



Leading Technology, Superior Quality, Best Experience

**Making Your Job More Enjoyable!**



2018-2019



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**VALUE** • Quality Assurance

Series **Classic**



**Making Your Job More Enjoyable !**



## WHO IS VALUE

VALUE is the leader of global air conditioner refrigeration tools dedicated to refrigeration tools and vacuum solutions. Over the past 20 years, the Company has kept technological innovation, and explored cutting-edge technologies concerning air conditioner refrigeration tools with the purpose of offering innovative and quality products, services and system solutions to users, and helping customers complete tasks in a more easier way.

### Global leader

in refrigeration tools and vacuum solutions

## MISSION OF VALUE — VALUE CREATES VALUE

We provide our customers with innovative and quality solutions of refrigeration tools and vacuum to help them succeed, and to advance technologies!

### 1. Create value for customers — Help them succeed

To provide customers with innovative and quality products, services and system solutions, customers complete tasks in a more efficient way, and to help them succeed!

### 2. Create value for employees — Help employees develop

Employees are the greatest wealth we own. Therefore we will help them acquire better skills and personal growth.

### 3. Create value for partners — Win-win among partners

To set up a fair, equitable and open cooperation platform for long-term win-win partnership.

### 4. Create value for society — Advance technologies

To do our possible to conserve resources, protect environment, and boost technological progress and social development.

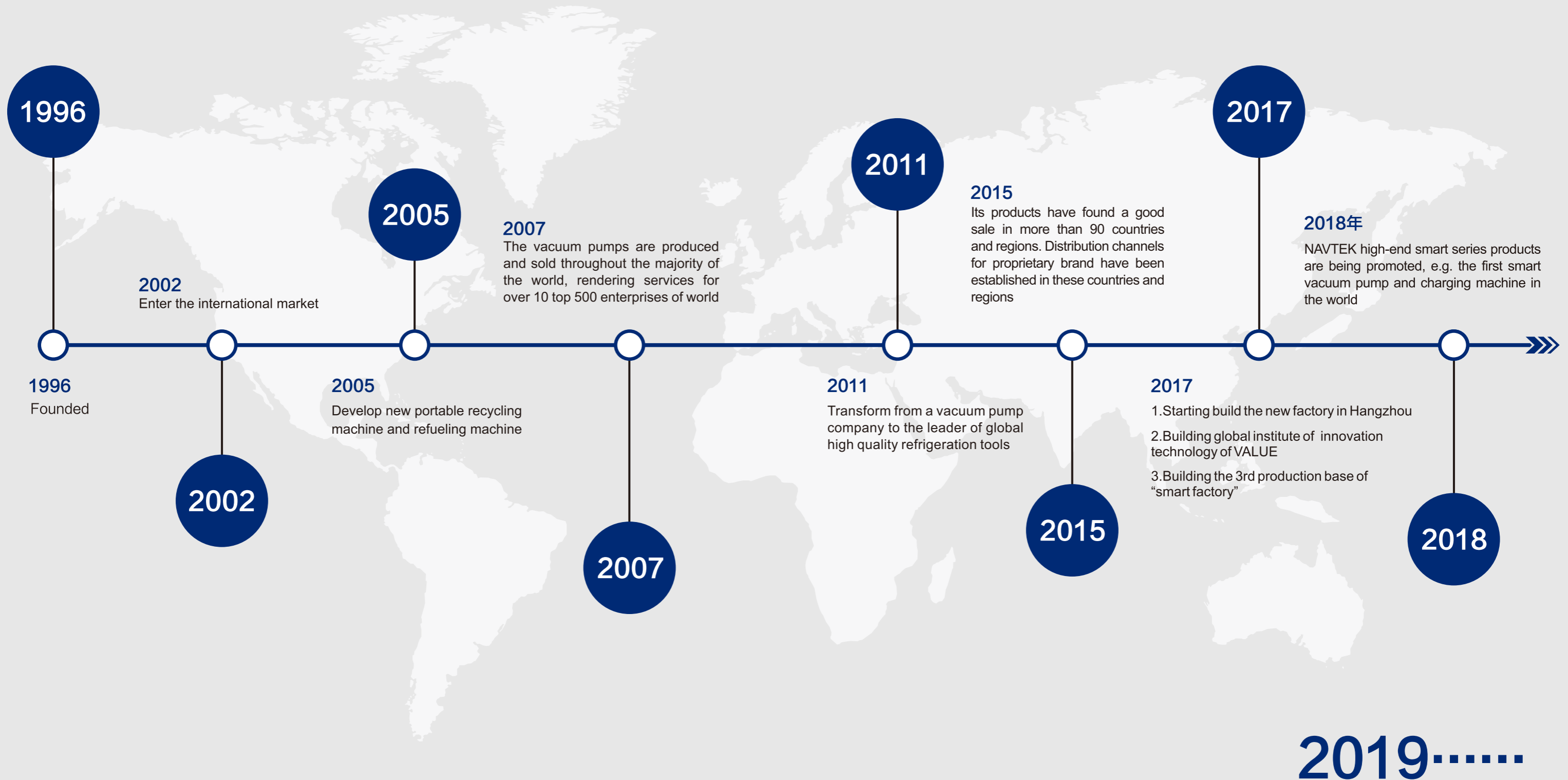
## VISION OF VALUE

### 1. To be the leader in solutions of refrigeration tools and vacuum!

- Global Market
- Leading Technology
- One of the best

### 2. Platform for employees to realize their dreams!

# DEVELOPMENT HISTORY



# Welcome to VALUE

Global leader in solutions refrigeration tools and vacuum

## ABOUT US

VALUE is the global leader of refrigeration tools and vacuum solutions. Over the past 20 years, be in the core mission of "create value for customers", the core competence of "speed, innovation, high quality", is committed to provide high-quality maintenance refrigeration tools for global refrigeration industry, to help customers more efficient and higher quality finish the work, to help customers succeed.

VALUE has accumulated the industry's veteran expert teams with experienced, we are always working on innovative work unswervingly to develop the best products, which can provide personalized design and service in the shortest time to meet customer needs. We have built a global innovation and Technology Research Institute, a huge proportion of R & D funds is invested every year, innovative development of the industry's leading products; the quality of our products reaches the world first-class level, through the CE, UL, CSA and other security certification and ISO9001 quality management system certification, and we also have built product failure analysis laboratory, thermostat and constant humidity production workshop and product prototype test center. We have introduced a lot of high precision manufacturing technology and equipment, Japanese SEIKI horizontal machining center and OKUMA vertical machining center, Germany WENZEL three coordinate measuring instrument and other modern machining and testing equipment, the full implementation of the ERP data management and lean production management system.

Through years of development, we have our owned global brand and channels. It has built "VALUE" independent brand sales channels in more than 90 countries, and has provided services for more than 10 of world top 500 enterprises.

**"speed, innovation, high quality", create value for customers**

Core competitiveness  
Speed • Innovation • High quality

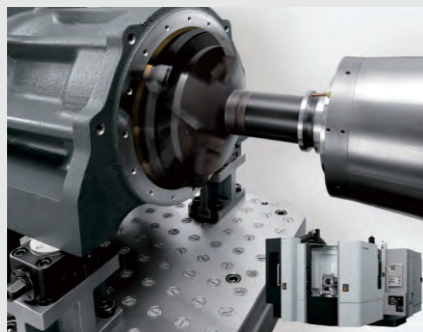
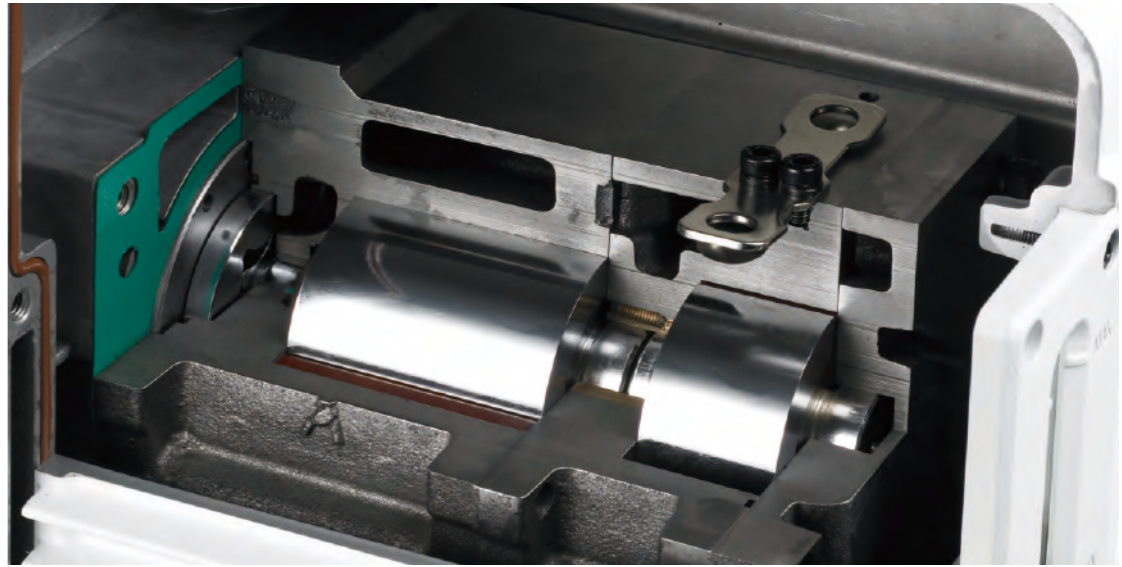


Headquarter base



The third production base, A new smart factory will be built in the future.

Global institute of innovation technology of VALUE in Hangzhou



## High quality manufacturing

VALUE is fully equipped with modernized processing and testing instruments, such as Japan DMG Mori Seiki horizontal machining center, Japan OKUMA-BYJC vertical machining center, German WENZEL three coordinates measuring equipment, etc. We carry out ERP data management and lean production management system.

## Precision measure Industry benchmark

Our products are qualified with world's most advanced quality level. We have European CE, American UL, Canada CSA safety certificates and German TUV ISO9001 certificate. And we also own product failure analysis lab, The constant temperature and humid workshop, new product trial center.

# GLOBAL BRAND CHANNELS



VALUE's product has exported to more than 100 countries and regions, such as US, Japan, France, Italy, Spain, German, North Europe, Korea, Taiwan, Brazil, etc.

VALUE has also built our own brand distribution network in over 90 countries  
VALUE provides products and service for 10 Fortune 500 enterprises as well.



# CLASSIC SERIES OF VALUE



"Creating value for customers" is the core mission of VALUE. Helping customers to accomplish work more easily, efficiently and with high quality is the landing of the core mission. Since the air conditioning industry practitioners is the goal of our research group, we continue to study the working process of the user's pain point, experience the user's experience, we developed high reliability series vacuum pump, light / fast series recovery machine, enjoyable series pipe tools and precision measuring instrument series, provides a full range of high-quality refrigeration maintenance tools for customers, help customers more easily complete maintenance work of air conditioning products. VALUE's Classic series to provide customers with a high quality full range of refrigeration maintenance tools.

Leading Technology, Superior Quality, Best Experience.

