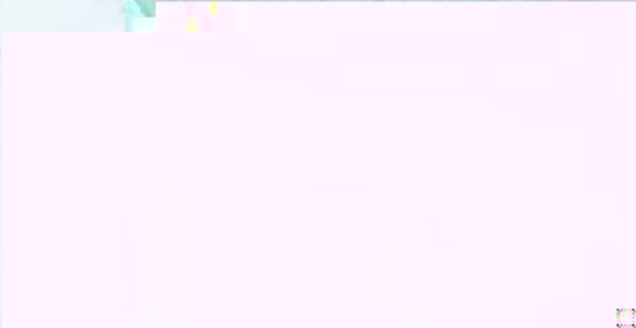


GR-320



GR-220





## Bellow Type, Class 1.0 Gauges, Oil Filled and Dry Execution

Fundamentals of a Bellow Gauge – The best gauge you'll ever have.

A metal bellow type gauge is very sensitive and therefore much more accurate than a standard bourdon tube gauge.

The main benefit of a bellow type gauge is that it is extremely accurate and highly over-pressure resistant.

The bellow gauge is accurate within 1% around the gauge face and can withstand up to 2.5 times over-pressurization without damage to the gauge.

A bourdon tube gauge would never withstand this type of over-pressurization.

Zero point  
adjustment

### R3 Series Oil Filled Bellow Type Gauges

- Bellow type, Class 1.0 accuracy, oil filled gauge
- Hermetically sealed, no oil fill plug on the top of gauge to allow leakage
- Highly over-pressure resistant, can withstand up to 2.5 times the printed scale
- Zero point adjustable
- All anodized aluminum body, no plastic
- Color-coded for easy identification of high and low side
- 2 3/4" (68 mm) outside diameter, easy to read
- Pulse free

R3-320

Designation	Description	Part No.
R3-220-F-R12	R12/R22/R502 scales, oil-filled, compound	9884479
R3-320-F-R12	R12/R22/R502 scales, oil-filled, pressure	9884480
R3-220-F-R22	R22/R134a/R404A scales, oil-filled, compound	4667472
R3-320-F-R22	R22/R134a/R404A scales, oil-filled, pressure	4667480
R3-220-F-R134a	R134a/R404A/R507 scales, oil-filled, compound	9884481
R3-320-F-R134a	R134a/R404A/R507 scales, oil-filled, pressure	9884482
R3-220-F-R410A-FG	R410A/R134a/R22/ scales, oil-filled, compound	4662399
R3-320-F-R410A-FG	R410A/R134a/R22/ scales, oil-filled, pressure	4662403



R5-220



## R5 Series Oil Filled Bellow Type Gauges

- All of the R3 features except it has a outside diameter of 3 1/4" (80 mm) for an extra easy to read gauge face

Designation	Description	Part No.
R5-220-F-R12	R12/R22/R502 scales, oil-filled, compound	4493916
R5-320-F-R12	R12/R22/R502 scales, oil-filled, pressure	4493924
R5-220-F-R410A-FG	R410A/R134a/R22 scales, oil-filled, compound	4675300
R5-320-F-R410A-FG	R410A/R134a/R22 scales, oil-filled, pressure	4675318





## Electronic Vacuum Gauges

### VG-64

- Digital Vacuum gauge
- Resolution to 1 micron when vacuum less than or equal to 200 microns
- Reads vacuum in seven units: Micron, psi, In Hg, mbar, PASCAL, Torr, and mTorr
- Hook to hang unit
- Cleaning port for cleaning of sensor
- Accuracy:
  - +/- 10% from 10 - 99 micron
  - +/- 10 micron from 100 - 1000 micron
- Over-pressure protected to 300 psi

Part No. 4503171



VG-64

DV-150

### DV-150

- Electronic Vacuum gauge measures from atmospheric to absolute vacuum
- Complete with carrying case
- Comes with a 9 volt battery
- Measures from atmosphere to 50 microns
- 10 LED Display lights
- Just turn on and ready to use, no adjustment necessary

Part No. 9881862

# Manifolds

## DIGIMON - Digital Manifold

### The Two-Way Digital Manifold

- 50 refrigerants, incl. R410A
- Class 1.0
- High/low pressure and temperature
- Superheat & Subcool measurable with an external temperature sensor
- Vacuum display
- Protected LCD screen
- Easy to read, illuminated display
- Updates reading every 3 seconds
- Automatic calibration
- Sturdy housing
- Unique design
- Auto shut-off
- Battery level indicator
- REFCO compatible spare parts
- Refrigerant upgrades possible
- Swiss made

Designation	Hoses	Packaging	Part No.
DIGIMON-9	none	blister	4676471
DIGIMON-3	5' set	plastic case	4676489

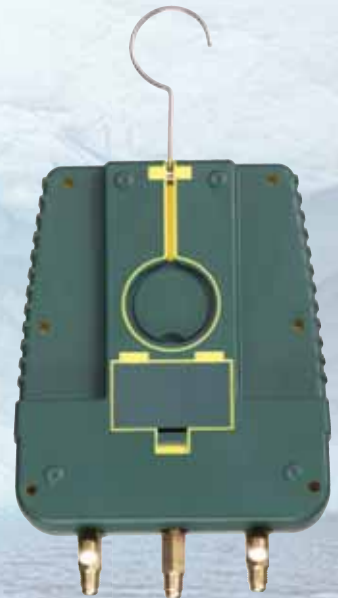
Designation	Description	Part No.
DIGIMON-CASE	Carrying case with storage compartment for the 2-way digital manifold	4676497

DIGIMON-EXTERNAL-SENSOR	External temperature probe	4677647
-------------------------	----------------------------	---------



DIGIMON-3

NEW



DIGIMON

Technical Data

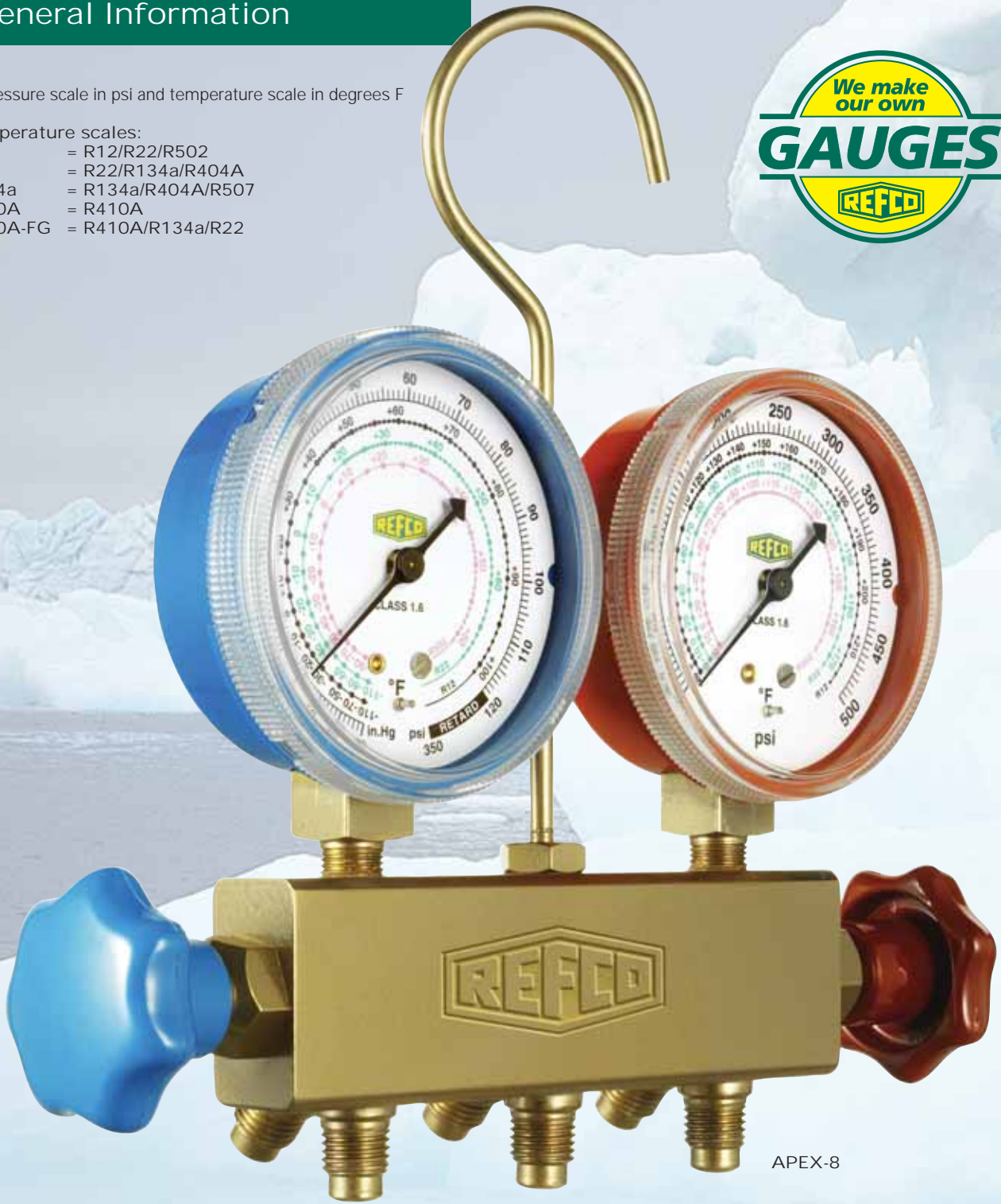
Accuracy:	≤1%
Pressure reading:	psi / bar / kPa / MPa
Temperature reading:	°F / °C
Vacuum measurement:	MICRONS / mbar
Operating temperature:	-4°F to +122°F -20°C to +50°C
Power supply:	9V Battery

