

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





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Highlights



DIGIMON



POWERMAX



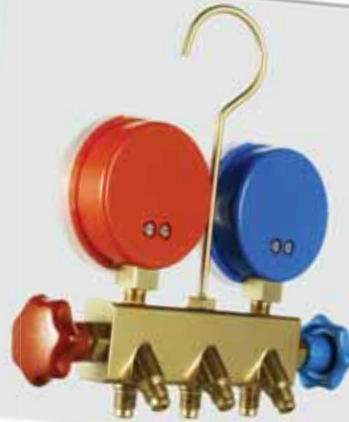
REF-METER



ECO-9



APEX-8



APEX-8



SM2-8



TELL-7



M5-500/250









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-2 135 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)



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

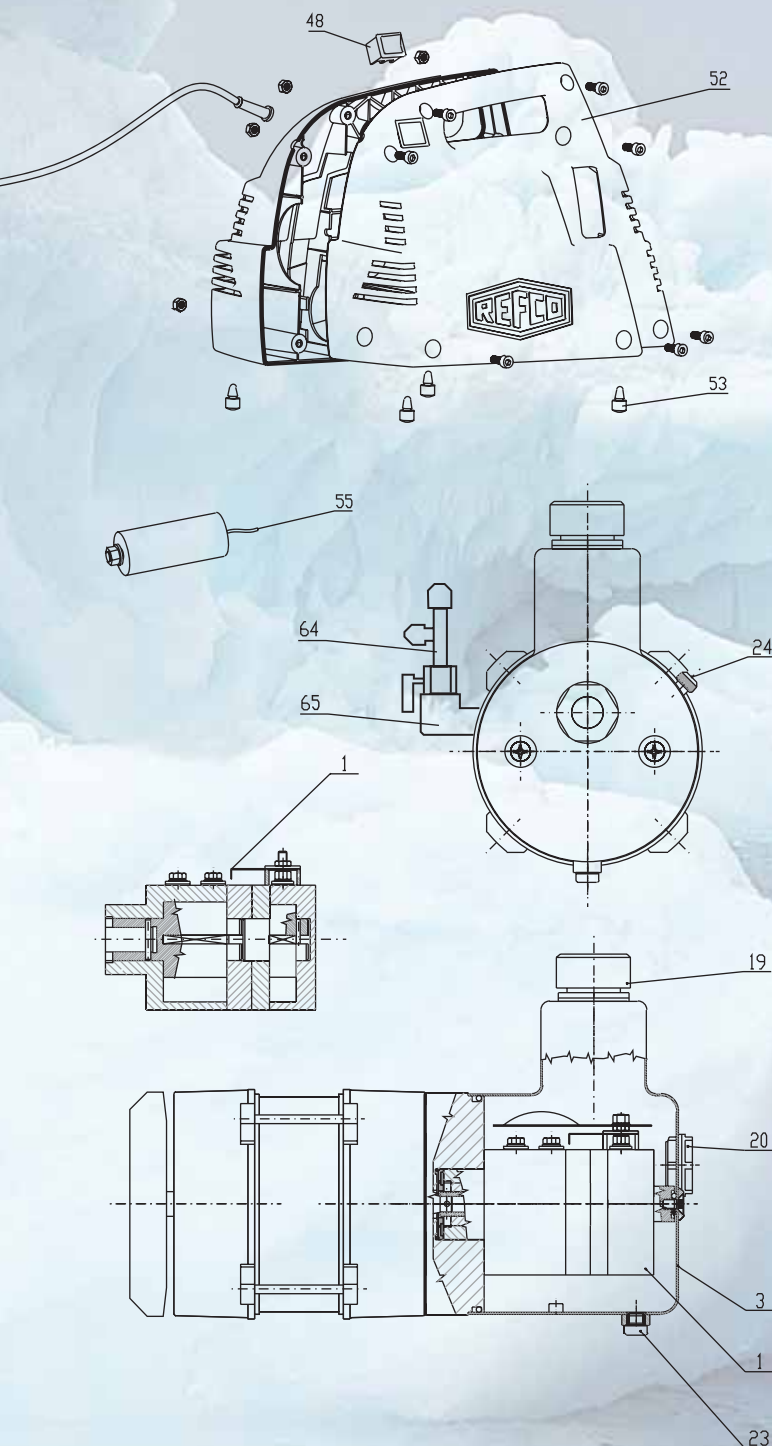
Pos.	Designation	Description	Part No.
3	RL-2-3000	Oil basin complete with gasket	4661589
20	RL-2-3011	Oil sight glass with gasket + counter nut	4661597
19	RL-2/4-303	Oil mist filter with gasket	4495471
24	RL-2/4-3060	Gas ballast valve complete	4661423
53	RL-8-4071	Rubber pad set (4 pieces)	4507631
55	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



ECO Series Vacuum Pumps

- Three different sizes available
- Designed specifically for HVAC/R Service
- Two stage rotary vane pump design
- Compact design with aluminum housing and easy to grip carrying handle
- Very quiet operation
- High pumping capacity reduces evacuation time
- Carrying handle stays cool to the touch
- Easy to start
- Both 1/4" and 3/8" SAE flare inlet connections allow for flexibility of connections (ECO-5 and ECO-9)
- Vacuum pump oil included
- Value priced but still manufactured to the highest quality and performance specifications



ECO-5

Technical Data	ECO-3	ECO-5	ECO-9
Free air displacement:	3.0 cfm	5.0 cfm	9.0 cfm
Number of stages:	2	2	2
Microns:	25	25	25
Intake threads:	1/4" SAE Flare	1/4" and 3/8" SAE Flare	1/4" and 3/8" SAE Flare
Motor:	1/3 horsepower	1/2 horsepower	1 horsepower
Voltage:	115 Volt, 60 Hz	115 Volt, 60 Hz	115 Volt, 60 Hz
Power cord length:	78"	78"	78"
Oil capacity:	8 oz / 0.5 pt.	9.5 oz / 0.6 pt.	20 oz / 1.25 pt.
Dimensions:	13 x 5 x 9 inch	14 x 5 x 10 inch	16 x 6 x 11 inch
Weight:	19 lbs	28 lbs	37 lbs
Part No.	4677990	4667685	4669661

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.