**Making your job more enjoyable!**



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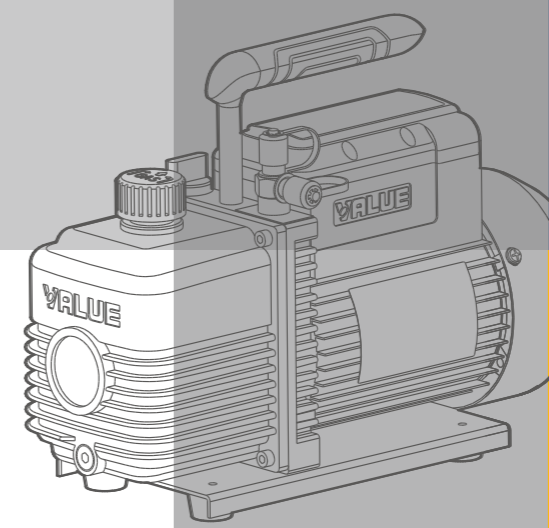
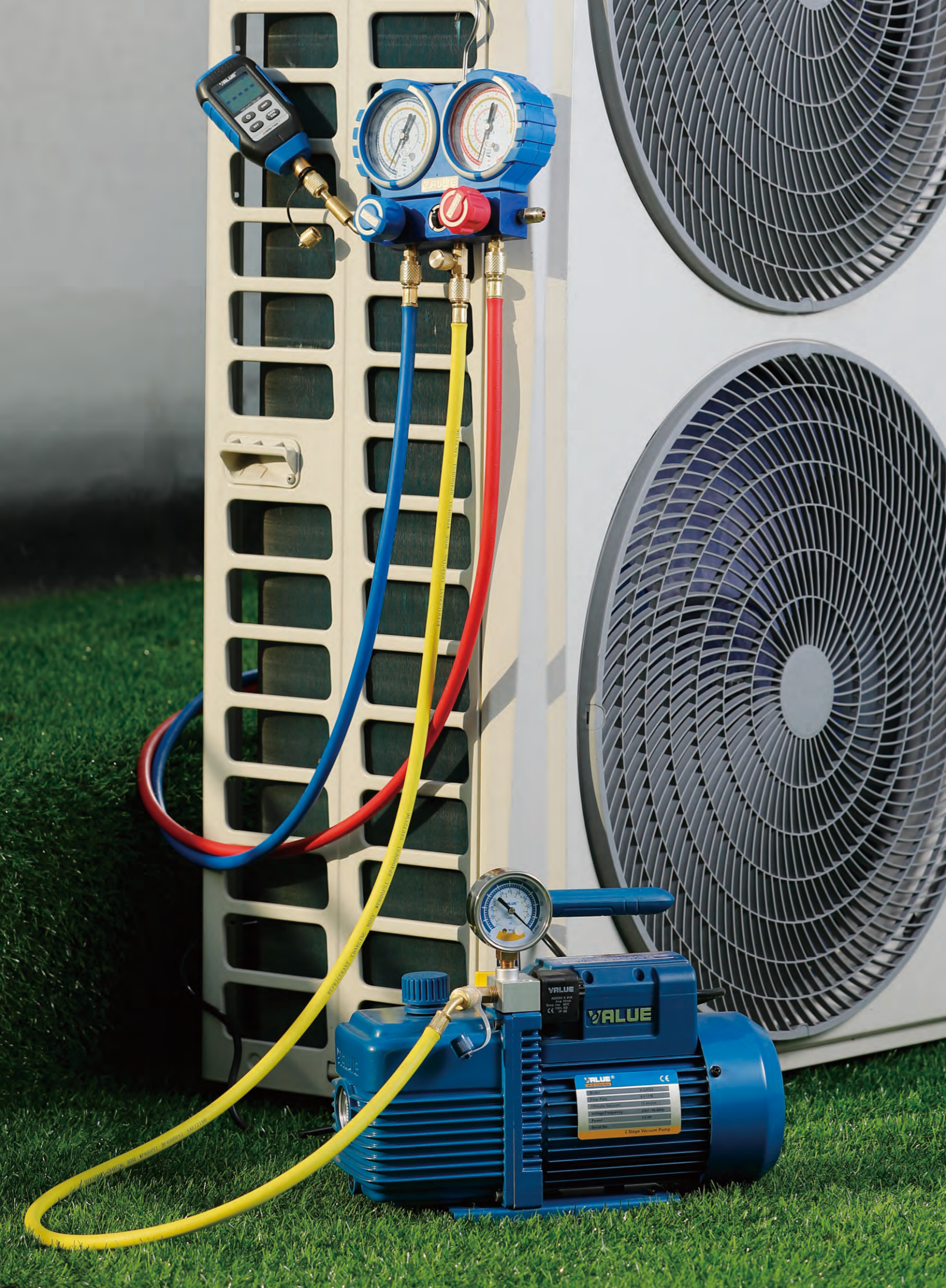
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# Vacuum Pump

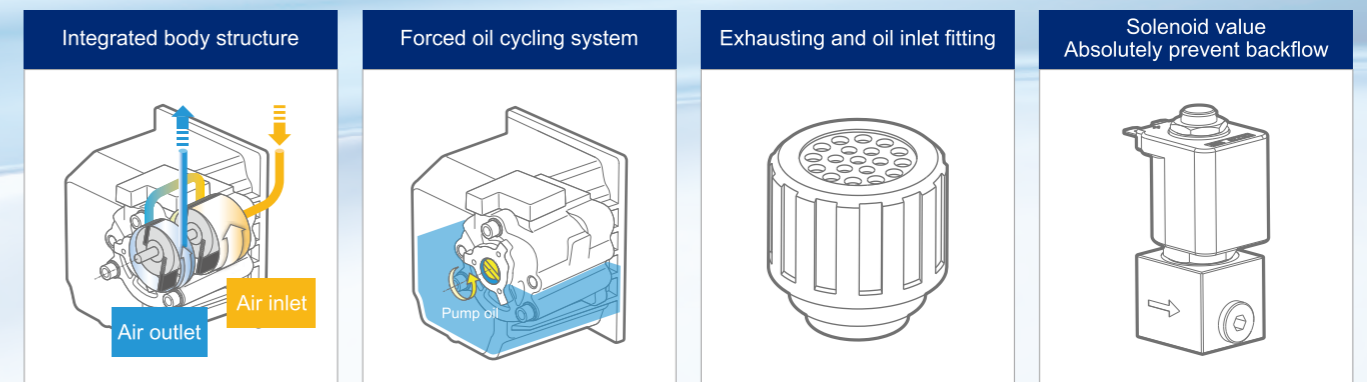
High Reliable

# High Reliability

It's suitable for vacuum pumping during the maintenance process of air condition and refrigeration system



To help users more easily complete vacuum pumping of air conditioning, we developed the classic series of high reliability vacuum pump, its integrated two-stage structure design has a higher degree of vacuum and higher ultimate vacuum; with solenoid valve structure design, when the pump stops working or power supply is suddenly broken, electromagnetic valve can be automatically closed vacuum system, and plunge inlet into the pump chamber which is the atmosphere through the pump, absolutely avoid vacuum oil backflow pollute the vacuum system; forced lubrication system and large oil level sight, which can effectively prevent the vacuum oil shortage situation of vacuum pump, enhance the reliability of the work.



## Series N Vacuum Pump VE280N

Making Your Job More Enjoyable !

Suitable for R407C, R404A, R507A, R134a refrigerant



## High Reliability

### Integrated Body Structure

- Higher precision
- Higher ultimate vacuum

### Forced Oil Cycling System







- High reliability

### Large Oil Screen

- Better visibility

## Series N Vacuum Pump VE280N

Making Your Job More Enjoyable !

Adapt for old refrigerant		
Household air-conditioning	 VE115N(1L/S) 150 micron	 VE135N(2L/S) 150 micron
Large household air-conditioning Bus air-conditioning	 VE160N(3L/S) 150 micron	 VE180N(4L/S) 150 micron
Central air-conditioning Large refrigerated warehouse	 VE245N(2L/S) 15 micron	 VE280N(4L/S) 15 micron

### Single Stage

Model	VE115N	VE125N	VE135N	VE160N	VE180N	
Flow Rate	50Hz	1.8 CFM 51 L/min	2.5 CFM 70 L/min	3.5 CFM 100 L/min	6.0 CFM 170 L/min	8.0 CFM 226 L/min
	60Hz	2.0 CFM 57 L/min	3.0 CFM 84 L/min	4.0 CFM 113 L/min	7.0 CFM 198 L/min	9.0 CFM 254 L/min
Ultimate Vacuum	Partial Pressure	2 Pa	2 Pa	2 Pa	2 Pa	2 Pa
	Total Pressure	150 micron	150 micron	150 micron	150 micron	150 micron
Power	1/4 HP	1/4 HP	1/3 HP	1/2 HP	3/4 HP	
Inlet Port	1/4" SAE	1/4" SAE	1/4" & 3/8" SAE	1/4" & 3/8" SAE	1/4" & 3/8" SAE	
Oil Capacity	250 ml	250 ml	250 ml	415 ml	660 ml	
Dimensions	290x124x224 mm	290x124x224 mm	318x124x234 mm	338x138x244 mm	395x145x257 mm	
Weight	6.6 Kg	7.1 Kg	8.0 Kg	9.9 Kg	14.6 Kg	

### Dual Stage

Model	VE215N	VE225N	VE245N	VE260N	VE280N	VE2100N	
Flow Rate	50Hz	1.5 CFM 42 L/min	2.5 CFM 70 L/min	4.5 CFM 128 L/min	6.0 CFM 170 L/min	8.0 CFM 226 L/min	10.0 CFM 283 L/min
	60Hz	1.8 CFM 50 L/min	3.0 CFM 84 L/min	5.0 CFM 142 L/min	7.0 CFM 198 L/min	9.0 CFM 254 L/min	12.0 CFM 340 L/min
Ultimate Vacuum	Partial Pressure	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa
	Total Pressure	15 micron	15 micron	15 micron	15 micron	15 micron	15 micron
Power	1/4 HP	1/3 HP	1/2 HP	3/4 HP	1 HP	1 HP	
Inlet Port	1/4" SAE	1/4" SAE	1/4" & 3/8" SAE	1/4" & 3/8" SAE	1/4" & 3/8" SAE	1/4" & 3/8" SAE	
Oil Capacity	200 ml	200 ml	325 ml	580 ml	500 ml	590 ml	
Dimensions	308x124x224 mm	318x124x234 mm	338x138x244 mm	395x145x257 mm	395x145x257 mm	395x145x257 mm	
Weight	7.5 Kg	8.5 Kg	10.4 Kg	15.8 Kg	16.2 Kg	16.7 Kg	

## Series N Vacuum Pump VE280ND

Making Your Job More Enjoyable !

Suitable for R407C, R404A, R507A, R134a refrigerant



## High Reliability

### Integrated Body Structure

- Higher precision
- Higher ultimate vacuum

### Forced Oil Cycling System

- High reliability

### Large Oil Screen

- Better visibility

## Series N Vacuum Pump VE280ND

Making Your Job More Enjoyable !

### Dual Stage

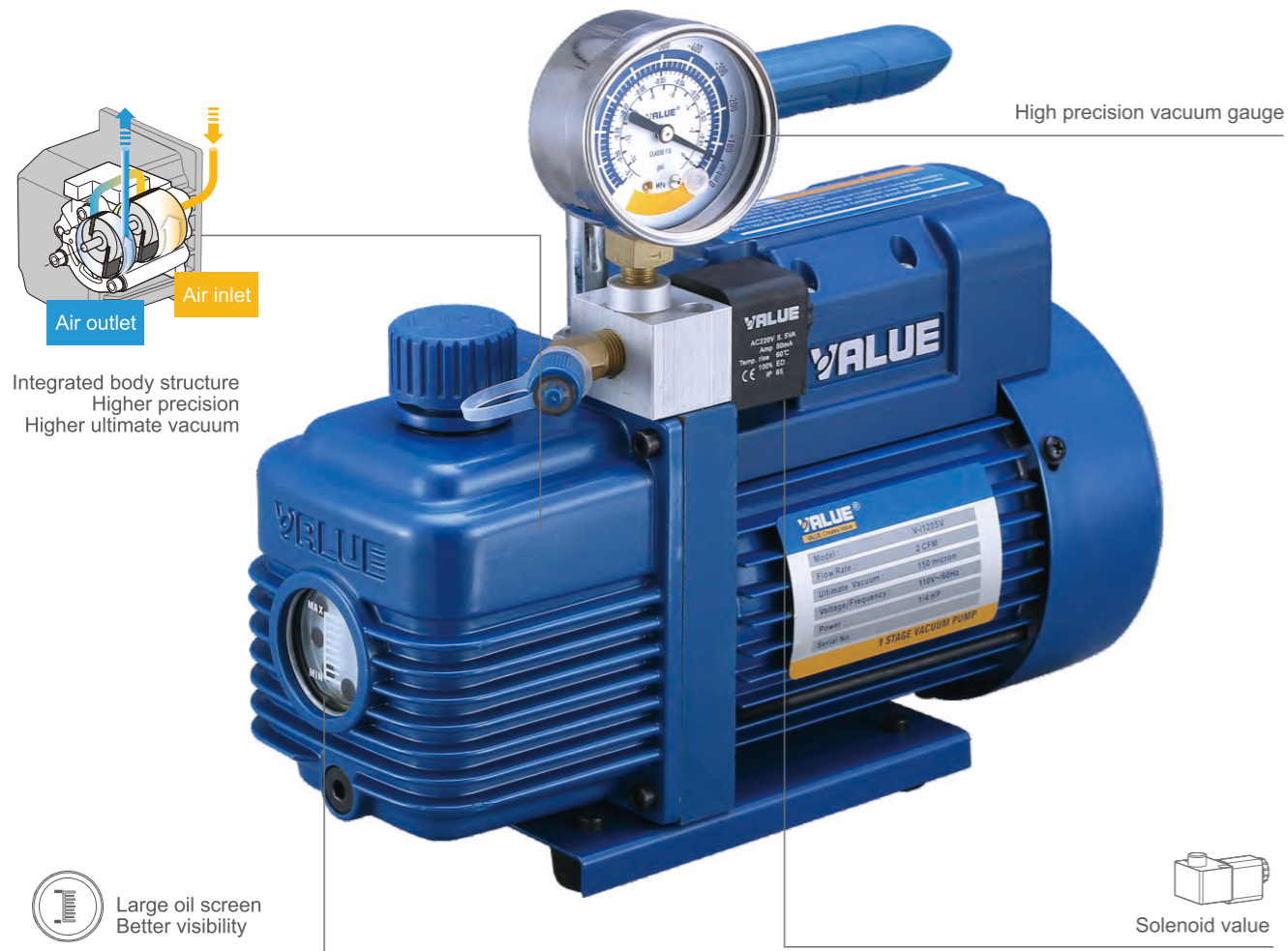
Model		VE215ND	VE225ND	VE245ND
Flow Rate	50Hz	1.5 CFM 42 L/min	2.5 CFM 70 L/min	4.5 CFM 128 L/min
	60Hz	1.8 CFM 50 L/min	3.0 CFM 84 L/min	5.0 CFM 142 L/min
Ultimate Vacuum	Partial Pressure	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa
	Total Pressure	15 micron	15 micron	15 micron
Power		1/4 HP	1/3 HP	1/2 HP
Inlet Port		1/4" SAE	1/4" SAE	1/4" & 3/8" SAE
Oil Capacity		200 ml	200 ml	325 ml
Dimensions		318x124x234 mm	318x124x234 mm	338x138x244 mm
Weight		8.5 Kg	8.5 Kg	10.4 Kg