## REFCO Manifolds General Information

F- pressure scale in psi and temperature scale in degrees F

Temperature scales:

R12 = R12/R22/R502  
R22 = R22/R134a/R404A  
R134a = R134a/R404A/R507  
R410A = R410A  
R410A-FG = R410A/R134a/R22



APEX-8



## APEX Manifolds

### Standard Two-Way Brass Manifold

- Class 1.6 bourdon tube gauges (KM), easy to read, zero point adjustable, pulse free and color-coded
- Two piece, O-ring seal piston style valve, repairable
- Swivel hook and 45° hose anchors
- Color-coded handwheels
- High quality brass body
- All hoses are high pressure, 870 psi working pressure, 3600 psi burst pressure

Designation	Hoses	Packaging	Part No.
APEX-8-F-R12	none	cardboard box	4665356
APEX-8-F-R22	none	cardboard box	4665364
APEX-8-F-R134a	none	cardboard box	4665372
APEX-6-F-R12	3' set	cardboard box	4665380
APEX-6-F-R22	3' set	cardboard box	4665398
APEX-6-F-R134a	3' set	cardboard box	4665402
APEX-6-F-R12-CCL-60	5' set	cardboard box	4665410
APEX-6-F-R22-CCL-60	5' set	cardboard box	4665428
APEX-6-F-R134a-CCL-60	5' set	cardboard box	4665436
APEX-6-F-R12-CCL-72	6' set	cardboard box	4665445
APEX-6-F-R22-CCL-72	6' set	cardboard box	4665453
APEX-6-F-R134a-CCL-72	6' set	cardboard box	4665461



APEX-9

Designation	Hoses	Packaging	Part No.
APEX-9-F-R12	none	blister package	4675458
APEX-9-F-R22	none	blister package	4675466
APEX-9-F-R134a	none	blister package	4675475
APEX-7-F-R12	3' set	blister package	4675377
APEX-7-F-R22	3' set	blister package	4675386
APEX-7-F-R134a	3' set	blister package	4675394
APEX-7-F-R12-CCL-60	5' set	blister package	4675416
APEX-7-F-R22-CCL-60	5' set	blister package	4675424
APEX-7-F-R134a-CCL-60	5' set	blister package	4675432

### R410A Manifold

- Same features but with all metal housing gauges (M2)
- R410A manifold with refrigerant scales R22/R134a/R410A

Designation	Hoses	Packaging	Part No.
APEX-8-F-R410A-FG	none	cardboard box	4665487
APEX-6-F-R410A-FG-CCL-60	5' set	cardboard box	4665479



APEX-8



APEX-8

Designation	Hoses	Packaging	Part No.
APEX-9-F-R410A-FG	none	blister package	4675483
APEX-7-F-R410A-FG	3' set	blister package	4675407
APEX-7-F-R410A-FG-CCL-60	5' set	blister package	4675440

## BM Series Manifolds

### Premium Two-Way Manifold

- All metal housing Class 1.6 bourdon tube gauges (M2), easy to read, zero point adjustable, pulse free and color coded
- Two-piece, O-ring seal piston style valve
- Extra large sight glass to view refrigerant movement
- Swivel hook and 45° hose anchors
- Anodized high quality aluminum body
- Color coded handwheels
- All hoses are high pressure, 870 psi working pressure, 3600 psi burst pressure

Designation	Hoses	Packaging	Part No.
BM2-8-F-R12	none	cardboard box	9884438
BM2-8-F-R22	none	cardboard box	4506490
BM2-8-F-R134a	none	cardboard box	9884439
BM2-6-F-R22	3' set	cardboard box	4506502
BM2-6-F-R22-CCL-60	5' set	cardboard box	4506520
BM2-6-F-R22-CCL-72	6' set	cardboard box	4506554
BM2-3-F-R22	3' set	plastic case	4506562



BM2-8

### R410A Manifold – Two-Way BM Series

- All the same features as the standard BM series manifolds except higher pressure gauges (M2). Low side gauge pressure to 500 psi and high side gauge pressure to 800 psi
- Comes standard with 1/4" SAE charging hoses

Designation	Hoses	Packaging	Part No.
BM2-8-F-R410A	none	cardboard box	4506571
BM2-6-F-R410A	3' set	cardboard box	4503261
BM2-6-F-R410A-CCL-60	5' set	cardboard box	4505710
BM2-6-F-R410A-CCL-72	6' set	cardboard box	4506589
BM2-3-F-R410A	3' set	plastic case	4505239
BM2-3-F-R410A-CCL-60	5' set	plastic case	4505433
BM2-3-F-R410A-CCL-72	6' set	plastic case	4506597

- R410A Manifold with refrigerant scales R410A/R134a/R22

Designation	Hoses	Packaging	Part No.
BM2-8-F-R410A-FG	none	cardboard box	4662535
BM2-6-F-R410A-FG-CCL-60	5' set	cardboard box	4662526
BM2-6-F-R410A-FG-CA-CCL-60	5' set	cardboard box w/ball valve	4665305

- Adapter to take a hose from 1/4" SAE to 5/16" SAE

Designation	Description	Part No.
OC-S410A	Adapter with core depressor 1/4" SAE male x 5/16" SAE female	9884931

BM2-8



## Premium Four-Way Manifolds

- Charge and evacuate an A/C or refrigeration system without having to connect and disconnect hoses, saving time and money
- All metal housing Class 1.6 bourdon tube gauges (M2), easy to read, zero point adjustable, pulse free and color-coded
- Two piece, O-ring seal piston style valve
- Extra large sight glass to view refrigerant movement
- Swivel hook and 45° hose anchors
- Anodized high quality aluminum body
- Color coded handwheels
- All hoses are high pressure, 870 psi working pressure, 3600 psi burst pressure



BM4-8

Designation	Hoses	Packaging	Part No.
BM4-8-F-R12	none	cardboard box	4505271
BM4-8-F-R22	none	cardboard box	4506619
BM4-8-F-R410A-FG	none	cardboard box	4675326
BM4-6-F-R12	3' set	cardboard box	4506627
BM4-6-F-R22	3' set	cardboard box	4506643
BM4-6-F-R410A-FG-CCL-60	5' set	cardboard box	4675335

## Glycerin Filled Two-Way Manifold Set

- Class 1.6 Glycerin filled bourdon tube gauges (GR), easy to read, zero point adjustable, color coded
- Two-piece, O-ring seal piston style valve
- Extra large sight glass to view refrigerant movement
- Swivel hook and 45° hose anchors
- Anodized high quality aluminum body
- Color coded handwheels
- All hoses are high pressure, 870 psi working pressure, 3600 psi burst pressure



GM2-8

Designation	Hoses	Packaging	Part No.
GM2-8-F-R12	none	cardboard box	4507061
GM2-8-F-R134a	none	cardboard box	4507071
GM2-6-F-R12-CCL-60	5' set	cardboard box	4507100
GM2-6-F-R134a-CCL-60	5' set	cardboard box	4507118



## Automotive Manifold Set

- All the same features as the standard BM series manifold except the manifold comes with high and low pressure automotive valve couplers.

Designation	Hoses	Packaging	Part No.
BM2-3-F-Auto-Set-R134a-RC	6' set	plastic case	4506601

- Replacement Auto Set Service Couplers

Designation	Description	Part No.
RC01-B	Blue automotive service-valve, 1/4" SAE Auto Connection	9884949
RC01-R	Red automotive service-valve, 1/4" SAE Auto Connection	9884948
V-R-B-001/10	O-ring for RC01-B HNBR package of 10	9884847
V-R-R-002/10	O-ring for RC01-R HNBR package of 10	9884848

## Manifolds with large, easy to read Bourdon Tube Gauges

- Easy to read 3 1/4" (80 mm) gauges (M5)
- All metal housing Class 1.0 bourdon tube gauges
- Retard protection
- Color-coded for high and low side
- Pulse/vibration free
- Zero point adjustable
- Two-piece, O-ring seal piston style valve
- Extra large sight glass
- Swivel hook and 45° hose anchors
- Anodized high quality aluminum body
- Color-coded handwheels
- All hoses are high pressure, 870 psi working pressure, 3600 psi burst pressure

Designation	Hoses	Packaging	Part No.
SM2-8-F-R410A-FG	none	cardboard box	4675343
SM2-6-F-R410A-FG-CCL-60	5' set	cardboard box	4675351
SM2-3-F-R410A-FG-CCL-60	5' set	plastic case	4675369





## Manifolds with Bellow Type Oil Filled Gauges

Bellow type gauges are the most accurate found in the industry today. Bellow type gauges are accurate within 1% all the way around the gauge dial, extremely over pressure resistant and pulse free. There is no oil or glycerin fill nipple on these gauges to have weepage, seepage or leakage from.