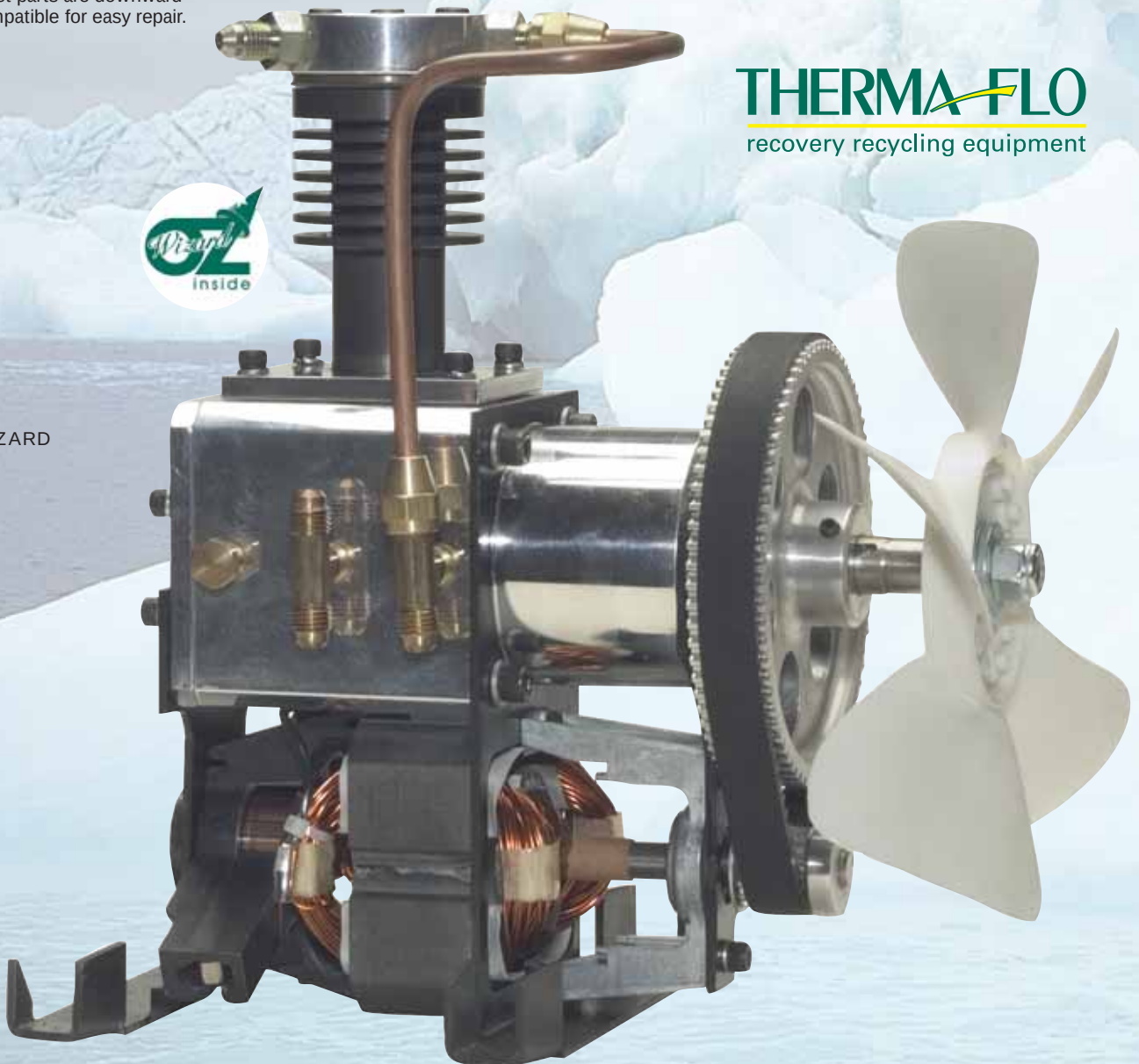
The Wizard introduces the liquid refrigerant into the crankcase before it flows to the valve plate and head assembly which gives the compressor maximum start-up torque and longer life. The Wizard compressor is available in the POWERMAX and OZ-4000 refrigerant recovery systems.

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

OZ-4000 Refrigerant Recovery Machine

The machine that sets the HVAC/R Industry Standard

Due to the patented solenoid system design and a simple 4 hose hook up, the OZ-4000 can go from the push pull method (17 lbs/minute) to 1/2 lbs/minute in vapor recovery with no hose changes and without shutting off the unit.

Features

- 1 horsepower oil-less Wizard compressor inside
- Fully automatic
- Patented automatic subcool feature
- Lightweight 29 lbs
- Signal lights to indicate liquid to vapor recovery modes and high pressure shut-off
- Safety shut-off to prevent tank overfill
- Over-sized condenser
- Re-settable circuit breaker
- Self-evacuation feature
- Shipped with safety cable and 3 - 72" hoses
- Self-discriminates between liquid and vapor, routing the liquid around the compressor for longer life and maximum capacity
- 2 year warranty
- UL certified to ARI 740
- Over 150'000 units sold since 1992