Model		VE260ND	VE280ND	VE2100ND
Flow Rate	50Hz	6.0 CFM 170 L/min	8.0 CFM 226 L/min	10.0 CFM 283 L/min
	60Hz	7.0 CFM 198 L/min	9.0 CFM 254 L/min	12.0 CFM 340 L/min
Ultimate Vacuum	Partial Pressure	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa
	Total Pressure	15micron	15 micron	15 micron
Power		3/4 HP	1 HP	1 HP
Inlet Port		1/4" & 3/8" SAE	1/4" & 3/8" SAE	1/4" & 3/8" SAE
Oil Capacity		580 ml	500 ml	590 ml
Dimensions		395x145x257 mm	395x145x257 mm	395x145x257 mm
Weight		15.8 Kg	16.2 Kg	16.7 Kg

## Series New Refrigerant V-i280SV

Making Your Job More Enjoyable !

Suitable for R410A, R407C, R134a, R12, R22 refrigerant



## High Reliability

### Integrated Body Structure

- Higher precision
- Higher ultimate vacuum

### Large Oil Screen

- Better visibility

### High Precision Vacuum Gauge

- More precise

### Solenoid Valve

- Absolutely prevent backflow

## Series New Refrigerant V-i280SV

Making Your Job More Enjoyable !

Adapt for old refrigerant		
Household air-conditioning	 V-i140SV(2L/S) 150 micron	
Large household air-conditioning Bus air-conditioning	 V-i240SV(2L/S) 15 micron	 V-i280SV(4L/S) 15 micron

### Single Stage

Model	V-i120SV	V-i140SV	V-i160SV	V-i180SV
Flow Rate	50Hz	1.8 CFM 51 L/min	3.5 CFM 100 L/min	5.0 CFM 142 L/min
	60Hz	2.0 CFM 57 L/min	4.0 CFM 113 L/min	6.0 CFM 170 L/min
Ultimate Vacuum	Partial Pressure	2 Pa	2 Pa	2 Pa
	Total Pressure	150 micron	150 micron	150 micron
Power	1/4 HP	1/3 HP	1/2 HP	3/4 HP
Inlet Port	1/4" SAE	1/4" SAE	1/4" SAE	1/4" SAE
Oil Capacity	250 ml	250 ml	415 ml	660 ml
Dimensions	290x124x255 mm	318x124x265 mm	338x138x275 mm	395x145x318 mm
Weight	6.7 Kg	8.6 Kg	10.3 Kg	15.4 Kg

### Dual Stage

Model	V-i220SV	V-i240SV	V-i260SV	V-i280SV
Flow Rate	50Hz	1.8 CFM 51 L/min	3.5 CFM 100 L/min	5.0 CFM 142 L/min
	60Hz	2.0 CFM 57 L/min	4.0 CFM 113 L/min	6.0 CFM 170 L/min
Ultimate Vacuum	Partial Pressure	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa
	Total Pressure	15 micron	15 micron	15 micron
Power	1/3 HP	1/2 HP	3/4 HP	1 HP
Inlet Port	1/4" SAE	1/4" SAE	1/4" SAE	1/4" SAE
Oil Capacity	200 ml	325 ml	580 ml	500 ml
Dimensions	318x124x265 mm	338x138x275 mm	395x145x318 mm	395x145x318 mm
Weight	9.0 Kg	11.0 Kg	16.6 Kg	17.0 Kg

## Series New Refrigerant V-i215S-M

Making Your Job More Enjoyable !

Suitable for R410A, R407c, R134a, R12, R22 refrigerant



Smaller, lighter,  
and more convenient  
only 4kg



## High Reliability

### Integrated Body Structure

- Higher precision
- Higher ultimate vacuum

### Solenoid Valve

- Absolutely prevent backflow

### Large Oil Screen

- Better visibility

Model	V-i115S-M	V-i215S-M
Flow Rate	1.5 CFM	1.5 CFM
Partial Pressure	2 Pa	2x10 <sup>-1</sup> Pa
Total Pressure	150 micron	15 micron
Power	1/5 HP	1/5 HP
Inlet Port	1/4" SAE	1/4" SAE
Oil Capacity	150 ml	110 ml
Dimensions	240x88x183 mm	240x88x183 mm
Weight	3.5 Kg	4 Kg

## Series New Refrigerant V-i215S-M

Making Your Job More Enjoyable !

Suitable for R410A, R407c, R134a, R12, R22 refrigerant



Both AC & DC  
can be operated



## High Reliability

### Integrated Body Structure

- Higher precision
- Higher ultimate vacuum

### Large Oil Screen

- Better visibility

Model	V-i210H
Flow Rate	1.0 CFM
Partial Pressure	2x10 <sup>-1</sup> Pa
Total Pressure	15 micron
Power	1/5 HP
Inlet Port	1/4" SAE
Oil Capacity	150 ml
Dimensions	240x88x183 mm
Weight	4 Kg

## R32 Only Vacuum Pump V-i125Y-R32

Making Your Job More Enjoyable !

Suitable for R32, 1234yf refrigerant



## High Reliability

### Integrated Body Structure

- Higher precision
- Higher ultimate vacuum

### Large Oil Screen

- Better visibility

### High Precision Vacuum Gauge

- More precise

### Enclosed Switch

- More reliable

### Solenoid Valve

- Absolutely prevent backflow

Model	V-i125Y-R32	V-i240Y-R32	V-i260Y-R32	V-i280Y-R32
Flow Rate	50Hz	2.5 CFM 70 L/min	3.5 CFM 100 L/min	5.0 CFM 142 L/min
	60Hz	3.0 CFM 84 L/min	4.0 CFM 113 L/min	6.0 CFM 170 L/min
Ultimate Vacuum	Partial Pressure	2 Pa	2x10 <sup>-1</sup> Pa	2x10 <sup>-1</sup> Pa
	Total Pressure	150micron	15micron	15 micron
Power	1/4 HP	1/2 HP	3/4 HP	1 HP
Inlet Port	1/4" SAE	1/4" SAE	1/4" SAE	1/4" SAE
Oil Capacity	250 ml	325 ml	460 ml	500 ml
Dimensions	290x124x235 mm	338x138x248 mm	395x145x270 mm	395x145x270mm
Weight	7.2 Kg	11.0 Kg	16.6 Kg	17.0 Kg

## R32 Only Vacuum Pump V-i2120

Making Your Job More Enjoyable !

Suitable for R32, 1234yf refrigerant



## High Reliability

### High Efficiency Motor

- More efficient
- Higher ultimate vacuum

### Large Oil Screen

- Better visibility

Model	V-i2120
Flow Rate	12 CFM
Partial Pressure	2x10 <sup>-1</sup> Pa
Total Pressure	15 micron
Power	1 HP
Inlet Port	1/4" & 3/8" SAE
Oil Capacity	500 ml
Dimensions	345x135x280 mm
Weight	11.5 Kg



## Vacuum Pump Oil VPO-68

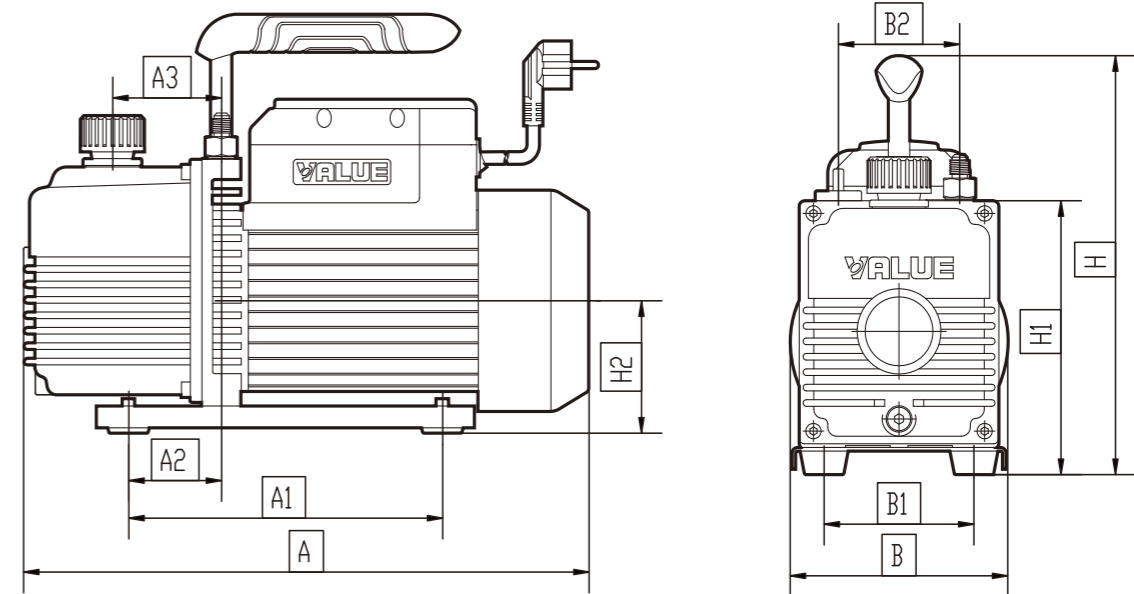
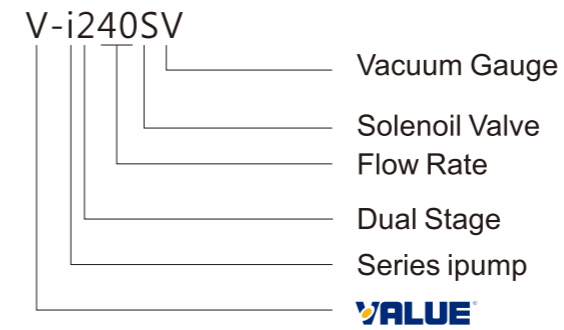
Making Your Job More Enjoyable !

## Vacuum Pump Choosing

Making Your Job More Enjoyable !