M2-8-DELUXE







## DELUXE Two-Way Oil Filled Manifolds Bellow Type

- Oil-filled, bellow type, Class 1.0 accuracy gauges (R3). Gauges are accurate within 1% all the way around the gauge face
- Made from anodized aluminum
- No plastic
- No fill nipple on the top of the gauge to allow leakage
- Pulse/vibration free
- Extremely over-pressure resistant. Gauge will withstand 2 1/2 times over-pressurization
- Zero point adjustable
- Easy to read 2 3/4" gauges (R3)
- Color-coded for high and low side
- Two-piece, O-ring seal piston style valve
- Extra large sight glass to view refrigerant movement
- Swivel hook and 45° hose anchors
- Anodized high quality aluminum body
- Color-coded handwheels
- All hoses are high pressure, 870 psi working pressure, 3600 psi burst pressure

Designation	Hoses	Packaging	Part No.
M2-8-DELUXE-F-R12	none	cardboard box	4505817
M2-8-DELUXE-F-R22	none	cardboard box	4667498
M2-8-DELUXE-F-R410A-FG	none	cardboard box	4675491
M2-3-DELUXE-F-R12-CCL-60	5' set	plastic case	4505809
M2-3-DELUXE-F-R22-CCL-60	5' set	plastic case	4667510
M2-3-DELUXE-F-R134a-CCL-60	5' set	plastic case	4506759
M2-3-DELUXE-F-R410A-FG-CCL-60	5' set	plastic case	4662543
M2-3-DELUXE-F-R410A-FG-CA-CCL-60	5' set w/ball valve	plastic case	4663727



## DELUXE Four-Way Oil Filled Manifolds Bellow Type

- Oil-filled, bellow type, Class 1.0 accuracy gauges (R5). Gauges are accurate within 1% all the way around the gauge face
- Gauge housing is anodized aluminum. No plastic
- No fill nipple on the top of the gauge to allow leakage
- Pulse/vibration free
- Extremely over-pressure resistant. Gauge will withstand 2 1/2 times over-pressurization
- Zero point adjustable
- Extra large, easy to read 3 1/4" gauges (R5)
- Color-coded high and low side gauges
- Two-piece, O-ring seal piston style valve
- Extra large sight glass to view refrigerant movement
- Swivel hook and 45° hose anchors
- Anodized high quality aluminum body
- Color-coded handwheels
- All hoses are high pressure, 870 psi working pressure, 3600 psi burst pressure
- Manifolds that come with hose sets also come with one 3/8" SAE yellow vacuum line 60" long with a working pressure of 465 psi and burst pressure of 2250 psi

M4-8-DELUXE

Designation	Hoses	Packaging	Part No.
M4-8-DELUXE-F-R12	none	cardboard box	4506783
M4-8-DELUXE-F-R410A-FG	none	cardboard box	4675505
M4-3-DELUXE-F-R12-CCL-60	5' set	plastic case	4505477
M4-3-DELUXE-F-R410A-FG-CCL-60	5' set	plastic case	4669997



## SUPER DELUXE Two-Way Manifold

- For the engineer looking for the highest quality manifold
- Oil-filled, bellow type, Class 1.0 accuracy gauges. Gauges are accurate within 1% all the way around the gauge face
- Pulse/vibration free
- Extremely over-pressure resistant. Gauge will withstand 2 1/2 times over-pressurization
- Made from high quality eloxed aluminum
- Zero point adjustable
- Two-piece, O-ring seal piston style valve
- Extra large sight glass to view refrigerant movement
- Swivel hook and 45° hose anchors
- Color-coded handwheels
- All hoses are high pressure, 870 psi working pressure, 3600 psi burst pressure

Designation	Hoses	Packaging	Part No.
MK-2-3-F-R12	5' set	plastic case	4506848
MK-2-3-F-R134a	5' set	plastic case	4506856

MK-2-3



# JUMBO-STAR

## 3/8" Bores and Connections

### Super High Flow Manifold



#### Standard Two-Way Manifold - High Flow

- 3/8" SAE bores all the way through the body to allow for increased flow over normal 1/4" SAE machined body. Standard 3/8" connections also
- Saves time and money during charging, recovery and vacuum operations
- Compact brass body with extra large sight glass
- All metal housing Class 1.6 bourdon tube gauges (M2), easy to read, zero point adjustable, pulse free and color-coded
- Two-piece, O-ring seal piston style valve
- Swivel hook 45° hose anchors
- Color-coded handwheels
- All hoses 3/8" SAE connections, 465 psi working pressure, 2250 psi burst pressure

Designation	Hoses	Packaging	Part No.
JUMBO-STAR-2-3-F-R12	3/8" 3' set	plastic case	4668109
JUMBO-STAR-2-3-F-R134a	3/8" 3' set	plastic case	4668117



JUMBO-STAR

## Manifold Spare Parts

### Spare Handwheels for Two-Way Manifold Series:

Designation	Description	Part No.
M2-6-09-B	Blue handwheel	4490950
M2-6-09-R	Red handwheel	4490968
M2-7-SET-B	Blue handwheel	4677834
M2-7-SET-R	Red handwheel	4677826

### Spare Handwheels for Four-Way Manifold Series:

Designation	Description	Part No.
M4-6-09-B	Blue handwheel	4490976
M4-6-09-N	Black handwheel	4490984
M4-6-09-R	Red handwheel	4490992
M4-6-09-Y	Yellow handwheel	4491000
M4-7-SET-B	Blue handwheel	4677850
M4-7-SET-N	Black handwheel	4677868
M4-7-SET-R	Red handwheel	4677842
M4-7-SET-Y	Yellow handwheel	4677876

### Hook for all manifolds apart from the DIGIMON

Designation	Description	Part No.
M4-6-10	Hook for manifold	9882584

### Complete Manifold Valve Replacement Kit

Designation	Description	Part No.
M2-10-95	Single replacement valve	4662594
M2-10-95/10	Package of 10 replacement valves	4662607

### Replacement Valve Seat Assembly

Designation	Description	Part No.
M4-6-04	Single valve seat assembly	4662616
M4-6-04/10	Package of 10 valve seat assemblies	4662624
M4-6-04-JUMBO	Single valve seat assembly for JUMBO-STAR	4666726

### Sight Glass Replacement Parts

Designation	Description	Part No.
M4-6-11	Sight glass w/O-ring and brass threaded ring for R410A manifolds	4491018
M4-6-11-T	Special sight glass threaded ring installation tool	4493169

### Hose holder for REFCO manifolds

Designation	Description	Part No.
A-31452-Y	Y-plug hose holder for manifolds	4665118

### Plastic Carrying Multi-Case

Designation	Description	Part No.
M4-6-15	Carrying case with storage compartment for 2- and 4-way REFCO manifolds made of sturdy plastic	4666106

# Charging Hoses

## Charging and Testing Hoses

Features of REFCO Charging hoses include:

- Standard 870 psi working pressure, 3600 psi burst pressure making the REFCO charging hoses good for all refrigerants including R410A
- Eight sided crimp ensures maximum hose life
- Teflon seals in place of neoprene - proven to last up to ten times longer
- Knurled brass nut for easy finger tightening
- Multiple lengths available
- Color coded for convenience
- Available in packs of 3 (one red, one yellow and one blue hose) or individually



CL-36-Y

## Individual Charging Hoses

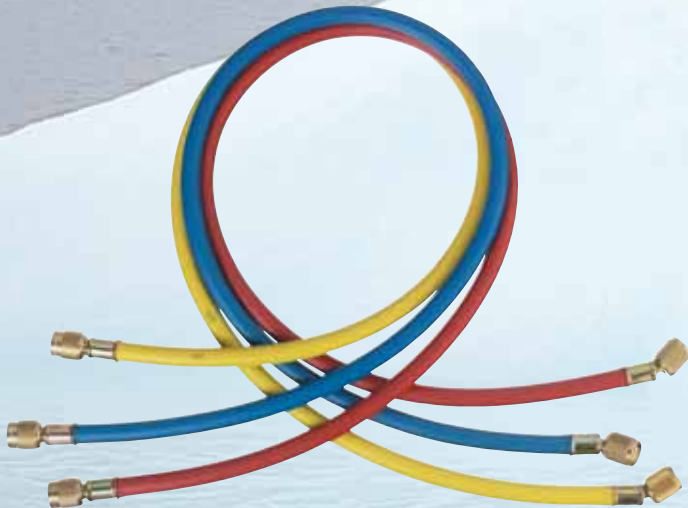
Premium REFCO Charging Hoses with 1/4" SAE Fittings