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

THERMA-FLO
recovery recycling equipment



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

OZ-4000

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 G

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



M2-500

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



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



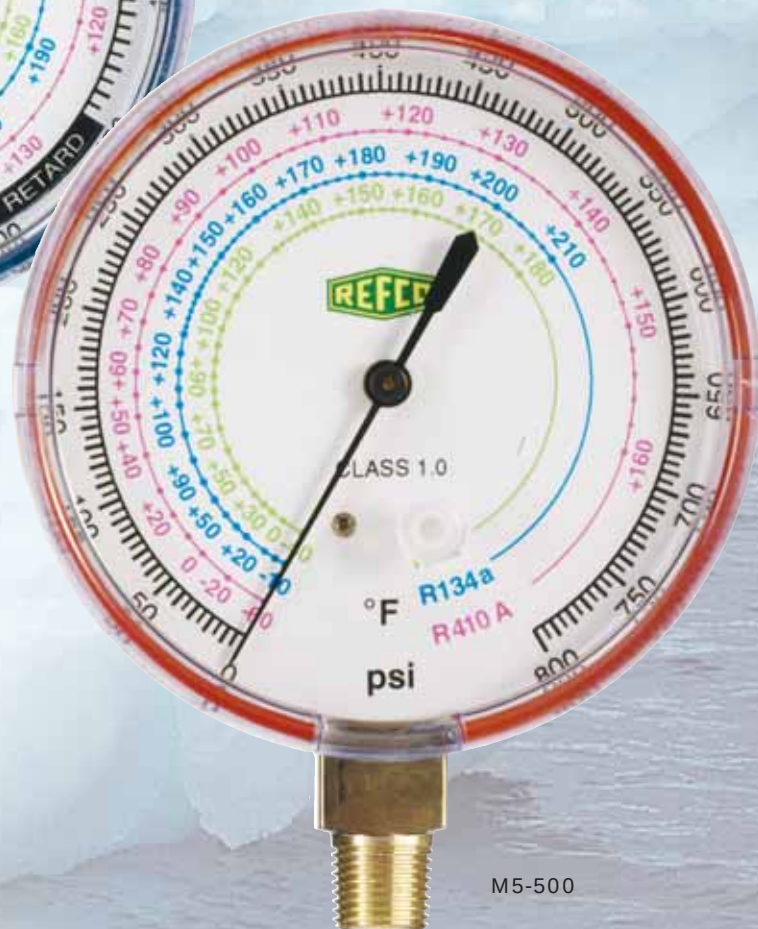
M5 Series Large Bourdon Tube Gauges

- 3 1/4" (80 mm) outside diameter, easy to read
- Bourdon tube, Class 1.0 accuracy
- Retard protection
- Zero point adjustable
- Metal housing
- Pulse free

Designation	Description	Part No.
M5-250-F-R410A-FG	R410A/R134a/R22 scales, compound	4675288
M5-500-F-R410A-FG	R410A/R134a/R22 scales, pressure	4675296



M5-250



M5-500



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

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



R3-320



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

Vacuum Gauges

Mechanical Vacuum Gauges

19800-SV

- Full range Mechanical Vacuum gauge
- Complete with replaceable safety relief device if positive pressure is introduced into gauge
- 3 1/4" outside diameter for easy to read, more accurate reading than a compound gauge
- 1/8" NPT bottom connection
- Zero point adjustable
- Scales in 1000 - 0 mbar and 30" - 0 Hg

Designation	Description	Part No.
19800-SV	Mechanical Vacuum gauge with replaceable safety relief device	9882473



19800-SV

19801

- Full range Mechanical Vacuum gauge with pointer that indicates maximum vacuum reading attained during a given operation
- Readjustable after each use by a thumbscrew
- Complete with replaceable safety relief device if positive pressure is introduced into gauge
- 4" outside diameter for easy reading, more accurate reading than a compound gauge
- 1/2" G bottom connection
- Scale in 1000 - 0 mbar
- Zero point adjustable

Designation	Description	Part No.
19801	Mechanical Vacuum gauge with maximum pressure indicator pointer and replaceable safety relief device	9882474



19801

Spare Parts for Mechanical Vacuum Gauges



19803



19805-12

Designation	Description	Part No.
19803/5	Adapter 1/2" G female x 1/4" SAE, with integrated gasket, packaged 5 per	9884819
19805-12/5	Replaceable safety valve for 19800-SV and 19801, packaged 5 per	9884867

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 10
- 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
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NEW