Model	VPO-46	VPO-68
Kinematic viscosity(40°C)	41.4-50.6mm <sup>2</sup> /s	61.2-74.8mm <sup>2</sup> /s
Viscosity Index	110	130
Flash Point	240°C	250°C
Pour Point	-10°C	-35°C
Type	Mineral Oil	Synthetic di-ester oil



Model	A	A1	A2	A3	B	B1	B2	H	H1	H2
VE115N	290	118	30	50	124	76	-	224	141	71
VE125N	290	118	30	50	124	76	-	224	141	71
VE135N	318	144	40	61	124	84	68	234	154	76
VE160N	338	144	40	61	138	84	74	244	166	78
VE180N	395	174	66	85	145	99	74	257	179	86
VE215N	308	118	30	50	124	76	-	224	141	71
VE225N	318	144	40	61	124	84	68	234	154	76
VE245N	338	144	40	61	138	84	74	244	166	78
VE260N	395	174	66	85	145	99	74	257	179	86
VE280N	395	174	66	85	145	99	74	257	179	86
VE2100N	395	174	66	85	145	99	74	257	179	86

### According to types of refrigerant

As for the vacuum supply of new refrigeration plants, vacuum pump with anti-backstreaming valve should be adopted. Otherwise there will be risk of backstreaming into the compressor, polluting and destroying the refrigerant ingredients, and influencing the refrigeration effect. Model I new refrigerant vacuum pump could ensure high reliability.

Shared vacuum pump for new and old refrigerants		Old refrigerant vacuum pump	New refrigerant vacuum pump
R410A	R407C	R22	R32 1234yf
	R404A	R12	
	R507A	R502	
	R134a	R500	

### According to pumping rate

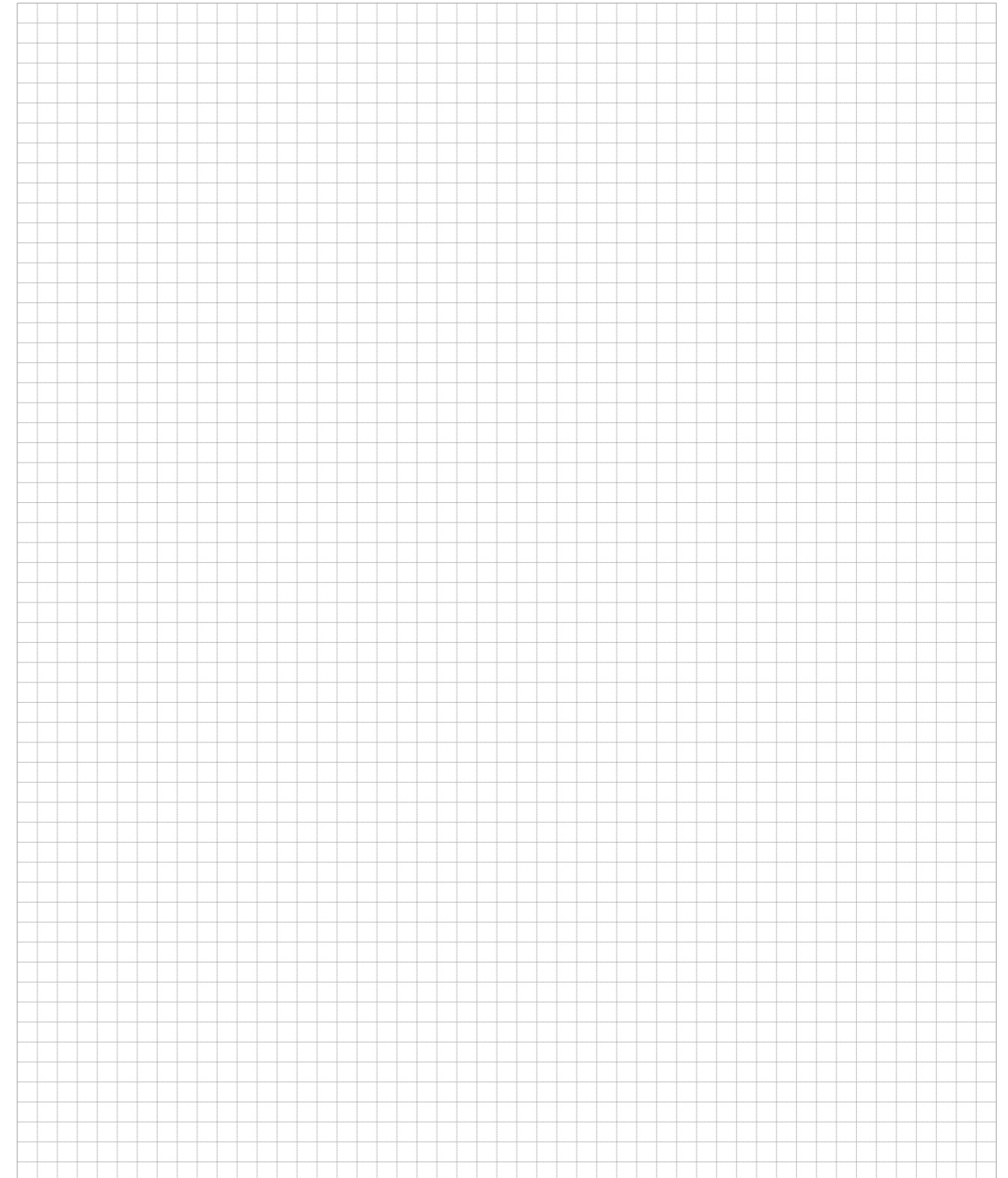
The pumping rate of vacuum pump is generally indicated by L/S. The operation time is directly related to the pumping rate. Hence highly reliable vacuum pump matching the unit should be chosen.

Applicable machines	Pumping rate	3~4L/S	New refrigerant vacuum pump
	Household refrigerator	Central air conditioner	Central air conditioner
	Household air conditioner (below 5 Hp)	Large household air conditioner	Large refrigeration storage
		Bus air conditioner	
Car air conditioner	Large refrigeration storage		

### According to vacuum degree

Vacuum degree indicates the ability to dewater, and is normally expressed by Pa. Higher vacuum degree is represented by smaller figures; new refrigerant central air conditioners and refrigeration facilities with low evaporating temperature often require double-stage vacuum pump with higher vacuum degree.

	Single-stage vacuum pump	Double-stage vacuum pump
Vacuum degree	2 Pa	$2 \times 10^{-1}$ Pa
Applicable machines	Household air conditioner	Central air conditioner
	Car air conditioner	Large and medium-sized refrigeration storage
	Refrigerator	



## Refrigeration Production Line VRD-65

Making Your Job More Enjoyable !

It's suitable for vacuum pumping on the refrigeration production line of air conditioning

### Higher ultimate vacuum



We did individual analysis on special applications such as medical industry. Because large amount of corrosive gas and vapor needs to be pumped, we used stainless spring, fluorubber oil seal and etc. to upgrade our product, which ensures the pump to run reliably.



Model		VRD-16	VRD-24	VRD-30
Displacement speed m <sup>3</sup> /h	50 Hz	16 (4.4)	24(6.6)	30(8.3)
	60 Hz	19.2 (5.2)	28.8 (7.9)	36 (9.9)
Ultimate partial pressure gas ballast close		4x10 <sup>-2</sup> Pa	4x10 <sup>-2</sup> Pa	4x10 <sup>-2</sup> Pa
Ultimate total pressure gas ballast close		4x10 <sup>-1</sup> Pa	4x10 <sup>-1</sup> Pa	4x10 <sup>-1</sup> Pa
Ultimate total pressure gas ballast open		8x10 <sup>-1</sup> Pa	8x10 <sup>-1</sup> Pa	8x10 <sup>-1</sup> Pa
Power supply		single/3-ph	single/3-ph	single/3-ph
Power rating(kw)		0.75kW/0.55kW	1.1kW/0.75kW	1.1kW
Inlet and exhaust DN		KF25	KF25/40	KF25/40
Oil capacity(L)		0.9~1.5L	1.3~2.0L	1.3~2.0L
Motor speed (rpm)	50 Hz	1440	1440	1440
	60 Hz	1720	1720	1720
Ambient temperature		5~40°C	5~40°C	5~40°C
Noise level (dB)		≤ 58dB	≤ 58dB	≤ 58dB
Weight(Kg)		33Kg	36Kg	37Kg

## Special For Large Refrigeration Equipment

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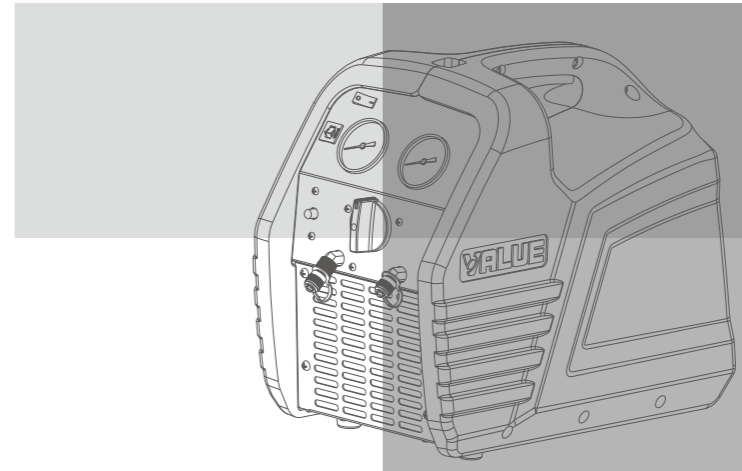
It's suitable for vacuum pumping on the refrigeration production line of air conditioning

### Higher ultimate vacuum



Vacuum Pump

Model		VP2120	VP2200
Displacement speed m <sup>3</sup> /h	50 Hz	20(12)	36(20)
	60 Hz	24(14)	43(24)
Ultimate partial pressure gas ballast close		4x10 <sup>-2</sup> Pa	4x10 <sup>-2</sup> Pa
Ultimate total pressure gas ballast close		4x10 <sup>-1</sup> Pa	4x10 <sup>-1</sup> Pa
Ultimate total pressure gas ballast open		8x10 <sup>-1</sup> Pa	8x10 <sup>-1</sup> Pa
Power supply		single/3-ph	single/3-ph
Power rating(kw)		0.75/0.55kW	1.1/0.75kW
Inlet and exhaust DN		7/16"-20UNF	7/16"-20UNF
Oil capacity(L)		0.9~1.5L	1.3~2.0L
Motor speed (rpm)	50 Hz	1440	1440
	60 Hz	1720	1720
Ambient temperature		5-40°C	5-40°C
Noise level (dB)		≤ 58dB	≤ 58dB
Weight(Kg)		37Kg	41Kg



# Recovery Unit

Higher  
Faster

## M Series Recovery Unit VRR12M

Making Your Job More Enjoyable !



## Light • Faster

### One Key Operation

- Easy to use

### High Pressure Protection

- Added safety

### Oil-free Compressor

- Suitable for all commonly used refrigerants

### Self-purge Function

- Prevent mixing of various refrigerants

Model	VRR12M			
Refrigerant	Categories III : R12,R134a,R401C,R500,1234yf Categories IV : R22,R401A, R401B, R402B, R407C, R407D, R408A,R409A,R411A R411B,R412A,R502,R509 Categories V : R402A,R404A,R407A,R407B,R410A,R507,R32			
Power Supply	220-240V~50/60Hz	115V~/60Hz		
Motor	Brushless DC motor 3/4HP			
Motor Speed	3000 rpm			
Maximal Current Draw	2.6 A	5.5 A		
Compressor	Oil-less, Air-cooled, Piston style			
Automatic Safety Shut-Off	38.5bar/3850kPa(558psi)			
Recovery Rate (kg/min)		Categories III	Categories IV	Categories V
	Vapor	0.20	0.25	0.25
	Liquid	1.76	1.98	2.42
	Push/pull	4.60	5.60	6.30
Operating Temperature	0 °C - 40 °C			
Dimensions	304×202×360 mm			
Weight	13.0 kg			

## M Series Recovery Unit VRR24M-B

Making Your Job More Enjoyable !