Designation	Description	Part No.
CL-36-Y	36" Yellow hose	9881271
CL-36-R	36" Red hose	9881262
CL-36-B	36" Blue hose	9881253
CL-48-Y	48" Yellow hose	9881270
CL-48-R	48" Red hose	9881261
CL-48-B	48" Blue hose	9881252
CL-60-Y	60" Yellow hose	9881269
CL-60-R	60" Red hose	9881260
CL-60-B	60" Blue hose	9881251
CL-72-Y	72" Yellow hose	9881268
CL-72-R	72" Red hose	9881259
CL-72-B	72" Blue hose	9881250

## Sets of 3

Premium REFCO Charging Hoses with 1/4" SAE Fittings

Designation	Description	Part No.
CCL-36	Set of 3 - 36"	9881278
CCL-48	Set of 3 - 48"	9881277
CCL-60	Set of 3 - 60"	9881276
CCL-72	Set of 3 - 72"	9881275



CCL-36



## Environmentally Friendly REFCO Charging Hoses with Special Barrier Protection

Features include:

- All of the features of the standard charging hose but are made from a special material which prevents virtually any permeation of refrigerant, yet remain flexible and easy to work with
- Meets SAE J2196 for permeation allowance

### Sets of 3

Designation	Description	Part No.
CCL-36-J2196	Set of 3 - 36"	9884728
CCL-60-J2196	Set of 3 - 60"	9884729
CCL-72-J2196	Set of 3 - 72"	9884730

### Individual Charging Hoses

Designation	Description	Part No.
CL-36-Y-J2196	36" Yellow hose	9884719
CL-36-R-J2196	36" Red hose	9884720
CL-36-B-J2196	36" Blue hose	9884721
CL-60-Y-J2196	60" Yellow hose	9884722
CL-60-R-J2196	60" Red hose	9884723
CL-60-B-J2196	60" Blue hose	9884724
CL-72-Y-J2196	72" Yellow hose	9884725
CL-72-R-J2196	72" Red hose	9884726
CL-72-B-J2196	72" Blue hose	9884727

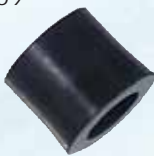


CCL-36



CL-36-R-J2196

P-509



P-509-T



P-513



## Spare Parts for REFCO 1/4" SAE Charging Hoses

Designation	Description	Part No.
P-509	Neoprene gasket for 1/4" SAE hoses	9882627
P-509/10	Ten neoprene gaskets for 1/4" SAE hoses	9880872
P-509-T	Teflon gasket for 1/4" SAE hoses	9882852
P-509-T/10	Ten Teflon gaskets for 1/4" SAE hoses	9880871
P-513	Core depressor for Schrader valves	9883835
P-513/10	Ten core depressors for Schrader valves	9880869







## REFCO Magic Seal Charging Hoses

Magic Seal charging hose features:

- Built in valve automatically closes when disconnecting the charging hose from the system, preventing refrigerant loss and burning of the skin
- One side straight connection, other side 45 ° bended
- Standard 870 psi working pressure and 3600 psi burst pressure make the hose good for all refrigerants including R410A
- Eight sided crimp ensures maximum life
- Knurled brass nut for easy finger tightening
- Teflon seals in place of neoprene - proven to last up to 10 times longer
- Multiple lengths available
- Color-coded for convenience

Designation	Description	Part No.
CPV-36-Y	36" Yellow hose w/built in shut off valve	9881232
CPV-36-R	36" Red hose w/built in shut off valve	9881242
CPV-36-B	36" Blue hose w/built in shut off valve	9881237
CPV-48-Y	48" Yellow hose w/built in shut off valve	9881231
CPV-48-R	48" Red hose w/built in shut off valve	9881241
CPV-48-B	48" Blue hose w/built in shut off valve	9881236
CPV-60-Y	60" Yellow hose w/built in shut off valve	9881230
CPV-60-R	60" Red hose w/built in shut off valve	9881240
CPV-60-B	60" Blue hose w/built in shut off valve	9881235
CPV-72-Y	72" Yellow hose w/built in shut off valve	9881229
CPV-72-R	72" Red hose w/built in shut off valve	9881239
CPV-72-B	72" Blue hose w/built in shut off valve	9881234

CPV-36-B

### Sets of 3

Magic Seal charging hose

Designation	Description	Part No.
CPV-CCL-36	Set of 3 - 36" w/built in shut off valve	4495412
CPV-CCL-48	Set of 3 - 48" w/built in shut off valve	4662551
CPV-CCL-60	Set of 3 - 60" w/built in shut off valve	4495421
CPV-CCL-72	Set of 3 - 72" w/built in shut off valve	4495439



## REFCO 3/8" SAE Charging Hoses

Features of the 3/8" SAE charging hose are as follows:

- Standard 465 psi working pressure, 2250 psi burst pressure
- Eight sided crimp to ensure maximum hose life
- Knurled brass nut for easy finger tightening
- Multiple hose lengths available
- Color-coded for convenience

Designation	Description	Part No.
HCL6-60-Y	60" 3/8" SAE Yellow hose	9881313



HCL6-60-Y

## Spare Parts for REFCO 3/8" SAE Charging Hoses

Designation	Description	Part No.
P-510	Neoprene O-ring for 3/8" SAE charging hoses	9884169
P-510/10	10 Neoprene O-rings for 3/8" SAE charging hoses	9880870
A-40513	Core depressor for 3/8" SAE charging hoses	9880957
A-40513/10	10 Core depressors for 3/8" SAE charging hoses	9884813



A-40513

# Leak Detection

## STARTEK

### Electronic Leak Detector for all Halogenated Refrigerants

- Extremely compact design concept similar to a cell phone
- Ergonomical design focused on performance and simplicity of operation
- Microprocessor controlled unit and state of the art microelectronics
- Detects all halogenated refrigerants incl. R410A
- Certified to SAE J1627 standard
- Simple one-button operation
- Two sensitivity levels using a double-click computer mouse action
- One touch reset-mode
- High performance true mechanical pump to provide positive airflow through the sensing tip
- Leak indication using both variable frequency audible and visual alarm
- Automatic shut-off after extended period of non-use to preserve battery life
- Battery life indicator
- Prevents incorrect readings by providing visual and audible warning followed by an automating shut-off when battery reaches a critical level
- State of the art sensor technology for higher reliability and longer life time
- Includes a practical belt clip holster that also protects the unit in your tool box
- Specially designed 12" flexible probe for easy reach
- Additional replacement sensor included inside the battery compartment
- Packed up in a sturdy plastic case

#### Technical Data:

Dimensions:	6 x 1.4 x 2.1 inch
Weight:	6.7 oz
Batteries:	2 x AA batteries
Battery lifetime:	40 hours
Sensitivity:	less than 0.1 oz/year
Sensor lifetime:	approx. 30 hours
Operating temperature:	32° to 125° F
Warm up time:	less than 2 seconds
Response time:	instantaneous
Reset time:	instantaneous
Probe length:	12 inches
Warranty:	2 years

Part No. 4507917

Designation	Description	Part No.
ES-02	Replacement sensor (Pack of 2)	4507577
STARTEK-CASE	Carrying case for STARTEK	4664333



STARTEK-CASE



STARTEK





# STARTEK-C

## Electronic Leak Detector for Combustible Gases

- This Combustible Gas Leak Detector with its new state of the art design is the most technologically advanced of its kind
- The STARTEK-C's low power requirements, small size and high sensitivity combine to create a tool which is easy to handle and ultra effective at locating even the most difficult-to-find leaks
- The STARTEK-C's long life sensor will detect concentrations of combustible gases as low as 5 ppm
- It is sensitive to all combustible gases
- The STARTEK-C also features a low sensitivity mode, enabling quick and easy location of large combustible gas leaks
- Packed up in a sturdy plastic case

### Technical Data:

Dimensions:	6 x 1.4 x 2.1 inch
Weight:	6.7 oz
Batteries:	2 x AA batteries
Battery lifetime:	11 hours
Sensitivity:	less than 50 ppm (Propane, Isobutane, Methane, Natural Gas)
Sensor lifetime:	less than 1 year normal use
Operating temperature:	32° to 125° F
Warm up time:	45 seconds (conditioned sensor)
Calibration:	automatic
Response time:	5 seconds
Reset time:	5 seconds or more depending on gas concentration
Probe length:	12 inches
Warranty:	2 years

Part No. 4660664

Designation	Description	Part No.
ES-C	Replacement sensor	4660672
STARTEK-C-CASE	Carrying case for STARTEK-C	4665593



STARTEK-C



# Charging Scale

## REF-METER

REF-METER is a new electronic refrigerant scale with modern design, sturdy and built in high quality.

- Easy to read LCD display
- Compact and lightweight (5.5 lbs)
- Large refrigerant cylinder platform
- Extremely high accuracy
- Programmable
- Field calibratable
- Supplied in a carrying pouch

### Technical Data:

Capacity:	220 lbs
Platform:	10.5 x 10.5 x 1.7 inches
Accuracy:	+/- 0.5 %
Resolution:	0.005 lbs, 0.1 oz
Power supply:	Four AAA batteries
Battery lifetime:	30 hours

Part No. 4665657

REF-METER

# Thermometers



## Digital Thermometers

### Infrared Non-Contact Thermometer

This thermometer is hand-held; battery operated and accurately measures temperature using non-contact infrared technology. Just point the sensor at the desired target and press and hold the „on“ button for one second for the temperature reading.