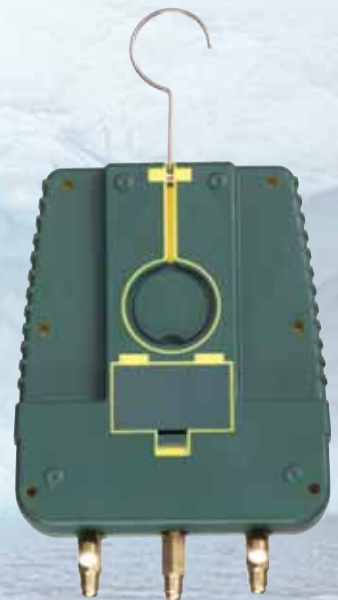


DIGIMON-3





DIGIMON



Technical Data

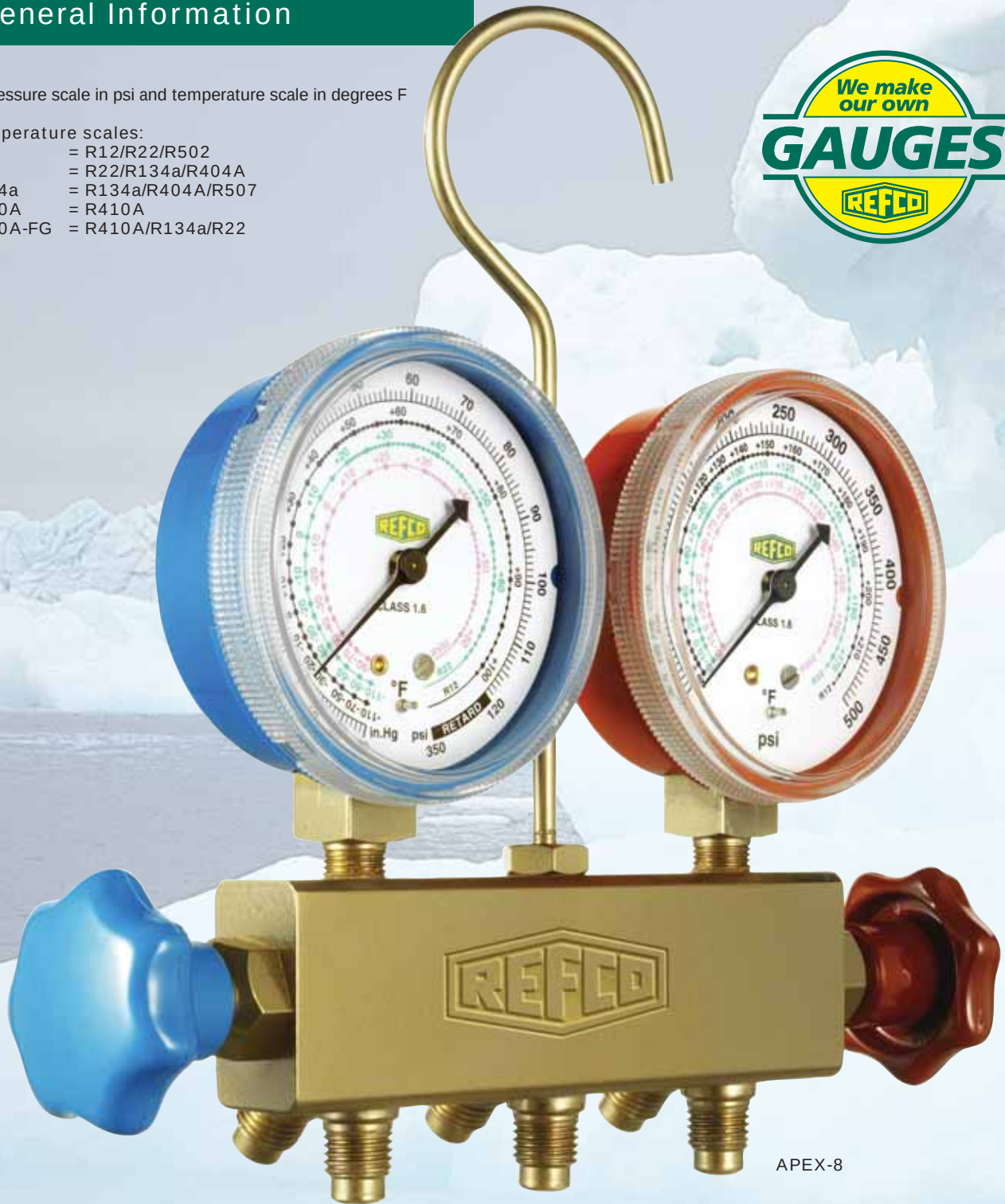
Accuracy:	≤1%
Pressure reading:	psi / bar / kPa / MPa
Temperature reading:	°F / °C
Vacuum measurement:	MICRONS / mbar
Operating temperature:	-4°F to +122°F -20°C to +50°C
Power supply:	9V Battery

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 16 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



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	4665305
	w/ball valve		

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

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





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 16 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