## Light • Faster

### Smart Motor

- Faster recovery
- Lighter

### Smart Control Technology

- Automatically controlled during recovery process, and easier to use

### One-key Operation

- Easy to use and more convenient

### Self-purge Function

- Prevent mixing of various refrigerants

### High and Low Voltage Protection

- Added safety

Model	VRR24M-B			
Refrigerant	Categories III : R12,R134a,R401C,R500,1234yf Categories IV : R22,R401A, R401B, R402B, R407C, R407D, R408A,R409A,R411A R411B,R412A,R502,R509 Categories V : R402A,R404A,R407A,R407B,R410A,R507,R32			
Power Supply	220-240V~50/60Hz	115V~/60Hz		
Motor	Brushless DC motor 1HP			
Motor Speed	3000 rpm			
Maximal Current Draw	5 A	10 A		
Compressor	Oil-less, Air-cooled, Piston style			
Automatic Safety Shut-Off	38.5bar/3850kPa(558psi)			
Recovery Rate (kg/min)		Categories III	Categories IV	Categories V
	Vapor	0.40	0.50	0.50
	Liquid	3.30	3.85	3.85
	Push/pull	7.50	8.50	9.50
Operating Temperature	0 °C - 40 °C			
Dimensions	380×250×360 mm			
Weight	11.0 kg			

## L Series Recovery Unit VRR12L-R32

Making Your Job More Enjoyable !



## Light • Faster

### One Key Operation

- Easy to use

### High Pressure Protection

- Added safety

### Oil-free Compressor

- Suitable for all commonly used refrigerants

### Self-purge Function

- Prevent mixing of various refrigerants

Model	VRR12L-R32			VRR12LOS-R32			
Refrigerant	Categories III : R12,R134a,R401C,R500,1234fy Categories IV : R22,R401A, R401B, R402B, R407C, R407D, R408A,R409A,R411A R411B,R412A,R502,R509 Categories V : R402A,R404A,R407A,R407B,R410A,R507,R32						
Power Supply	220V-240V~/50-60Hz	115V~/60Hz	220V-240V~/50-60Hz	115V~/60Hz			
Motor	3/4 HP	3/4 HP	3/4 HP	3/4 HP			
Motor Speed	1450rpm/1750rpm	1750rpm	1450rpm/1750rpm	1750rpm			
Maximal Current Draw	4 A	4 A	4 A	8 A			
Compressor	Oil-less, Air-cooled, Piston style						
Automatic Safety Shut-Off	38.5bar/3850kPa(558psi)						
Recovery Rate (kg/min)		Categories III	Categories IV	Categories V	Categories III	Categories IV	Categories V
	Vapor	0.20	0.25	0.25	0.20	0.25	0.25
	Liquid	1.60	1.80	2.20	1.60	1.80	2.20
	Push/pull	4.60	5.60	6.30	4.60	5.60	6.30
Operating Temperature	0 °C-40 °C						
Dimensions	450×250×355 mm						
Weight	13.0 kg			14.2 kg			

## L Series Recovery Unit VRR24L-R32

Making Your Job More Enjoyable !



## Light • Faster

### One Key Operation

- Easy to use

### Twin Cylinder

- Faster recovery

### Oil-free Compressor

- Suitable for all commonly used refrigerants

### Self-purge Function

- Prevent mixing of various refrigerants

### High Pressure Protection

- Added safety

Model	VRR24L-R32			VRR24LOS-R32			
Refrigerant	Categories III : R12,R134a,R401C,R500,1234fy Categories IV : R22,R401A, R401B, R402B, R407C, R407D, R408A,R409A,R411A R411B,R412A,R502,R509 Categories V : R402A,R404A,R407A,R407B,R410A,R507,R32						
Power Supply	220V-240V~/50-60Hz	115V~/60Hz	220V-240V~/50-60Hz	115V~/60Hz			
Motor	1 HP	1 HP	1 HP	1 HP			
Motor Speed	1450rpm/1750rpm	1750rpm	1450rpm/1750rpm	1750rpm			
Maximal Current Draw	5 A	10 A	5 A	10 A			
Compressor	Oil-less, Air-cooled, Piston style						
Automatic Safety Shut-Off	38.5bar/3850kPa(558psi)						
Recovery Rate (kg/min)		Categories III	Categories IV	Categories V	Categories III	Categories IV	Categories V
	Vapor	0.40	0.50	0.50	0.40	0.50	0.50
	Liquid	3.00	3.50	3.50	3.00	3.50	3.50
	Push/pull	7.50	8.50	9.50	7.50	8.50	9.50
Operating Temperature	0 °C-40 °C						
Dimensions	450×250×355 mm						
Weight	13.5 kg			14.7 kg			

## Mini Recovery Unit VRR12L

Making Your Job More Enjoyable !



## Light • Faster

### One Key Operation

- Easy to use

### Self-purge Function

- Prevent mixing of various refrigerants

### Oil-free Compressor

- Suitable for all commonly used refrigerants

### High Pressure Protection

- Added safety

Model	VRR12L			VRR12L-OS			
Refrigerant	Categories III : R12, R134a, R401C, R500 Categories IV : R22, R401A, R401B, R402B, R407C, R407D, R408A, R409A, R411A, R411B, R412A, R502, R509 Categories V : R402A, R404A, R407A, R407B, R410A, R507						
Power Supply	220-240V~/50-60Hz	115V~/60Hz	220V-240V~/50-60Hz	115V~/60Hz			
Motor	3/4 HP	3/4 HP	3/4 HP	3/4 HP			
Motor Speed	1450rpm/1750rpm	1750rpm	1450rpm/1750rpm	1750rpm			
Maximal Current Draw	4 A	8 A	4 A	8 A			
Compressor	Oil-less, Air-cooled, Piston style						
Automatic Safety Shut-Off	38.5bar/3850kPa(558psi)						
Recovery Rate (kg/min)		Categories III	Categories IV	Categories V	Categories III	Categories IV	Categories V
	Vapor	0.20	0.25	0.25	0.20	0.25	0.25
	Liquid	1.60	1.80	2.20	1.60	1.80	2.20
	Push/pull	4.60	5.60	6.30	4.60	5.60	6.30
Operating Temperature	0 °C - 40 °C						
Dimensions	400×250×355 mm						
Weight	13.0 kg						

## Mini Recovery Unit VRR24L

Making Your Job More Enjoyable !



## Light • Faster

### One Key Operation

- Easy to use

### Twin Cylinder

- Faster recovery

### Oil-free Compressor

- Suitable for all commonly used refrigerants

### Self-purge Function

- Prevent mixing of various refrigerants

### High Pressure Protection

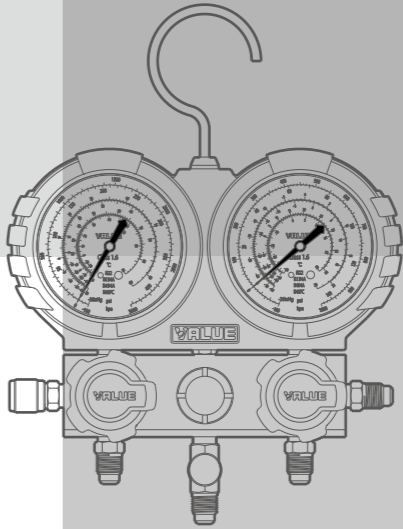
- Added safety

Model	VRR24L			VRR24L-OS			
Refrigerant	Categories III : R12, R134a, R401C, R500 Categories IV : R22, R401A, R401B, R402B, R407C, R407D, R408A, R409A, R411A, R411B, R412A, R502, R509 Categories V : R402A, R404A, R407A, R407B, R410A, R507						
Power Supply	220-240V~/50-60Hz	115V~/60Hz	220V-240V~/50-60Hz	115V~/60Hz			
Motor	1 HP	1 HP	1 HP	1 HP			
Motor Speed	1450rpm/1750rpm	1750rpm	1450rpm/1750rpm	1750rpm			
Maximal Current Draw	5 A	10 A	5 A	10 A			
Compressor	Oil-less, Air-cooled, Piston style						
Automatic Safety Shut-Off	38.5bar/3850kPa(558psi)						
Recovery Rate (kg/min)		Categories III	Categories IV	Categories V	Categories III	Categories IV	Categories V
	Vapor	0.40	0.50	0.50	0.40	0.50	0.50
	Liquid	3.00	3.50	3.50	3.00	3.50	3.50
	Push/pull	7.50	8.50	9.50	7.50	8.50	9.50
Operating Temperature	0 °C - 40 °C						
Dimensions	450×250×355 mm						
Weight	13.5 kg			14.7 kg			

# Refrigeration Tools

Refrigeration  
Tools

Accurate

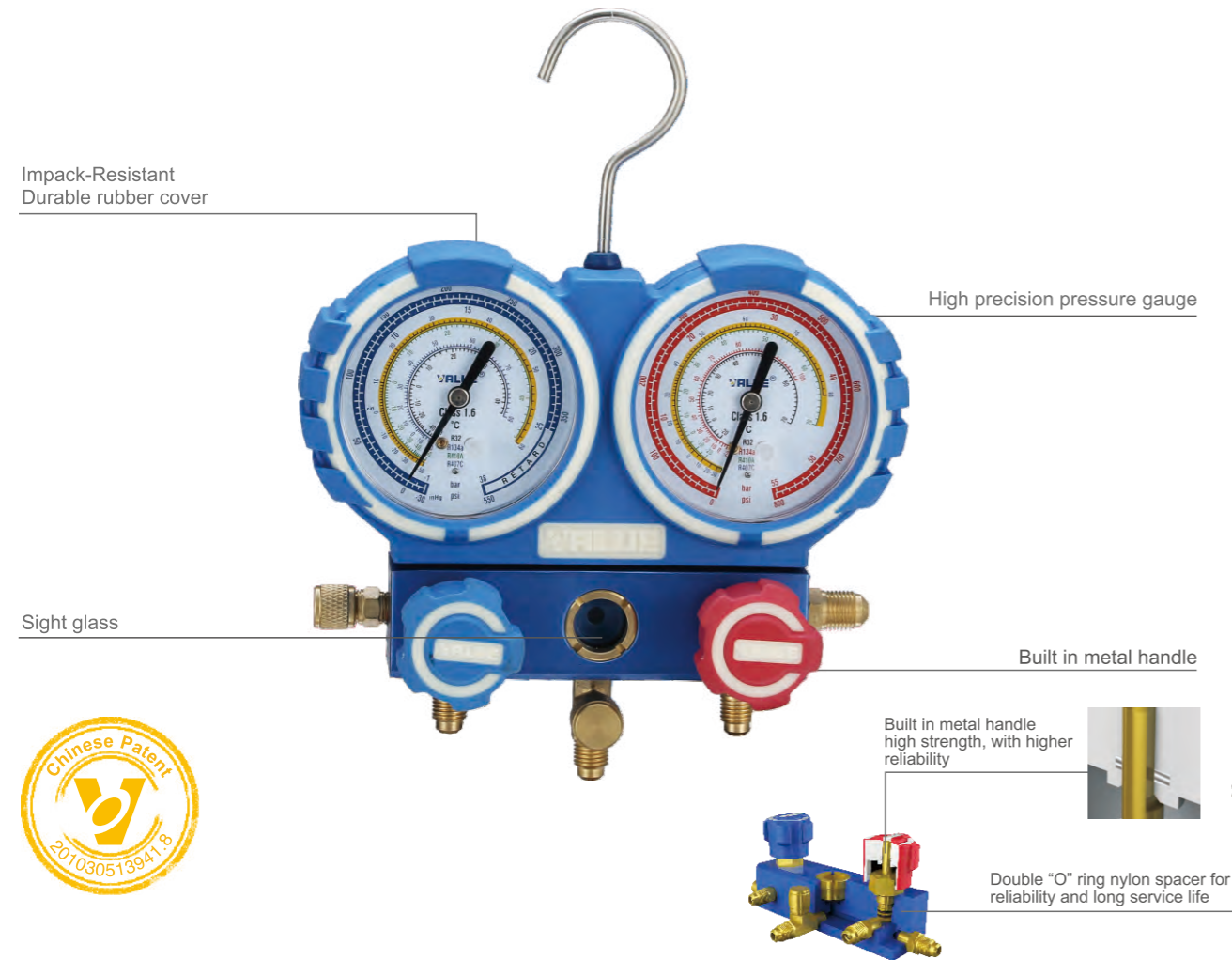




## Manifold Gauge

Making Your Job More Enjoyable !