- Target size/field of view: 10 to 1
- Temperature range -67°F to +260°F
- Operating temperature +50°F to +125°F
- Accuracy +/- 2% of reading or 3°F, plus one digit, whichever is greater
- Response time - 1 second
- Power source is one 9 Volt battery

Designation	Description	Part No.
LP-79	Non-Contact Infrared Thermometer	4505922



LP-79

### Digital Pocket Test Thermometer

This thermometer comes with an easy to read LCD digital readout, is battery operated, switchable from Fahrenheit to Celsius and comes with a protective sheath with clip.

- Range -40°F to 300°F
- Accuracy +/-2°F
- Resolution 0.1°F

Designation	Description	Part No.
DT-150	Pocket Test Thermometer	9884365



DT-150

## Tube Cutters

All Mini Tube Cutters have the following features:

- Light in weight yet heavy duty cutters for the majority of your jobs
- Easy gripping
- Large rollers with flare cut off grooves
- Carbide steel cutting wheels



---

---

---

---

---

---

---

---

---

---





## Pinch Off Tools

Designation	Description	Part No.
14285	Up to 3/8" diameter suction tubes	9881530
RFA-105-FF	Pinch off tools for 1/4", 3/8" and 1/2"	9881528
14200	Pinch off pliers up to 3/8" O.D.	9881527
14215	Capillary tube cutter, no need to swage after cutting the tube	9881087



## Recovery-Service Piercing Pliers

Designation	Description	Part No.
14210	Piercing pliers with changeable piercing needle and access fitting	9881526
14210-01/10	Package of 10 spare needles	4665550



14210

## Tubing Tools

Designation	Description	Part No.
RFA-209	Inner-Outer reamer	9881649
RFA-209-STYLO	Tube deburring tool, rotate blade	9883750
BR-4IN1	Cleaning brush 4 in 1	4677621

RFA-209-STYLO



RFA-209





## Tube Benders

Designation	Description	Part No.
RFA-364-FH-08	1/2"	9881667
RFA-364-FH-10	5/8"	9881666
RFA-364-FH-12	3/4"	9881665
RFA-368-FH	Triple-header tube bender. Bends all tubes with an outside diameter of 1/4", 5/16" and 3/8" to a 90-degree bend	9881657



RFA-368-FH



TELL-7

14297-RF



## Punch Type Swaging Tools

Designation	Description (Tube inside diameter)	Part No.
T21002	1/8"	9881620
T21003	3/16"	9881619
T21004	1/4"	9881618
T21005	5/16"	9881617
T21006	3/8"	9881616
T21007	7/16"	9881615
T21008	1/2"	9881614
T21010	5/8"	9881613
T21012	3/4"	9881612
T21014	7/8"	9881611
T21018	1 1/8"	9881610
T21000	Complete set of seven tools from 1/8" to 1/2"	9881609
T21100	Complete Bar covers all sizes from 1/8" to 1/2" in one tool	9881608



T21000



T21100



## General Tools

Designation	Description	Part No.
14297-RF	Expander tool set. Complete with expander plier and 6 heads in steel box. Tube sizes 3/8", 1/2", 5/8", 3/4", 7/8" and 1 1/8" diameter	4677817
RFA-124-C	Ratchet wrench. Hex openings 1/2" and 5/16" on one end and square 3/16" and 1/4" on the other end	9881467
RFA-127-C	Ratchet wrench. 1/4" by 3/16" at one end and 3/8" by 5/16" at the other end	9881466
RFA-127-OFFSET	Offset wrench	4506201
KKS-38	Ratchet wrench with extendable reversible L-shape handle, ideal if space is tight, 3/8" square. Blister packaging.	4667413



---

---

---

---

---

## Access Valve Tools for 1/4" SAE

Designation	Description	Part No.
32515	Charging and evacuation valve key for fluid filling or withdrawal through Schrader valves. Increases speed of recovery and charging	9880894
32520	Valve core replacing tool	9880893
32520-555	O-ring set complete	9880892
A-32000	Valve core tool. Contains 6 extra cores and one extra core remover and tap	9880890



32515



32520



A-32000

## Solenoid Valve Operating Magnet

- The quickest and easiest way to operate solenoid valves manually
- Converts electronically operated solenoid valves into hand operated valves in seconds
- Proven design that fits about 90% of solenoid valves
- Opening is 18 mm or 0.75 inch

Designation	Description	Part No.
SVOM-18	Solenoid valve operating magnet	4660507



SVOM-18

## Access Valves - 1/4" SAE

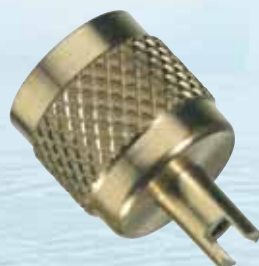
Designation	Description	Part No.
A-31004	Extended copper tube, diameter 1/4"	9880938
A-31006	With swaged tube suitable for 3/8" diameter	9880934
NFT5-4	Quick seal 1/4" SAE flare cap with gasket	9880875
NFT-118	Quick seal cap with built-in core remover 1/4" SAE	9880873