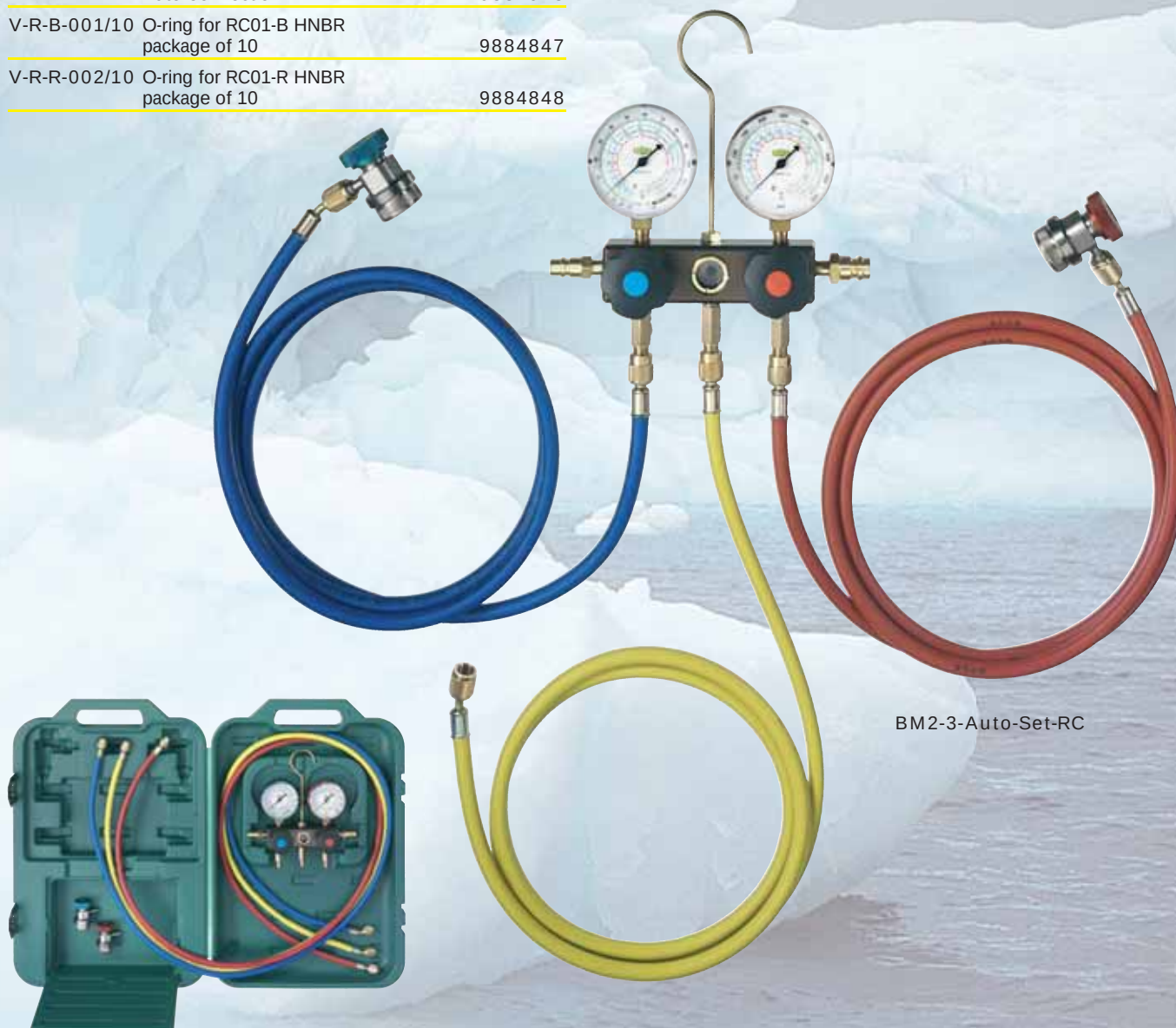
Automotive Manifold Set

- 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



BM2-3-Auto-Set-RC

BM2-3-Auto-Set

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





SM2-8

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



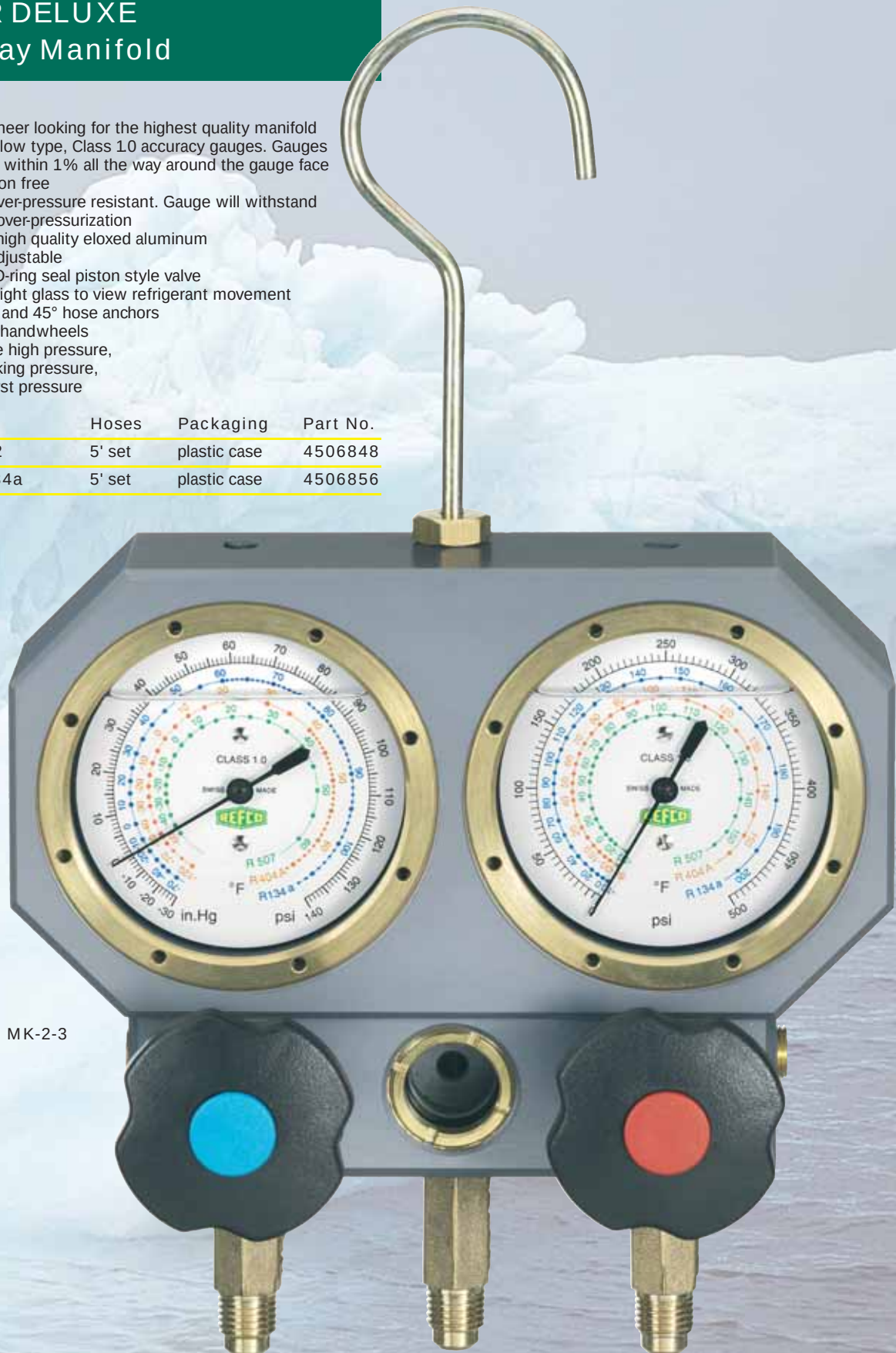
M4-8-DELUXE

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



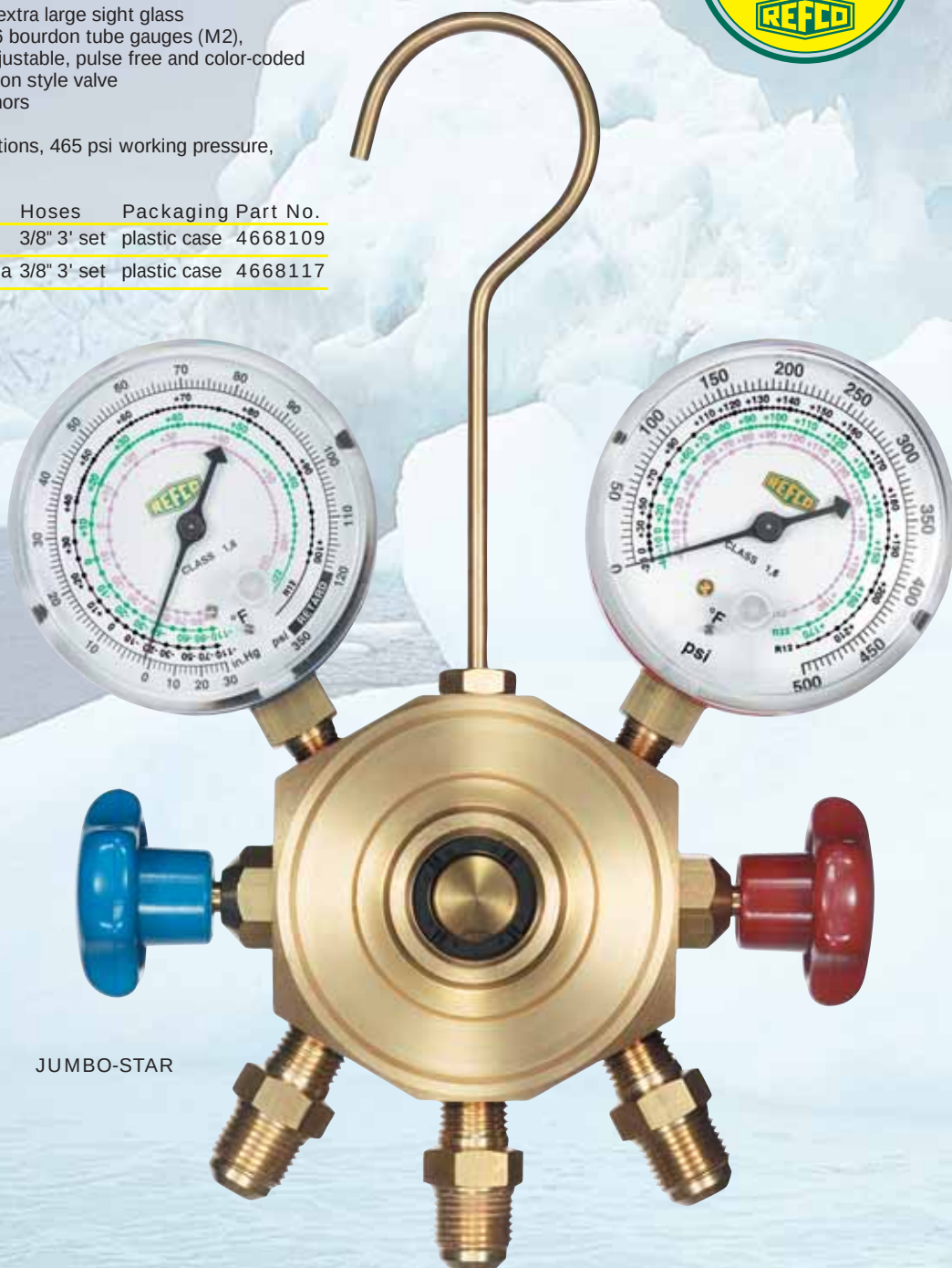
MK-2-3

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



M2-6-09



M2-7-SET



M4-6-10



M4-6-11



M4-6-11T



M4-6-15

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