Suitable for R32, R407, R410A, R134a, 1234yf refrigerant



## Precision/Impact-Resistant

### Impact-resistant

- Impact-Resistant design
- Durable rubber cover

### Accurate

- Precision pressure gauge

### Built In Metal Handle

- High strength, with higher reliability

### Sight Glass

- To easily view refrigerant movement and condition during charging and recovery

Model	VMG-2-R32	VMG-2-R32-B-03	VMG-2-1234yf
Refrigerant scale	R32	R32, R407, R410A, R134a	1234yf
Gauge Diameter	Φ80mm	Φ68mm	Φ80mm
Pressure Scale	0~80 psi; -30~500 psi		0~400 psi; -30~130 psi
Hose	Red&Blue: 1/4" -5/16", 2x1pc Yellow: 1/4" -1/4", 1pc	/	Red&Blue: M12X1.5 - M12X1.5, 2X1pc Yellow: M12X1.5 - 1/2" Acme, 1pc
Length	3x120cm	/	150cm
Package	Blow Case	Blister packing	Blow Case

## Manifold Gauge

Making Your Job More Enjoyable !

### VMG-2-R600-B Series **NEW**

Model	VMG-2-R600-B	VMG-2-R600-B-03
Refrigerant scale	R600/R600a/R290	
Gauge Diameter	Φ68mm	
Pressure Scale	-30~435psi; -30~130psi	
Hose	Red&Blue&Yellow: 1/4"-1/4", 3x1pc	/
Length	120cm	/
Package	Blow Case	Blister packing

### VMG-2-R22 Series

Model	VMG-2-R22	VMG-2-R22-02	VMG-2-R22-03
Refrigerant scale	R404A/R407C/R134a/R22		
Gauge Diameter	Φ80mm		
Pressure Scale	0~400psi; -30~140psi		
Hose	Red&Blue&Yellow: 1/4"-1/4", 3x1pc	/	/
Length	120cm	/	/
Package	Blow Case	Blister packing	Blister packing

Model	VMG-2-R22-B	VMG-2-R22-B-02	VMG-2-R22-B-03
Refrigerant scale	R404A/R407C/R134a/R22		
Gauge Diameter	Φ68mm		
Pressure Scale	0~400psi; -30~140psi		
Hose	Red&Blue&Yellow: 1/4"-1/4", 3x1pc	/	/
Length	120cm	/	/
Package	Blow Case	Blister packing	Blister packing

NOTICE: All information listed above is standard size, if you require other size, please appoint in the order.

### VMG-2-R410A Series

Model	VMG-2-R410A	VMG-2-R410A-02	VMG-2-R410A-03	VMG-2-R410A-04	VMG-2-R410A-05
Refrigerant scale	R410A	R410A/R407C/R134a/R22			R410A/R407C/R404A/R134a
Gauge Diameter	Φ80mm				
Pressure Scale	0~800psi; -30~500psi				
Hose	Red&Blue: 1/4"-5/16", 2x1pc Yellow: 1/4"-1/4", 1pc	Red&Blue: 1/4"-5/16", 2x1pc Yellow: 1/4"-1/4", 1pc With 2pcs adapters	Red&Blue: 1/4"-5/16", 2x1pc Yellow: 1/4"-1/4", 1pc	/	Red&Blue: 1/4"-5/16", 2x1pc Yellow: 1/4"-1/4", 1pc
Length	150 cm				
Package	Blow case	Blow case	Blister packing	Blister packing	Blister packing

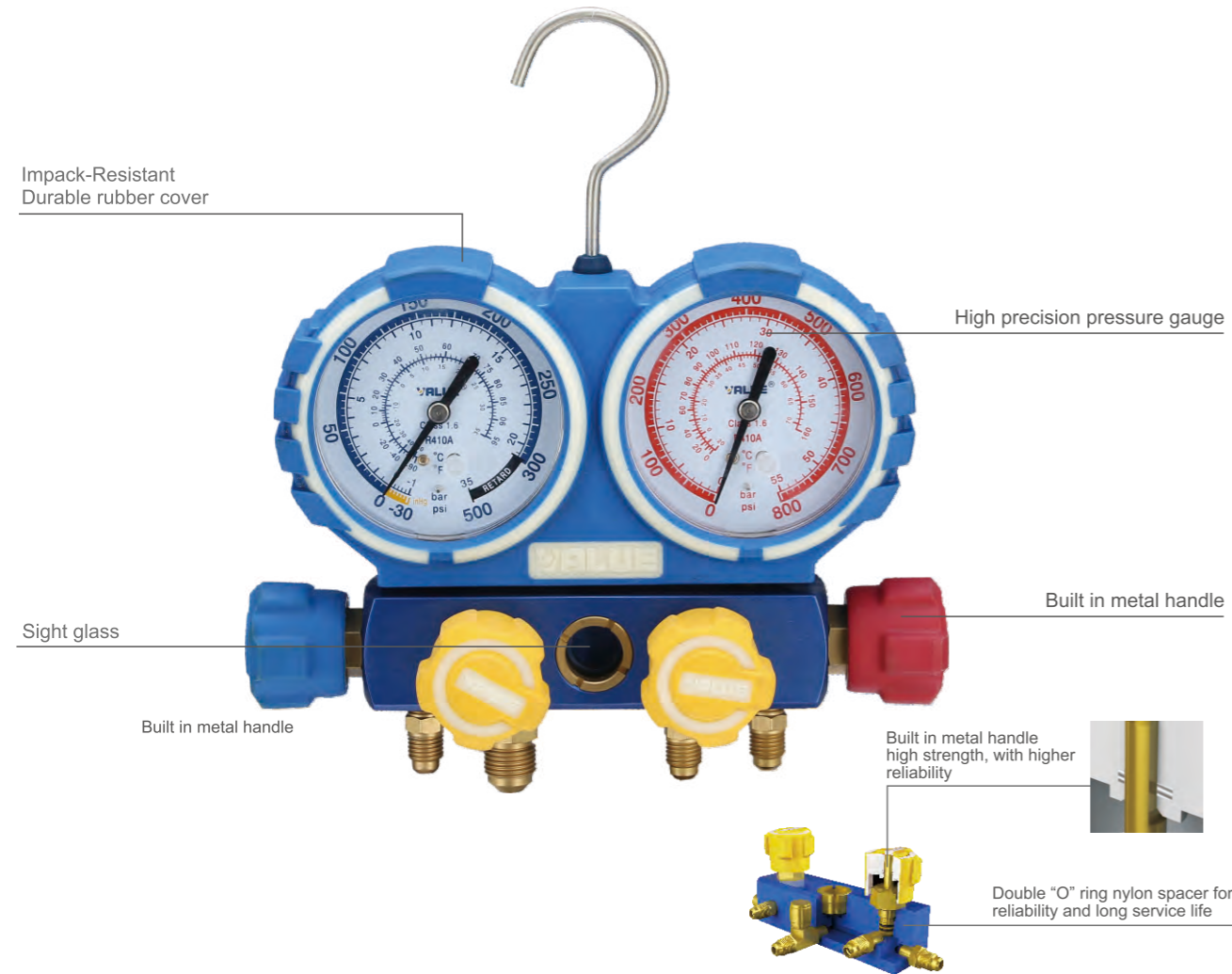
Model	VMG-2-R410A-B	VMG-2-R410A-B-02	VMG-2-R410A-B-03
Refrigerant scale	R410A/R407C/R134a/R22		
Gauge Diameter	Φ68mm		
Pressure Scale	0~800psi; -30~500psi		
Hose	Red&Blue: 1/4"-5/16", 2x1pc Yellow: 1/4"-1/4", 1pc	/	/
Standard Length	120 cm	/	/
Package	Blow case	Blister packing	Blister packing

NOTICE: All information listed above is standard size, if you require other size, please appoint in the order.

## Manifold Gauge VMG-4-R410A

Making Your Job More Enjoyable !

Suitable for R410A refrigerant



## Precision/Impact-Resistant

### Impact-resistant

- Impact-Resistant design
- Durable rubber cover

### Accurate

- Precision pressure gauge

### Built In Metal Handle

- High strength, with higher reliability

### Sight Glass

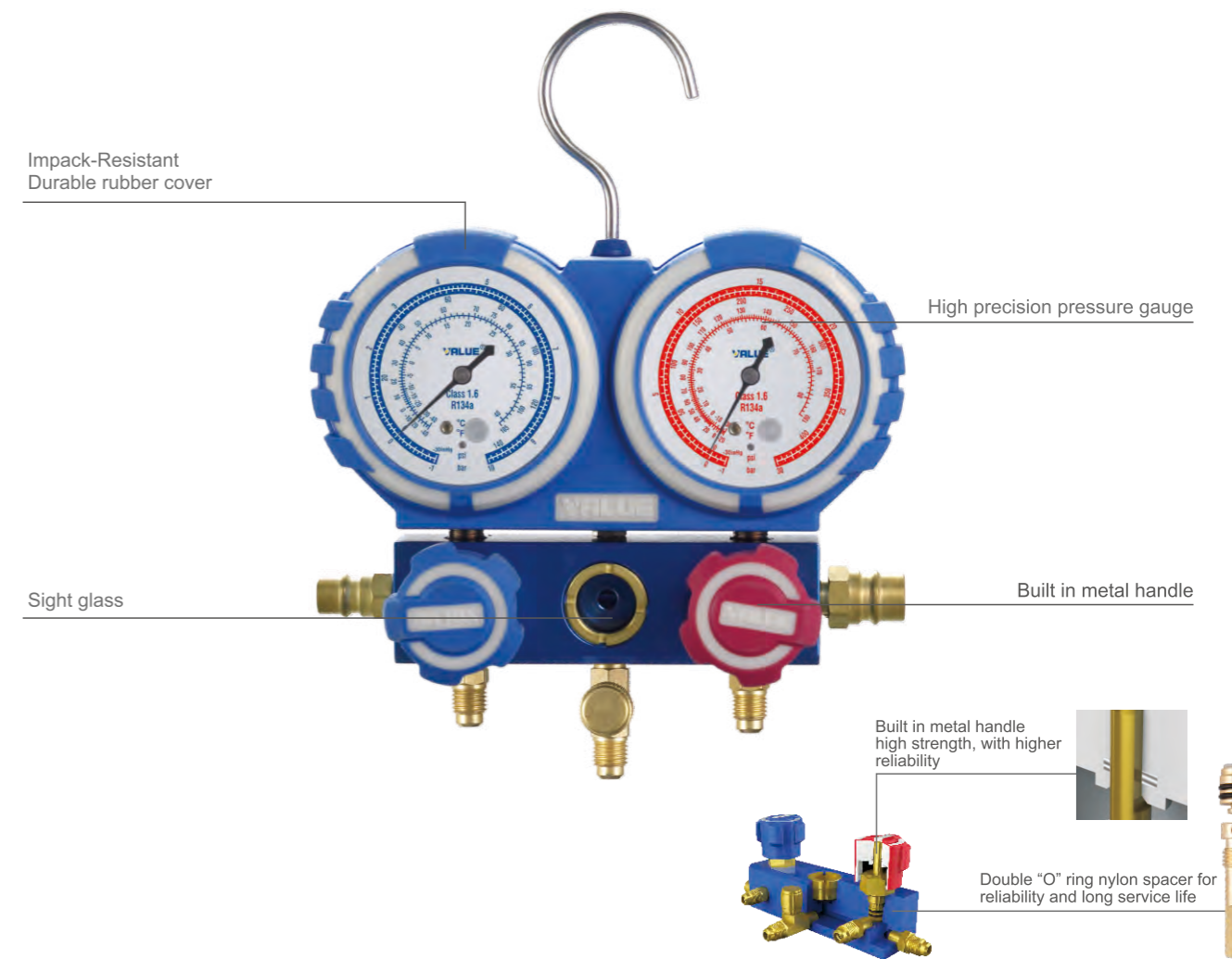
- To easily view refrigerant movement and condition during charging and recovery

Model	VMG-4-R410A
Refrigerant scale	R410A
Gauge Diameter	Φ 80mm
Pressure Scale	0~800 psi; -30~500 psi
Hose	Red&Blue: 1/4"-5/16", 2x1pc Yellow: 1/4"-1/4", 1pc Black: 3/8"-3/8", 1pc
Length	150cm
Package	Blow Case

## Manifold Gauge VMG-2-R134a

Making Your Job More Enjoyable !