A-31004



NFT5-4



NFT-118

# Swiss-Quality



## Part No. Index

PartNo.	Designation	Pg	PartNo.	Designation	Pg
1212648	M2-001	23	4506848	MK-2-3-F-R12	43
4490950	M2-6-09-B	45	4506856	MK-2-3-F-R134a	43
4490968	M2-6-09-R	45	4507061	GM2-8-F-R12	36
4490976	M4-6-09-B	45	4507071	GM2-8-F-R134a	36
4490984	M4-6-09-N	45	4507100	GM2-6-F-R12-CCL-60	36
4490992	M4-6-09-R	45	4507118	GM2-6-F-R134a-CCL-60	36
4491000	M4-6-09-Y	45	4507356	RL-8	10
4491018	M4-6-11	45	4507445	RL-8-303	11
4492936	CA-CL-36-Y	49	4507577	ES-02	52
4492944	CA-CL-60-B	49	4507607	RL-8-3000	11
4492952	CA-CL-60-R	49	4507615	RL-8-3011	11
4492961	CA-CL-60-Y	49	4507623	RL-8-3060	11
4492979	CA-CL-72-B	49	4507631	RL-8-4071	11
4492987	CA-CL-72-R	49	4507640	RL-8-4000	11
4492995	CA-CL-72-Y	49	4507658	RL-8-2A	11
4493169	M4-6-11-T	45	4507674	RL-4-3000	11
4493525	CA-1/4"SAE-B	49	4507682	RL-4-3011	11
4493533	CA-1/4"SAE-R	49	4507917	STARTEK	52
4493614	CA-CCL-36	48	4508203	RL-8-426	11
4493622	CA-CCL-60	48	4508221	PLUS-12	19
4493631	CA-CCL-72	48	4530152	KM2-250-F-R12	22
4493738	CA-1/4"SAE-Y	49	4530161	KM2-500-F-R12	22
4493916	R5-220-F-R12	27	4530179	KM2-250-F-R134a	22
4493924	R5-320-F-R12	27	4530187	KM2-500-F-R134a	22
4495340	DV-44	13	4660507	SVOM-18	62
4495358	DV-45	13	4660664	STARTEK-C	53
4495366	DV-46	13	4660672	ES-C	53
4495412	CPV-CCL-36	50	4661040	RL-2-406	11
4495421	CPV-CCL-60	50	4661423	RL-2/4-3060	11
4495439	CPV-CCL-72	50	4661474	RL-4-4000	11
4495471	RL-2/4-303	11	4661482	RL-2-2A	11
4496761	RL-4/8-310	11	4661538	RL-2-4000	11
4496770	RL-4-415	11	4661589	RL-2-3000	11
4503171	VG-64	29	4661597	RL-2-3011	11
4503261	BM2-6-F-R410A	34	4661601	RL-2	10
4503350	KM2-001	22	4661759	RL-4	10
4505051	RL-4-406	11	4661954	RL-4-2A	11
4505239	BM2-3-F-R410A	34	4662399	R3-220-F-R410A-FG	26
4505271	BM4-8-F-R12	35	4662403	R3-320-F-R410A-FG	26
4505417	KM2-250-F-R22	22	4662411	PLUS-12-6-09-R	19
4505425	KM2-500-F-R22	22	4662429	PLUS-12-6-09-B	19
4505433	BM2-3-F-R410A-CCL-60	34	4662437	PLUS-12-6-09-G	19
4505477	M4-3-DELUXE-F-R12-CCL-60	42	4662446	PLUS-12-KM-HP	19
4505710	BM2-6-F-R410A-CCL-60	34	4662454	PLUS-12-KM-BP	19
4505809	M2-3-DELUXE-F-R12-CCL-60	41	4662526	BM2-6-F-R410A-FG-CCL-60	34
4505817	M2-8-DELUXE-F-R12	41	4662535	BM2-8-F-R410A-FG	34
4505922	LP-79	55	4662543	M2-3-DELUXE-F-R410A-FG-CCL-60	41
4506171	RF-888-Z	58	4662551	CPV-CCL-48	50
4506198	RF-175-FS	58	4662594	M2-10-95	45
4506201	RFA-127-OFFSET	61	4662607	M2-10-95/10	45
4506490	BM2-8-F-R22	34	4662616	M4-6-04	45
4506502	BM2-6-F-R22	34	4662624	M4-6-04/10	45
4506520	BM2-6-F-R22-CCL-60	34	4663239	POWERMIX	15
4506554	BM2-6-F-R22-CCL-72	34	4663247	OZ-4000	16
4506562	BM2-3-F-R22	34	4663256	CYCLEPAK	17
4506571	BM2-8-F-R410A	34	4663727	M2-3-DELUXE-F-R410A-FG-CA-CCL-60	41
4506589	BM2-6-F-R410A-CCL-72	34	4664333	STARTEK-CASE	52
4506597	BM2-3-F-R410A-CCL-72	34	4665118	A-31452-Y	45
4506601	BM2-3-F-Auto-Set-R134a-RC	37	4665305	BM2-6-F-R410A-FG-CA-CCL-60	34
4506619	BM4-8-F-R22	35	4665356	APEX-8-F-R12	33
4506627	BM4-6-F-R12	35	4665364	APEX-8-F-R22	33
4506643	BM4-6-F-R22	35	4665372	APEX-8-F-R134a	33
4506759	M2-3-DELUXE-F-R134a-CCL-60	41	4665380	APEX-6-F-R12	33
4506783	M4-8-DELUXE-F-R12	42	4665398	APEX-6-F-R22	33
			4665402	APEX-6-F-R134a	33
			4665410	APEX-6-F-R12-CCL-60	33
			4665428	APEX-6-F-R22-CCL-60	33
			4665436	APEX-6-F-R134a-CCL-60	33
			4665445	APEX-6-F-R12-CCL-72	33
			4665453	APEX-6-F-R22-CCL-72	33
			4665461	APEX-6-F-R134a-CCL-72	33
			4665479	APEX-6-F-R410A-FG-CCL-60	33
			4665487	APEX-8-F-R410A-FG	33
			4665550	14210-01/10	57
			4665593	STARTEK-C-CASE	53
			4665657	REF-METER	54
			4666076	TELL-7	59
			4666106	M4-6-15	45
			4666726	M4-6-04-JUMBO	45
			4667413	KKS-38	61
			4667472	R3-220-F-R22	26
			4667480	R3-320-F-R22	26
			4667498	M2-8-DELUXE-F-R22	41
			4667510	M2-3-DELUXE-F-R22-CCL-60	41
			4667685	ECO-5	12
			4667757	ECO-3/5/9-1	13
			4667766	ECO-3/5/9-2	13
			4667774	ECO-3/5/9-3	13
			4667782	ECO-3/5/9-4	13
			4667790	ECO-3/5/9-5	13
			4667820	ECO-3/5/9-8	13
			4668028	RL-2-64	11
			4668036	RL-4-64	11
			4668045	RL-8-64	11
			4668053	RL-4/8-65	11
			4668109	JUMBO-STAR-2-3-F-R12	44
			4668117	JUMBO-STAR-2-3-F-R134a	44
			4668533	CCL-60-CA	48
			4668559	CCL-36-CA	48
			4669407	TELL-7-LB	59
			4669416	TELL-7-SB	59
			4669432	TELL-7-BA-1/4"	59
			4669440	TELL-7-BA-5/16"	59
			4669458	TELL-7-BA-3/8"	59
			4669466	TELL-7-BA-1/2"	59
			4669475	TELL-7-BA-5/8"	59
			4669483	TELL-7-BA-3/4"	59
			4669491	TELL-7-BA-7/8"	59
			4669513	TELL-7-HANDLE	59
			4669661	ECO-9	12
			4669679	TELL-7-AD	59
			4669997	M4-3-DELUXE-F-R410A-FG-CCL-60	42
			4670406	1997-1	15
			4670406	1997-1	16
			4670414	ALF-032	15
			4670414	ALF-032	16
			4670562	3000-60	15
			4670562	3000-60	16
			4671011	400-15	15
			4671011	400-15	16
			4671526	2070-10	15
			4671526	2070-10	16
			4671526	2070-10	17
			4671801	3000-9-1	16
			4671801	3000-9-1	17
			4672441	3000-72	15
			4672441	3000-72	16
			4673188	FTP-100-4	17
			4674079	2277	15



PartNo.	Designation	Pg	PartNo.	Designation	Pg	PartNo.	Designation	Pg
4674079	2277	16	9880869	P-513/10	47	9881618	T21004	60
4674087	1997-10	15	9880870	P-510/10	51	9881619	T21003	60
4674087	1997-10	16	9880871	P-509-T/10	47	9881620	T21002	60
4674096	3000-73	15	9880872	P-509/10	47	9881622	14338	56
4674096	3000-73	16	9880873	NFT-118	62	9881624	RFA-001	56
4674495	AW-30	15	9880875	NFT5-4	62	9881628	14301	56
4674495	AW-30	16	9880890	A-32000	62	9881629	RFA-312-FB	56
4674681	AA-30	15	9880892	32520-555	62	9881630	RFA-274-FC	56
4674681	AA-30	16	9880893	32520	62	9881631	RFA-206-FB	56
4674681	AA-30	19	9880894	32515	62	9881632	RFA-174-F	56
4674699	AA-50	15	9880934	A-31006	62	9881633	14310	56
4674699	AA-50	16	9880938	A-31004	62	9881634	14300	56
4674699	AA-50	19	9880957	A-40513	51	9881635	BS-77	58
4674711	AW-50	15	9881087	14215	57	9881637	BS-12	58
4674711	AW-50	16	9881229	CPV-72-Y	50	9881638	BS-10	58
4675288	M5-250-F-R410A-FG	25	9881230	CPV-60-Y	50	9881639	BS-8	58
4675296	M5-500-F-R410A-FG	25	9881231	CPV-48-Y	50	9881640	BS-7	58
4675300	R5-220-F-R410A-FG	27	9881232	CPV-36-Y	50	9881641	BS-6	58
4675318	R5-320-F-R410A-FG	27	9881234	CPV-72-B	50	9881642	BS-5	58
4675326	BM4-8-F-R410A-FG	35	9881235	CPV-60-B	50	9881648	BS-4	58
4675335	BM4-6-F-R410A-FG-CCL-60	35	9881236	CPV-48-B	50	9881649	RFA-209	57
4675343	SM2-8-F-R410A-FG	38	9881237	CPV-36-B	50	9881657	RFA-368-FH	59
4675351	SM2-6-F-R410A-FG-CCL-60	38	9881239	CPV-72-R	50	9881665	RFA-364-FH-12	59
4675369	SM2-3-F-R410A-FG-CCL-60	38	9881240	CPV-60-R	50	9881666	RFA-364-FH-10	59
4675377	APEX-7-F-R12	33	9881241	CPV-48-R	50	9881667	RFA-364-FH-08	59
4675386	APEX-7-F-R22	33	9881242	CPV-36-R	50	9881862	DV-150	29
4675394	APEX-7-F-R134a	33	9881250	CL-72-B	46	9882473	19800-SV	28
4675407	APEX-7-F-R410A-FG	33	9881251	CL-60-B	46	9882474	19801	28
4675416	APEX-7-F-R12-CCL-60	33	9881252	CL-48-B	46	9882584	M4-6-10	45
4675424	APEX-7-F-R22-CCL-60	33	9881253	CL-36-B	46	9882627	P-509	47
4675432	APEX-7-F-R134a-CCL-60	33	9881259	CL-72-R	46	9882852	P-509-T	47
4675440	APEX-7-F-R410A-FG-CCL-60	33	9881260	CL-60-R	46	9883750	RFA-209-STYLO	57
4675458	APEX-9-F-R12	33	9881261	CL-48-R	46	9883835	P-513	47
4675466	APEX-9-F-R22	33	9881262	CL-36-R	46	9884169	P-510	51
4675475	APEX-9-F-R134a	33	9881268	CL-72-Y	46	9884365	DT-150	55
4675483	APEX-9-F-R410A-FG	33	9881269	CL-60-Y	46	9884438	BM2-8-F-R12	34
4675491	M2-8-DELUXE-F-R410A-FG	41	9881270	CL-48-Y	46	9884439	BM2-8-F-R134a	34
4675505	M4-8-DELUXE-F-R410A-FG	42	9881271	CL-36-Y	46	9884479	R3-220-F-R12	26
4676110	NFT5-4-K-Green	13	9881275	CCL-72	46	9884480	R3-320-F-R12	26
4676128	NFT5-6-K-Green	13	9881276	CCL-60	46	9884481	R3-220-F-R134a	26
4676471	DIGIMON-9	30	9881277	CCL-48	46	9884482	R3-320-F-R134a	26
4676489	DIGIMON-3	30	9881278	CCL-36	46	9884719	CL-36-Y-J2196	47
4676497	DIGIMON-CASE	30	9881313	HCL6-60-Y	51	9884720	CL-36-R-J2196	47
4677451	M2-GS	23	9881466	RFA-127-C	61	9884721	CL-36-B-J2196	47
4677621	BR-4IN1	57	9881467	RFA-124-C	61	9884722	CL-60-Y-J2196	47
4677647	DIGIMON-EXTERNAL-SENSOR	30	9881526	14210	57	9884723	CL-60-R-J2196	47
4677817	14297-RF	61	9881527	14200	57	9884724	CL-60-B-J2196	47
4677826	M2-7-SET-R	45	9881528	RFA-105-FF	57	9884725	CL-72-Y-J2196	47
4677834	M2-7-SET-B	45	9881530	14285	57	9884726	CL-72-R-J2196	47
4677842	M4-7-SET-R	45	9881557	21751	61	9884727	CL-72-B-J2196	47
4677850	M4-7-SET-B	45	9881559	21702	61	9884728	CCL-36-J2196	47
4677868	M4-7-SET-N	45	9881560	14225	61	9884729	CCL-60-J2196	47
4677876	M4-7-SET-Y	45	9881561	14144	61	9884730	CCL-72-J2196	47
4677990	ECO-3	12	9881562	14142	61	9884813	A-40513/10	51
7218188	M2-250-F-R410A-FG	23	9881571	525-F	58	9884819	19803/5	28
7218358	M2-500-F-R410A-FG	23	9881575	RF-275-FS	58	9884847	V-R-B-001/10	37
7635083	M2-250-F-R22	23	9881608	T21100	60	9884848	V-R-R-002/10	37
7635147	M2-500-F-R22	23	9881609	T21000	60	9884867	19805-12/5	28
7714013	GR-220-F-R12	24	9881610	T21018	60	9884890	BS-44	58
7714064	GR-220-F-R134a	24	9881611	T21014	60	9884931	QC-S410A	34
7714098	GR-320-F-R12	24	9881612	T21012	60	9884948	RC01-R	37
7714102	GR-320-F-R134a	24	9881613	T21010	60	9884949	RC01-B	37
7829168	M2-250-F-R12	23	9881614	T21008	60			
7829567	M2-500-F-R12	23	9881615	T21007	60			
7829982	M2-250-F-R410A	23	9881616	T21006	60			
7830000	M2-500-F-R410A	23	9881617	T21005	60			