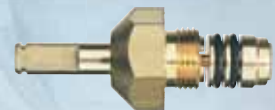
Designation	Description	Part No.
M4-6-15	Carrying case with storage compartment for 2- and 4-way REFCO manifolds made of sturdy plastic	4666106



M4-6-09



M4-7-SET



M2-10-95



M4-6-04



A-31452-Y

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

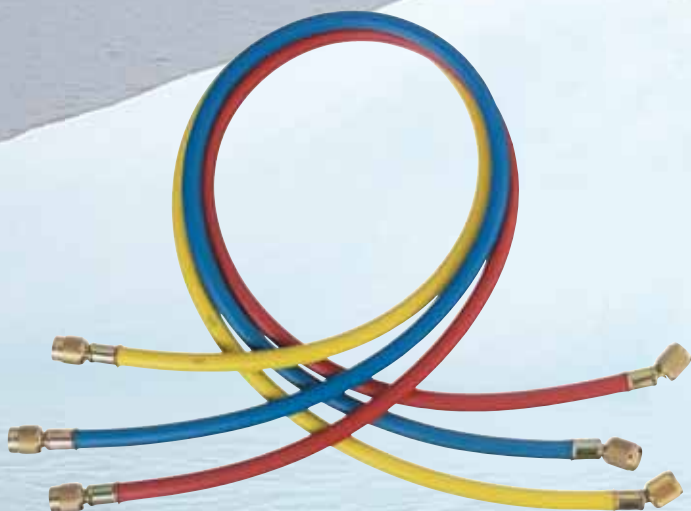


CL-36-Y

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

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





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



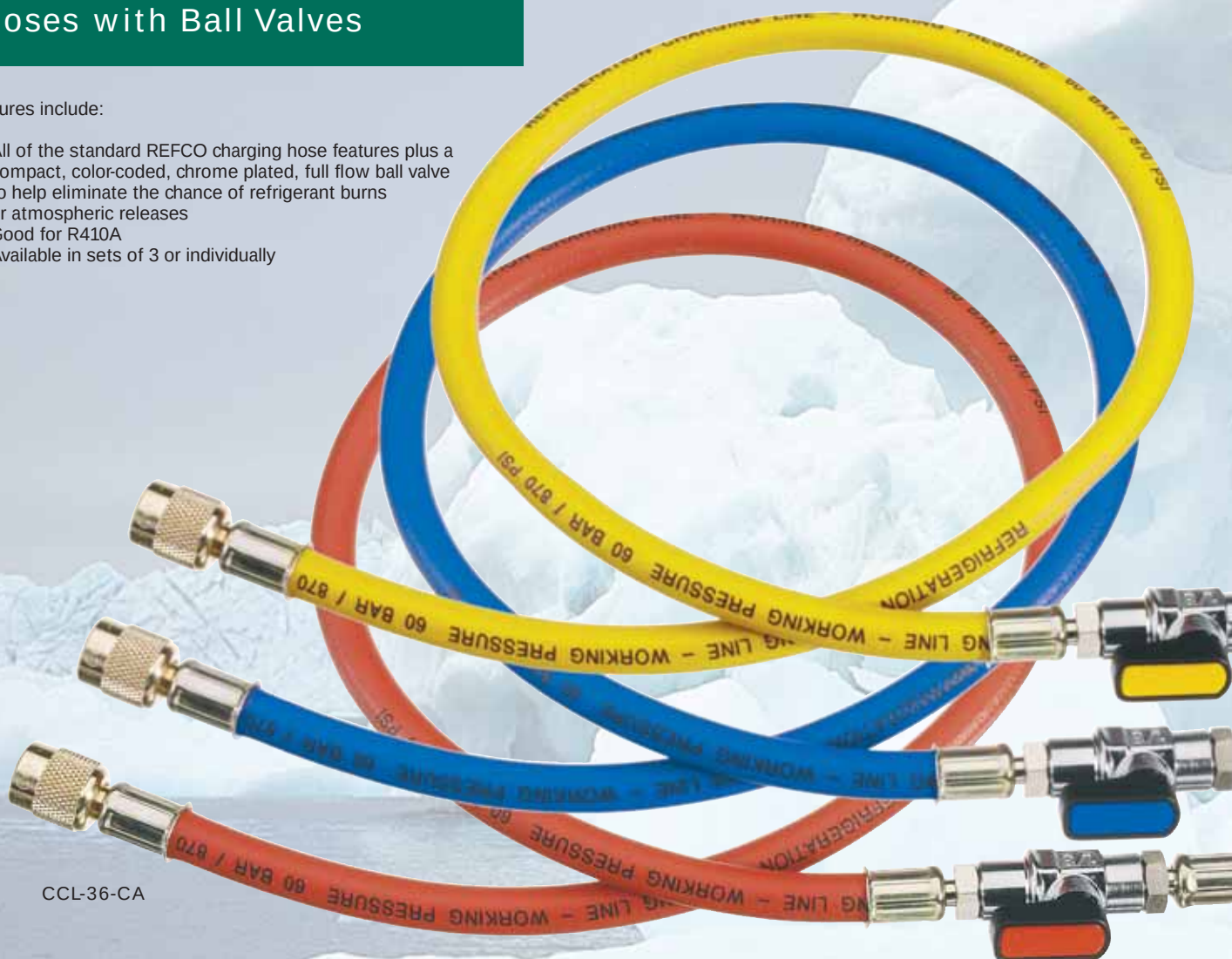
Spare Parts for REFCO 1/4" SAE Charging Hoses