Suitable for R134a refrigerant



## Precision/Impact-Resistant

### Impact-resistant

- Impact-Resistant design
- Durable rubber cover

### Accurate

- Precision pressure gauge

### Built In Metal Handle

- High strength, with higher reliability

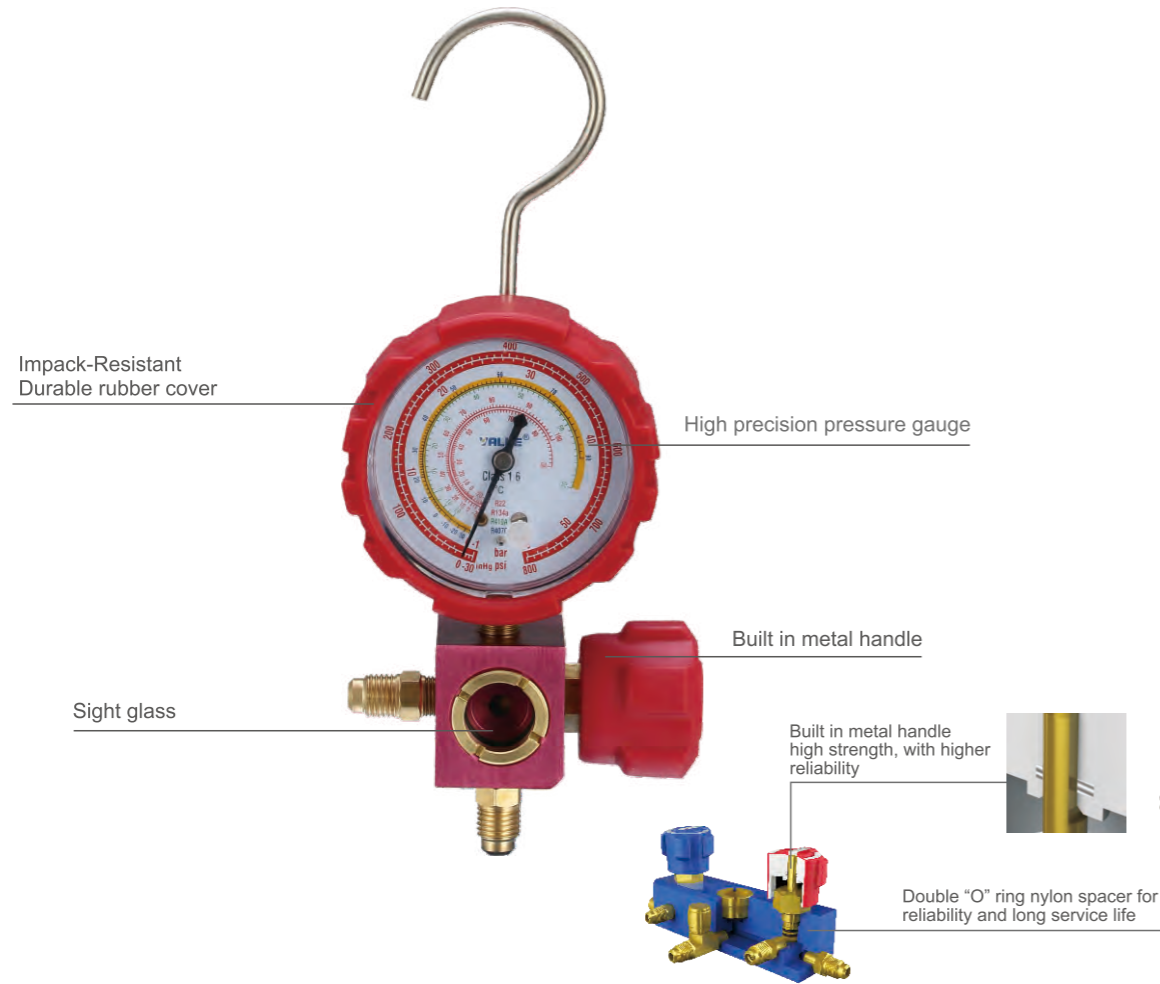
### Sight Glass

- To easily view refrigerant movement and condition during charging and recovery

Model	VMG-2-R134a	VMG-2-R134a-B	VMG-2-R134a-02	VMG-2-R134a-B-02
Refrigerant scale	R134a			
Gauge Diameter	Φ 80mm	Φ 68mm	Φ 80mm	Φ 68mm
Pressure Scale	0~400 psi; -30~140 psi		0~400 psi; -30~140 psi	
Hose	Red & Blue & Yellow: 1/4"-1/4", 3x1pc		Red & Blue: 1/2"Acme, M14x1.5, 2x1pc Yellow: 1/2"Acme, 1/2"Acme, 1pc	
Length	120cm		120cm	
Package	Blow Case		Blow Case	
Quick Couplers	VHF-SA 1set		VHF-SB 1set	

# Single Gauge VMG-1C-R32-H

Making Your Job More Enjoyable !



## Precision/Impact-Resistant

### Impact-resistant

- Impact-Resistant design
- Durable rubber cover

### Accurate

- Precision pressure gauge

### Built In Metal Handle

- High strength, with higher reliability

### Sight Glass

- To easily view refrigerant movement and condition during charging and recovery

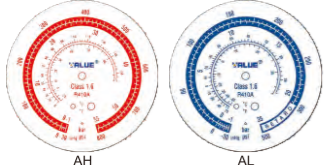
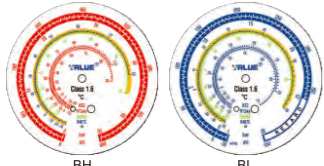
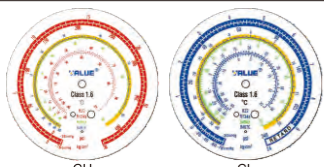
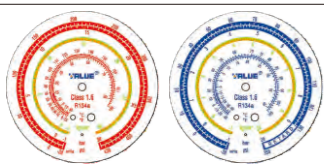
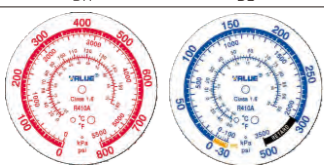
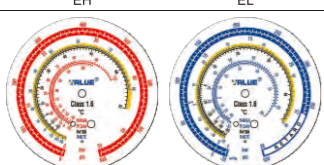
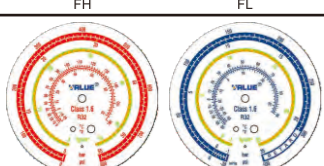
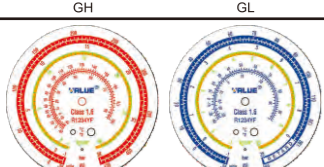
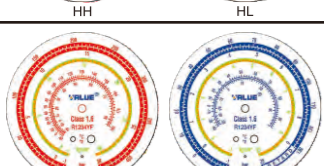
Model	VMG-1-U-H	VMG-1-U-L	VMG-1-S-H	VMG-1-S-L
Gauge Diameter	ABH/ABL Φ68mm			
Refrigerant scale (Optional)	ABH/ABL	R134a		
	BBH/BBL	R22/R134a/R404A/R407C		
	CBH/CBL	R22/R134a/R410A/R407C		
	EBH/EBL	R410A		
	FBH/FBL	R600/R600a/R290		
Pressure Scale	-30inHg ~ 800 psi	-30inHg ~ 500 psi	-30inHg ~ 800 psi	-30inHg ~ 500 psi
Sight glass	Without		With	
Package	Blister packing			

# Pressure Gauge

Making Your Job More Enjoyable !

High / Low Pressure Gauge	Gauge Diameter	Unit	Refrigerant	MRP NO.	Thread
	Φ68mm	°C/°F/ Pis/Bar	R134a	342260108 342260109	NPT1/8"
	Φ68mm	°C/Psi/Bar	R22 R134a R404A R407C	342260110 342260111	NPT1/8"
	Φ68mm	°C/Psi/Bar	R22 R134a R410A R407C	342260112 342260113	NPT1/8"
	Φ68mm	°C/°F/ Psi/Bar	R410A	342260114 342260115	NPT1/8"
	Φ68mm	°C/Psi/Bar	R404A R134a R410A R407C	342260118 342260119	NPT1/8"
	Φ68mm	Psi/Bar	R600 R600a R290	342266427 342266428	NPT1/8"
	Φ68mm	Psi/Bar	R22 R410A R32	342260122 342260123	NPT1/8"
	Φ68mm	Psi/Bar	R32 R134a R410A R407C	342260124 342260125	NPT1/8"

## Pressure Gauge

High / Low Pressure Gauge	Gauge Diameter	Unit	Refrigerant	MRP NO.	Thread
	Φ80mm	°C/°F/Psi/Bar	R410A	342260101 342260102	NPT1/8"
	Φ80mm	°C/Psi/Bar	R22 R134a R410A R407C	342260104 342260105	NPT1/8"
	Φ80mm	°C/Psi/kg/cm <sup>2</sup>	R22 R134a R404A R407C	342260401 342260402	NPT1/8"
	Φ80mm	°C/°F/Psi/ Bar/kg/cm <sup>2</sup>	R134a	342260405 342260406	NPT1/8"
	Φ80mm	°C/°F/Psi/kPa	R410A	342260409 342260410	NPT1/8"
	Φ80mm	°C/Bar/Psi	R404A R134a R410A R407C	342260411 342260412	NPT1/8"
	Φ80mm	°C/°F/Psi/ Bar/kg/cm <sup>2</sup>	R32	342260413 342260414	NPT1/8"
	Φ80mm	°C/°F/Psi/ Bar/kg/cm <sup>2</sup>	1234yf	342260415 342260416	NPT1/8"
	Φ80mm	°C/Psi/Bar	R32 R134a R410A R407C	342260421 342260422	NPT1/8"

## Digital Manifold Gauge VDG-1

Making Your Job More Enjoyable !

Suitable for R32, R410A, R22, 1234yf, R134a refrigerant



## Precision/Impact-Resistant

### Impact-resistant

- Impact-Resistant design
- Durable rubber cover

### Sight Glass

- To easily view refrigerant movement and condition during charging and recovery

### Accurate

- Precision pressure gauge

### Wide Range of Application

- It's suit for more than 40 refrigerants

### LCD Backlit Display

- Clearly display, easy to read

### Built in Metal Handle

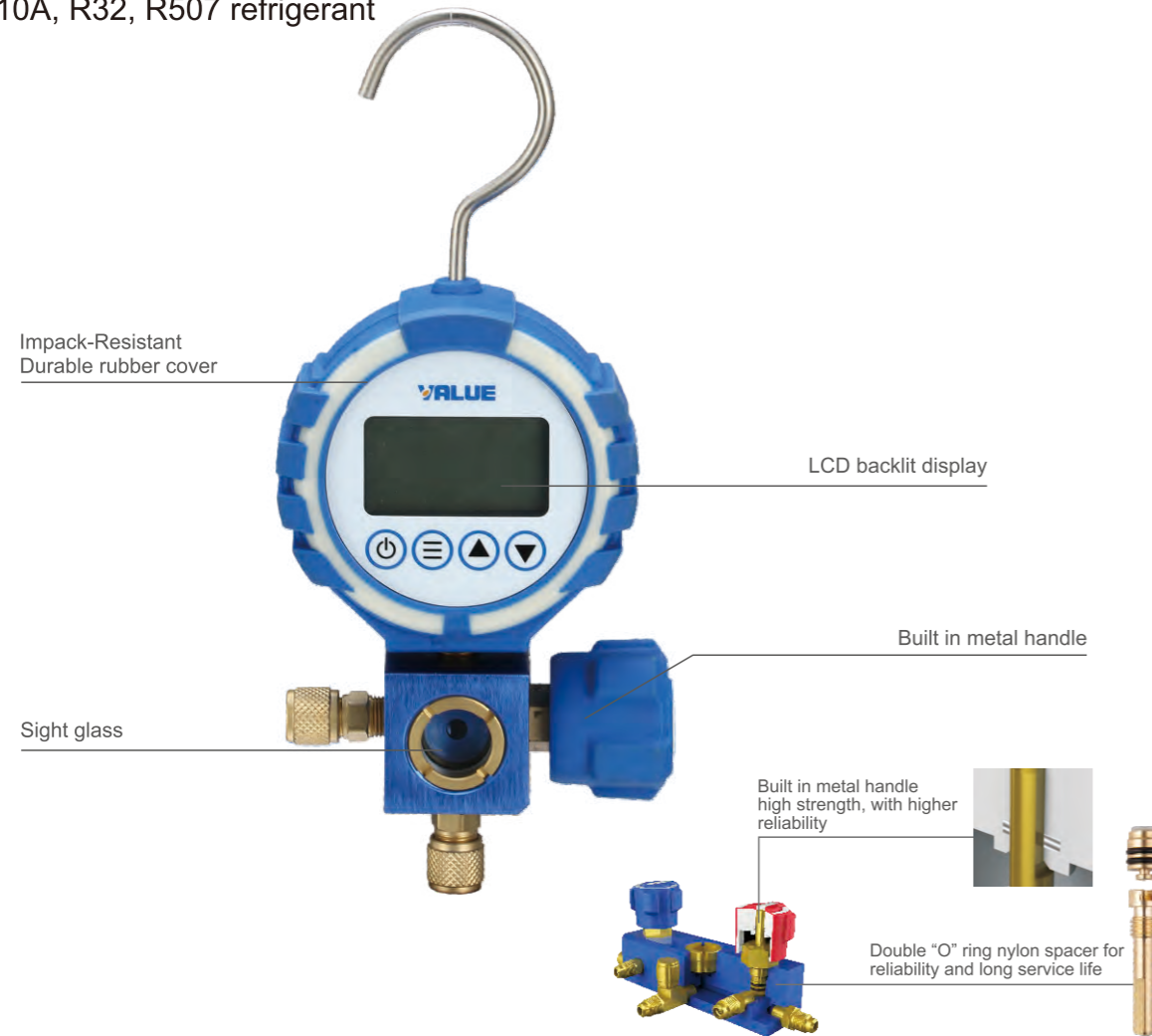
- High strength, with higher reliability

Model	VDG-1
Operating temperature	10~90% RH
Measuring range pressure	-14.5~725 psi
Net weight	1.2 kg

## Digital Single Gauge VDG-S1

Making Your Job More Enjoyable !