## Designation Index

Designation	PartNo.	Pg	Designation	PartNo.	Pg
14142	9881562	61	APEX-6-F-R22-CCL-72	4665453	33
14144	9881561	61	APEX-6-F-R410A-FG-CCL-60	4665479	33
14200	9881527	57	APEX-7-F-R12	4675377	33
14210	9881526	57	APEX-7-F-R12-CCL-60	4675416	33
14210-01/10	4665550	57	APEX-7-F-R134a	4675394	33
14215	9881087	57	APEX-7-F-R134a-CCL-60	4675432	33
14225	9881560	61	APEX-7-F-R22	4675386	33
14285	9881530	57	APEX-7-F-R22-CCL-60	4675424	33
14297-RF	4677817	61	APEX-7-F-R410A-FG	4675407	33
14300	9881634	56	APEX-7-F-R410A-FG-CCL-60	4675440	33
14301	9881628	56	APEX-8-F-R12	4665356	33
14310	9881633	56	APEX-8-F-R134a	4665372	33
14338	9881622	56	APEX-8-F-R22	4665364	33
19800-SV	9882473	28	APEX-8-F-R410A-FG	4665487	33
19801	9882474	28	APEX-9-F-R12	4675458	33
19803/5	9884819	28	APEX-9-F-R134a	4675475	33
19805-12/5	9884867	28	APEX-9-F-R22	4675466	33
1997-1	4670406	15	APEX-9-F-R410A-FG	4675483	33
1997-1	4670406	16	AW-30	4674495	15
1997-10	4674087	15	AW-30	4674495	16
1997-10	4674087	16	AW-50	4674711	15
2070-10	4671526	15	AW-50	4674711	16
2070-10	4671526	16	BM2-3-F-Auto-Set-R134a-RC	4506601	37
2070-10	4671526	17	BM2-3-F-R22	4506562	34
21702	9881559	61	BM2-3-F-R410A	4505239	34
21751	9881557	61	BM2-3-F-R410A-CCL-60	4505433	34
2277	4674079	15	BM2-3-F-R410A-CCL-72	4506597	34
2277	4674079	16	BM2-3-F-R410A-CCL-72	4506502	34
3000-60	4670562	15	BM2-6-F-R22	4506520	34
3000-60	4670562	16	BM2-6-F-R22-CCL-72	4506554	34
3000-72	4672441	15	BM2-6-F-R410A	4503261	34
3000-72	4672441	16	BM2-6-F-R410A-CCL-60	4505710	34
3000-73	4674096	15	BM2-6-F-R410A-CCL-72	4506589	34
3000-73	4674096	16	BM2-6-F-R410A-FG-CA-CCL-60	4665305	34
3000-9-1	4671801	16	BM2-6-F-R410A-FG-CCL-60	4662526	34
3000-9-1	4671801	17	BM2-8-F-R12	9884438	34
32515	9880894	62	BM2-8-F-R134a	9884439	34
32520	9880893	62	BM2-8-F-R22	4506490	34
32520-555	9880892	62	BM2-8-F-R410A	4506571	34
400-15	4671011	15	BM2-8-F-R410A-FG	4662535	34
400-15	4671011	16	BM4-6-F-R12	4506627	35
525-F	9881571	58	BM4-6-F-R22	4506643	35
A-31004	9880938	62	BM4-6-F-R410A-FG-CCL-60	4675335	35
A-31006	9880934	62	BM4-8-F-R12	4505271	35
A-31452-Y	4665118	45	BM4-8-F-R22	4506619	35
A-32000	9880890	62	BM4-8-F-R410A-FG	4675326	35
A-40513	9880957	51	BR-4IN1	4677621	57
A-40513/10	9884813	51	BS-10	9881638	58
AA-30	4674681	15	BS-12	9881637	58
AA-30	4674681	16	BS-4	9881648	58
AA-30	4674681	19	BS-44	9884890	58
AA-50	4674699	15	BS-5	9881642	58
AA-50	4674699	16	BS-6	9881641	58
AA-50	4674699	19	BS-7	9881640	58
ALF-032	4670414	15	BS-77	9881635	58
ALF-032	4670414	16	BS-8	9881639	58
APEX-6-F-R12	4665380	33	CA-1/4"SAE-B	4493525	49
APEX-6-F-R12-CCL-60	4665410	33	CA-1/4"SAE-R	4493533	49
APEX-6-F-R12-CCL-72	4665445	33	CA-1/4"SAE-Y	4493738	49
APEX-6-F-R134a	4665402	33	CA-CCL-36	4493614	48
APEX-6-F-R134a-CCL-60	4665436	33	CA-CCL-60	4493622	48
APEX-6-F-R134a-CCL-72	4665461	33	CA-CCL-72	4493631	48
APEX-6-F-R22	4665398	33	CA-CL-36-Y	4492936	49
APEX-6-F-R22-CCL-60	4665428	33	CA-CL-60-B	4492944	49
			CA-CL-60-R	4492952	49
			CA-CL-60-Y	4492961	49
			CA-CL-72-B	4492979	49
			CA-CL-72-R	4492987	49
			CA-CL-72-Y	4492995	49
			CCL-36	9881278	46
			CCL-36-CA	4668559	48
			CCL-36-J2196	9884728	47
			CCL-48	9881277	46
			CCL-60	9881276	46
			CCL-60-CA	4668533	48
			CCL-60-J2196	9884729	47
			CCL-72	9881275	46
			CCL-72-J2196	9884730	47
			CL-36-B	9881253	46
			CL-36-B-J2196	9884721	47
			CL-36-R	9881262	46
			CL-36-R-J2196	9884720	47
			CL-36-Y	9881271	46
			CL-36-Y-J2196	9884719	47
			CL-48-B	9881252	46
			CL-48-R	9881261	46
			CL-48-Y	9881270	46
			CL-60-B	9881251	46
			CL-60-B-J2196	9884724	47
			CL-60-R	9881260	46
			CL-60-R-J2196	9884723	47
			CL-60-Y	9881269	46
			CL-60-Y-J2196	9884722	47
			CL-72-B	9881250	46
			CL-72-B-J2196	9884727	47
			CL-72-R	9881259	46
			CL-72-R-J2196	9884726	47
			CL-72-Y	9881268	46
			CL-72-Y-J2196	9884725	47
			CPV-36-B	9881237	50
			CPV-36-R	9881242	50
			CPV-36-Y	9881232	50
			CPV-48-B	9881236	50
			CPV-48-R	9881241	50
			CPV-48-Y	9881231	50
			CPV-60-B	9881235	50
			CPV-60-R	9881240	50
			CPV-60-Y	9881230	50
			CPV-72-B	9881234	50
			CPV-72-R	9881239	50
			CPV-72-Y	9881229	50
			CPV-CCL-36	4495412	50
			CPV-CCL-48	4662551	50
			CPV-CCL-60	4495421	50
			CPV-CCL-72	4495439	50
			CYCLEPAK	4663256	17
			DIGIMON-3	4676489	30
			DIGIMON-9	4676471	30
			DIGIMON-CASE	4676497	30
			DIGIMON-EXTERNAL-SENSOR	4677647	30
			DT-150	9884365	55
			DV-150	9881862	29
			DV-44	4495340	13
			DV-45	4495358	13
			DV-46	4495366	13
			ECO-3	4677990	12
			ECO-3/5/9-1	4667757	13
			ECO-3/5/9-2	4667766	13
			ECO-3/5/9-3	4667774	13
			ECO-3/5/9-4	4667782	13
			ECO-3/5/9-5	4667790	13
			ECO-3/5/9-8	4667820	13