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

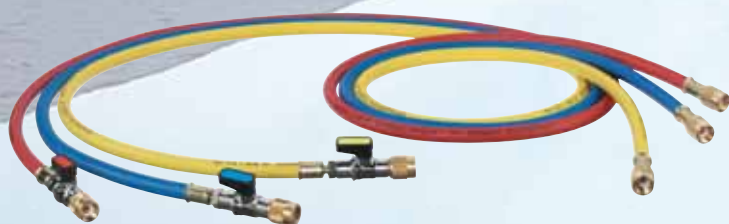
REFCO Premium Charging Hoses with Ball Valves

Features include:

- All of the standard REFCO charging hose features plus a compact, color-coded, chrome plated, full flow ball valve to help eliminate the chance of refrigerant burns or atmospheric releases
- Good for R410A
- Available in sets of 3 or individually



CCL-36-CA



CA-CCL-36

Sets of 3

Premium REFCO charging hose with ball valve

Designation	Description	Part No.
CA-CCL-36	Set of 3 - 36" w/ball valve	4493614
CA-CCL-60	Set of 3 - 60" w/ball valve	4493622
CA-CCL-72	Set of 3 - 72" w/ball valve	4493631

Premium REFCO charging hose with ball valve and flexible length of hose between ball valve and fitting. 1/4" SAE on both ends.

Designation	Description	Part No.
CCL-36-CA	Set of 3 - 36" w/CA valve	4668559
CCL-60-CA	Set of 3 - 60" w/CA valve	4668533



Individual Charging Hoses

Premium REFCO charging hoses with ball valve

Designation	Description	Part No.
CA-CL-36-Y	36" Yellow hose w/ball valve	4492936
CA-CL-60-Y	60" Yellow hose w/ball valve	4492961
CA-CL-60-R	60" Red hose w/ball valve	4492952
CA-CL-60-B	60" Blue hose w/ball valve	4492944
CA-CL-72-Y	72" Yellow hose w/ball valve	4492995
CA-CL-72-R	72" Red hose w/ball valve	4492987
CA-CL-72-B	72" Blue hose w/ball valve	4492979



CA-CL-36-Y



REFCO Ball Valves

Ball Valve with 1/4" SAE male and female fittings, core depressor and knurled nut

Designation	Description	Part No.
CA-1/4"SAE-Y	Yellow ball valve with male & female 1/4" fittings	4493738
CA-1/4"SAE-R	Red ball valve with male & female 1/4" fittings	4493533
CA-1/4"SAE-B	Blue ball valve with male & female 1/4" fittings	4493525

CA-1/4"SAE-Y



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



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

A/C and Refrigeration S

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

Designation	Description	Part No.
14300	1/8" to 5/8" O.D.	9881634
14310	1/8" to 7/8" O.D.	9881633
14301	Spare cutting wheel for 14300 & 14310	9881628
RFA-174-F	3/8" to 1 1/8" O.D.	9881632
RFA-206-FB	3/8" to 2 3/8" O.D.	9881631
RFA-274-FC	1/8" to 1 1/8" O.D. w/spare cutting wheel	9881630
RFA-312-FB	1/4" to 1 5/8" O.D. w/spare cutting wheel	9881629
RFA-001	Hardened replacement cutting wheel for RFA-174-F, RFA-206-FB, RFA-274-FC and RFA-312-FB	9881624
14338	REFCO roller for tubing construction. Useful for brazed or sweat type connections	9881622



RFA-312-FB



14300

RFA-174-F

14310



RFA-274-FC



14338

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



14285



RFA-105-FF



14200



14215

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



RFA-209-STYLO



BR-4IN1



NEW

525-F



45 Degree Flaring Tools

Designation	Description	Part No.
525-F	Flaring and burnishing in one tool. Sizes from 3/16" to 5/8" O.D.	9881571
RF-888-Z	45° Eccentric flaring tool in inch-sizes. Made of forged high quality steel for tubes with an outside-diameter of: 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", 3/4". Supplied in a sturdy plastic case	4506171
RF-275-FS	Flaring and swaging tool for tubes with an outside-diameter of: 3/16", 1/4", 5/16", 3/8", 1/2", 5/8". Supplied in a plastic case	9881575
RF-175-FS	45° Flaring and swaging tool in inch- sizes. Made of forged high quality steel for tubes with an outside-diameter of: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4". Supplied in a sturdy plastic case	4506198



RF-888-Z



RF-275-FS



RF-175-FS

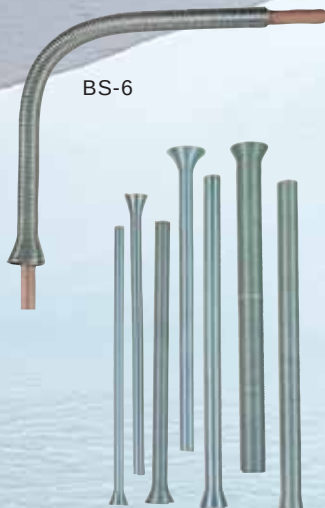


RFA-364-FH

Tube Bending Springs

Designation	Description (Outside diameter of tube)	Part No.
BS-4	1/4"	9881648
BS-5	5/16"	9881642
BS-6	3/8"	9881641
BS-7	7/16"	9881640
BS-8	1/2"	9881639
BS-10	5/8"	9881638
BS-12	3/4"	9881637
BS-44	Set of 4 sizes (BS-4,6,8,10) Packed in a plastic bag	9884890
BS-77	Set of all 7 sizes Packed in a plastic bag	9881635

BS-6



BS-77

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

Designation	Description	Part No.
TELL-7	Cross-Bow type tube bender set for easy, ergonomic handling. For following outside diameters: 1/4", 5/16", 3/8", 1/2", 5/8", 3/4", 7/8". Supplied with tube cutter in a sturdy plastic case.	4666076
TELL-7-BA-1/4"	Bending adapter 1/4"	4669432
TELL-7-BA-5/16"	Bending adapter 5/16"	4669440
TELL-7-BA-3/8"	Bending adapter 3/8"	4669458
TELL-7-BA-1/2"	Bending adapter 1/2"	4669466
TELL-7-BA-5/8"	Bending adapter 5/8"	4669475
TELL-7-BA-3/4"	Bending adapter 3/4"	4669483
TELL-7-BA-7/8"	Bending adapter 7/8"	4669491
TELL-7-SB	Short bar	4669416
TELL-7-LB	Long bar	4669407
TELL-7-HANDLE	Handle complete	4669513
TELL-7-AD	Reverse bend adapter	4669679



TELL-7



TELL-7



TELL-7-AD

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



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



KKS-38

KKS-38



RFA-124-C



RFA-127-OFFSET



RFA-127-C



14142

14144

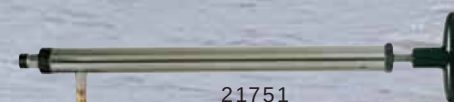
Designation	Description	Part No.
14142	Fin comb, 6 in 1 with sizes marked on the comb. Comes with additional spare head in bag	9881562
14144	Fin comb for cleaning and straightening fins quickly and easily. Adjustable tension	9881561
14225	Circular pocket mirror, telescopic 1 1/2" diameter	9881560
21702	REFCO charging oil pump. Pumps one quart of oil in 20 strokes	9881559
21751	Change oil pump	9881557



14225



21702



21751

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



NFT5-4



NFT-118



A-31004



Part No. Index

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4490968 M2-6-09-R	45	4507061 GM2-8-F-R12	36
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4490984 M4-6-09-N	45	4507100 GM2-6-F-R12-CCL-60	36
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4492936 CA-CL-36-Y	49	4507577 ES-02	52
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4492952 CA-CL-60-R	49	4507615 RL-8-3011	11
4492961 CA-CL-60-Y	49	4507623 RL-8-3060	11
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4492987 CA-CL-72-R	49	4507640 RL-8-4000	11
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M2-3-DELUXE-F-R410A-FG-CCL-60	4662543	41	R3-320-F-R22	4667480	26	T21003	9881619	60
M2-500-F-R12	7829567	23	R3-320-F-R410A-FG	4662403	26	T21004	9881618	60
M2-500-F-R22	7635147	23	R5-220-F-R12	4493916	27	T21005	9881617	60
M2-500-F-R410A	7830000	23	R5-220-F-R410A-FG	4675300	27	T21006	9881616	60
M2-500-F-R410A-FG	7218358	23	R5-320-F-R12	4493924	27	T21007	9881615	60
M2-6-09-B	4490950	45	R5-320-F-R410A-FG	4675318	27	T21008	9881614	60
M2-6-09-R	4490968	45	RC01-B	9884949	37	T21010	9881613	60
M2-7-SET-B	4677834	45	RC01-R	9884948	37	T21012	9881612	60
M2-7-SET-R	4677826	45	REF-METER	4665657	54	T21014	9881611	60
M2-8-DELUXE-F-R12	4505817	41	RF-175-FS	4506198	58	T21018	9881610	60
M2-8-DELUXE-F-R22	4667498	41	RF-275-FS	9881575	58	T21100	9881608	60
M2-8-DELUXE-F-R410A-FG	4675491	41	RF-888-Z	4506171	58	TELL-7	4666076	59
M2-GS	4677451	23	RFA-001	9881624	56	TELL-7-AD	4669679	59
M4-3-DELUXE-F-R12-CCL-60	4505477	42	RFA-105-FF	9881528	57	TELL-7-BA-1/2"	4669466	59
M4-3-DELUXE-F-R410A-FG-CCL-60	4669997	42	RFA-124-C	9881467	61	TELL-7-BA-1/4"	4669432	59
M4-6-04	4662616	45	RFA-127-C	9881466	61	TELL-7-BA-3/4"	4669483	59
M4-6-04/10	4662624	45	RFA-127-OFFSET	4506201	61	TELL-7-BA-3/8"	4669458	59
M4-6-04-JUMBO	4666726	45	RFA-174-F	9881632	56	TELL-7-BA-5/16"	4669440	59
M4-6-09-B	4490976	45	RFA-206-FB	9881631	56	TELL-7-BA-5/8"	4669475	59
M4-6-09-N	4490984	45	RFA-209	9881649	57	TELL-7-BA-7/8"	4669491	59
M4-6-09-R	4490992	45	RFA-209-STYLO	9883750	57	TELL-7-HANDLE	4669513	59
M4-6-09-Y	4491000	45	RFA-274-FC	9881630	56	TELL-7-LB	4669407	59
M4-6-10	9882584	45	RFA-312-FB	9881629	56	TELL-7-SB	4669416	59
M4-6-11	4491018	45	RFA-364-FH-08	9881667	59	VG-64	4503171	29
M4-6-11-T	4493169	45	RFA-364-FH-10	9881666	59	V-R-B-001/10	9884847	37
M4-6-15	4666106	45	RFA-364-FH-12	9881665	59	V-R-R-002/10	9884848	37
M4-7-SET-B	4677850	45	RFA-368-FH	9881657	59			
			RL-2	4661601	10			
			RL-2/4-303	4495471	11			
			RL-2/4-3060	4661423	11			

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