Designation	PartNo.	Pg	Designation	PartNo.	Pg	Designation	PartNo.	Pg
ECO-5	4667685	12	M4-7-SET-N	4677868	45	RL-2-2A	4661482	11
ECO-9	4669661	12	M4-7-SET-R	4677842	45	RL-2-3000	4661589	11
ES-02	4507577	52	M4-7-SET-Y	4677876	45	RL-2-3011	4661597	11
ES-C	4660672	53	M4-8-DELUXE-F-R12	4506783	42	RL-2-4000	4661538	11
FTP-100-4	4673188	17	M4-8-DELUXE-F-R410A-FG	4675505	42	RL-2-406	4661040	11
GM2-6-F-R12-CCL-60	4507100	36	M5-250-F-R410A-FG	4675288	25	RL-2-64	4668028	11
GM2-6-F-R134a-CCL-60	4507118	36	M5-500-F-R410A-FG	4675296	25	RL-4	4661759	10
GM2-8-F-R12	4507061	36	MK-2-3-F-R12	4506848	43	RL-4/8-310	4496761	11
GM2-8-F-R134a	4507071	36	MK-2-3-F-R134a	4506856	43	RL-4/8-65	4668053	11
GR-220-F-R12	7714013	24	NFT-118	9880873	62	RL-4-2A	4661954	11
GR-220-F-R134a	7714064	24	NFT5-4	9880875	62	RL-4-3000	4507674	11
GR-320-F-R12	7714098	24	NFT5-4-K-Green	4676110	13	RL-4-3011	4507682	11
GR-320-F-R134a	7714102	24	NFT5-6-K-Green	4676128	13	RL-4-4000	4661474	11
HCL6-60-Y	9881313	51	OZ-4000	4663247	16	RL-4-406	4505051	11
JUMBO-STAR-2-3-F-R12	4668109	44	P-509	9882627	47	RL-4-415	4496770	11
JUMBO-STAR-2-3-F-R134a	4668117	44	P-509/10	9880872	47	RL-4-64	4668036	11
KKS-38	4667413	61	P-509-T	9882852	47	RL-8	4507356	10
KM2-001	4503350	22	P-509-T/10	9880871	47	RL-8-2A	4507658	11
KM2-250-F-R12	4530152	22	P-510	9884169	51	RL-8-3000	4507607	11
KM2-250-F-R134a	4530179	22	P-510/10	9880870	51	RL-8-3011	4507615	11
KM2-250-F-R22	4505417	22	P-513	9883835	47	RL-8-303	4507445	11
KM2-500-F-R12	4530161	22	P-513/10	9880869	47	RL-8-3060	4507623	11
KM2-500-F-R134a	4530187	22	PLUS-12	4508221	19	RL-8-4000	4507640	11
KM2-500-F-R22	4505425	22	PLUS-12-6-09-B	4662429	19	RL-8-4071	4507631	11
LP-79	4505922	55	PLUS-12-6-09-G	4662437	19	RL-8-426	4508203	11
M2-001	1212648	23	PLUS-12-6-09-R	4662411	19	RL-8-64	4668045	11
M2-10-95	4662594	45	PLUS-12-KM-BP	4662454	19	SM2-3-F-R410A-FG-CCL-60	4675369	38
M2-10-95/10	4662607	45	PLUS-12-KM-HP	4662446	19	SM2-6-F-R410A-FG-CCL-60	4675351	38
M2-250-F-R12	7829168	23	POWERMAX	4663239	15	SM2-8-F-R410A-FG	4675343	38
M2-250-F-R22	7635083	23	QC-S410A	9884931	34	STARTEK	4507917	52
M2-250-F-R410A	7829982	23	R3-220-F-R12	9884479	26	STARTEK-C	4660664	53
M2-250-F-R410A-FG	7218188	23	R3-220-F-R134a	9884481	26	STARTEK-CASE	4664333	52
M2-3-DELUXE-F-R12-CCL-60	4505809	41	R3-220-F-R22	4667472	26	STARTEK-C-CASE	4665593	53
M2-3-DELUXE-F-R22-CCL-60	4667510	41	R3-220-F-R410A-FG	4662399	26	SVOM-18	4660507	62
M2-3-DELUXE-F-R134a-CCL-60	4506759	41	R3-320-F-R12	9884480	26	T21000	9881609	60
M2-3-DELUXE-F-R410A-			R3-320-F-R134a	9884482	26	T21002	9881620	60
FG-CA-CCL-60	4663727	41	R3-320-F-R22	4667480	26	T21003	9881619	60
M2-3-DELUXE-F-R410A-			R3-320-F-R410A-FG	4662403	26	T21004	9881618	60
FG-CCL-60	4662543	41	R5-220-F-R12	4493916	27	T21005	9881617	60
M2-500-F-R12	7829567	23	R5-220-F-R410A-FG	4675300	27	T21006	9881616	60
M2-500-F-R22	7635147	23	R5-320-F-R12	4493924	27	T21007	9881615	60
M2-500-F-R410A	7830000	23	R5-320-F-R410A-FG	4675318	27	T21008	9881614	60
M2-500-F-R410A-FG	7218358	23	RC01-B	9884949	37	T21010	9881613	60
M2-6-09-B	4490950	45	RC01-R	9884948	37	T21012	9881612	60
M2-6-09-R	4490968	45	REF-METER	4665657	54	T21014	9881611	60
M2-7-SET-B	4677834	45	RF-175-FS	4506198	58	T21018	9881610	60
M2-7-SET-R	4677826	45	RF-275-FS	9881575	58	T21100	9881608	60
M2-8-DELUXE-F-R12	4505817	41	RF-888-Z	4506171	58	TELL-7	4666076	59
M2-8-DELUXE-F-R22	4667498	41	RFA-001	9881624	56	TELL-7-AD	4669679	59
M2-8-DELUXE-F-R410A-FG	4675491	41	RFA-105-FF	9881528	57	TELL-7-BA-1/2"	4669466	59
M2-GS	4677451	23	RFA-124-C	9881467	61	TELL-7-BA-1/4"	4669432	59
M4-3-DELUXE-F-R12-CCL-60	4505477	42	RFA-127-C	9881466	61	TELL-7-BA-3/4"	4669483	59
M4-3-DELUXE-F-R410A-			RFA-127-OFFSET	4506201	61	TELL-7-BA-3/8"	4669458	59
FG-CCL-60	4669997	42	RFA-174-F	9881632	56	TELL-7-BA-5/16"	4669440	59
M4-6-04	4662616	45	RFA-206-FB	9881631	56	TELL-7-BA-5/8"	4669475	59
M4-6-04/10	4662624	45	RFA-209	9881649	57	TELL-7-BA-7/8"	4669491	59
M4-6-04-JUMBO	4666726	45	RFA-209-STYLO	9883750	57	TELL-7-HANDLE	4669513	59
M4-6-09-B	4490976	45	RFA-274-FC	9881630	56	TELL-7-LB	4669407	59
M4-6-09-N	4490984	45	RFA-312-FB	9881629	56	TELL-7-SB	4669416	59
M4-6-09-R	4490992	45	RFA-364-FH-08	9881667	59	VG-64	4503171	29
M4-6-09-Y	4491000	45	RFA-364-FH-10	9881666	59	V-R-B-001/10	9884847	37
M4-6-10	9882584	45	RFA-364-FH-12	9881665	59	V-R-R-002/10	9884848	37
M4-6-11	4491018	45	RFA-368-FH	9881657	59			
M4-6-11-T	4493169	45	RL-2	4661601	10			
M4-6-15	4666106	45	RL-2/4-303	4495471	11			
M4-7-SET-B	4677850	45	RL-2/4-3060	4661423	11			

**HVAC/R  
Service Products**



07/2008 - Catalog ED24 - 4679020

World Headquarters:  
**REFCO Manufacturing Ltd.**  
Industriestrasse 11  
CH-6285 Hitzkirch (Switzerland)  
Phone: 011 41 41 919 72 82  
Fax: 011 41 41 919 72 83  
info@refco.ch  
www.refco.ch

North American Headquarters:  
**REFCO Manufacturing (US) Inc.**  
66 B Industry Avenue  
Springfield MA 01104  
Phone: 413 739 4761  
Fax: 413 733 9267  
sales@refcoswiss.com  
www.refcoswiss.com

**24/7 customers service:**  
1 800 848 4232