Suitable for R22, R134a, 1234yf, R290, R404A, R407C, R410A, R32, R507 refrigerant



## Precision/Impact-Resistant

### Impact-resistant

- Impact-Resistant design
- Durable rubber cover

### Accurate

- Precision pressure gauge

### LCD Backlit Display

- Clearly display, easy to read

### Sight Glass

- To easily view refrigerant movement and condition during charging and recovery

### Wide Range of Application

- It's suit for 9 refrigerants

### Built in Metal Handle

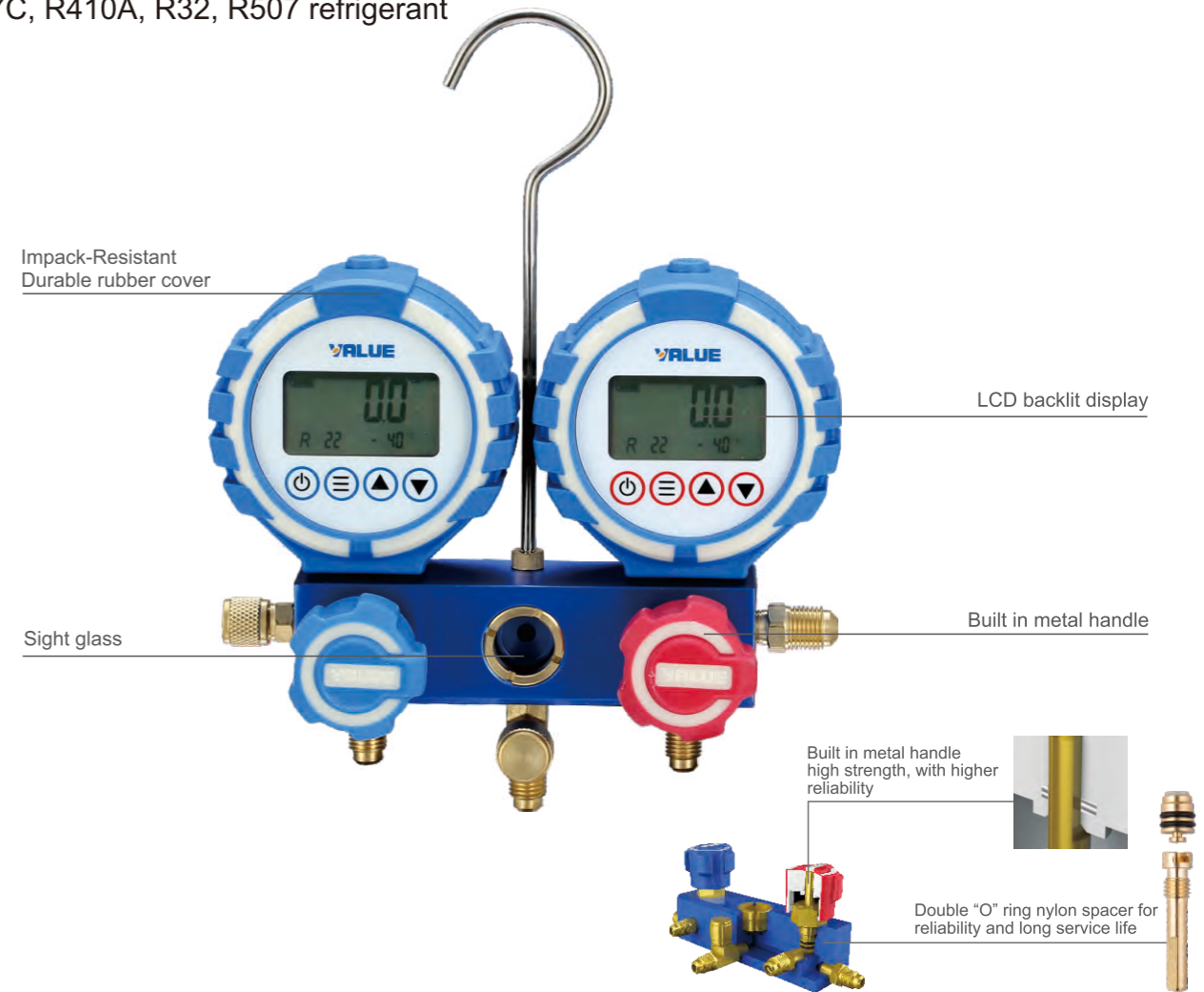
- High strength, with higher reliability

Model	VDG-S1
Refrigerant scale	R22, R134a, 1234yf, R290, R404A, R407C, R410A, R32, R507
Pressure display	psi bar Kpa Mpa kgf/cm <sup>2</sup>
Pressure resolution	1 psi; 0.1 bar; 10 kPa; 0.01 Mpa; 0.1 kgf/cm <sup>2</sup>
Connection	2x1/4" SAE
Power	1x9V DC battery

## Digital Manifold Gauge VDG-2-S1

Making Your Job More Enjoyable !

Suitable for R22, R134a, 1234yf, R290, R404A, R407C, R410A, R32, R507 refrigerant



## Precision/Impact-Resistant

### Impact-resistant

- Impact-Resistant design
- Durable rubber cover

### Accurate

- Precision pressure gauge

### LCD Backlit Display

- Clearly display, easy to read

### Sight Glass

- To easily view refrigerant movement and condition during charging and recovery

### Wide Range of Application

- It's suit for 9 refrigerants

### Built in Metal Handle

- High strength, with higher reliability

Model	VDG-2-S1
Refrigerant scale	R22, R134a, 1234yf, R290, R404A, R407C, R410A, R32, R507
Pressure display	psi bar Kpa Mpa kgf/cm <sup>2</sup>
Pressure resolution	1 psi; 0.1 bar; 10 kPa; 0.01 Mpa; 0.1 kgf/cm <sup>2</sup>
Hose	Red & Blue: 1/4"-5/16", 2x150cm Yellow: 1/4"-1/4", 150cm
Power	2x9V DC battery

## Digital Manifold Gauge VDG-4-S1

Making Your Job More Enjoyable !

Suitable for R22, R134a, 1234yf, R290, R404A, R407C, R410A, R32, R507 refrigerant



## Precision/Impact-Resistant

### Impack-resistant

- Impack-Resistant design
- Durable rubber cover

### Accurate

- Precision pressure gauge

### LCD Backlit Display

- Clearly display, easy to read

### Sight Glass

- To easily view refrigerant movement and condition during charging and recovery

### Wide Range of Application

- It's suit for 9 refrigerants

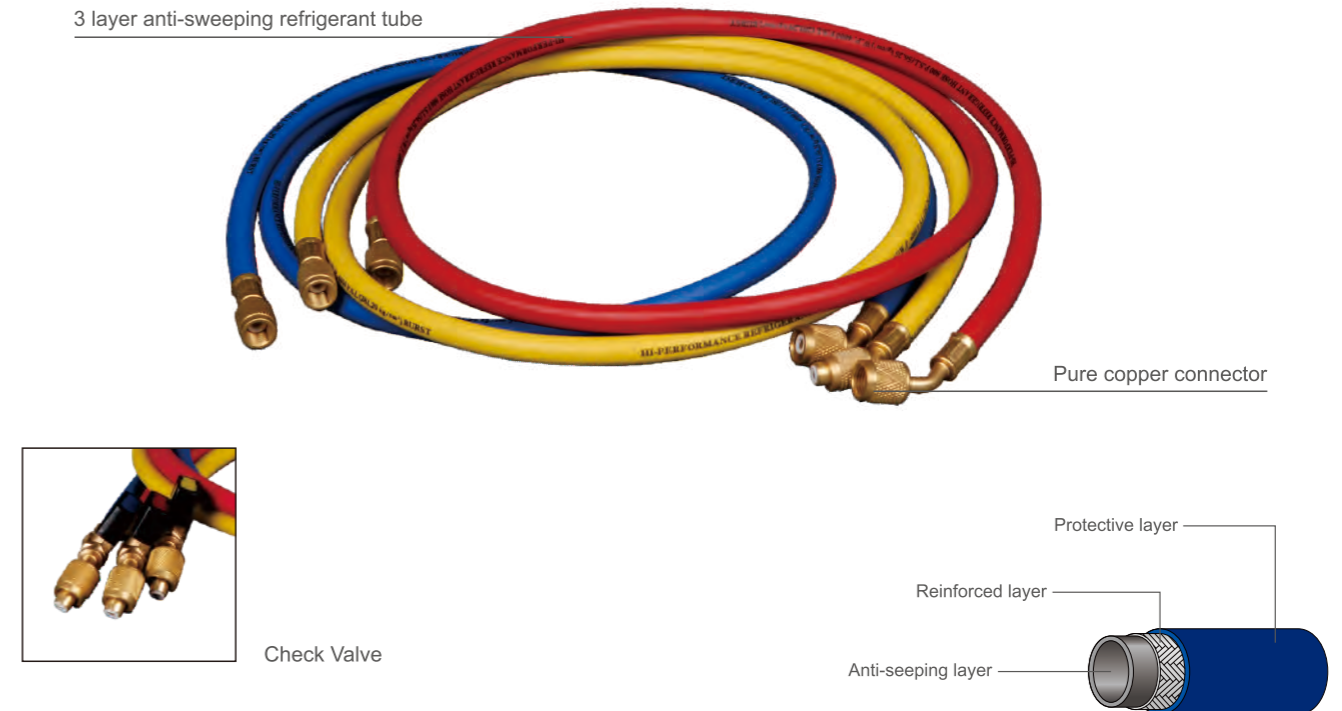
### Built in Metal Handle

- High strength, with higher reliability

Model	VDG-4-S1
Refrigerant scale	R22, R134a, 1234yf, R290, R404A, R407C, R410A, R32, R507
Pressure display	psi bar Kpa Mpa kgf/cm <sup>2</sup>
Pressure resolution	1 psi; 0.1 bar; 10 kPa; 0.01 Mpa; 0.1 kgf/cm <sup>2</sup>
Hose	Red & Blue: 1/4"-5/16", 2x150cm Yellow: 1/4"-1/4", 150cm Black: 3/8"-3/8", 150cm
Power	2x9V DC battery

## Refrigerant Tube

Making Your Job More Enjoyable !



## High strength

### Wide Range of Application

- It's suit for R410A, R134a, R22, etc

### Safe and Reliable

- Rubber tube reinforced thickness 12mm, Ensure safe and reliable using

### High Oil-resistance, Anti-seep

- 3 layer reinforce refrigerant tube, Effective avoid seeping
- Pure copper connector, Longitudinal die-casting

### Check Valve

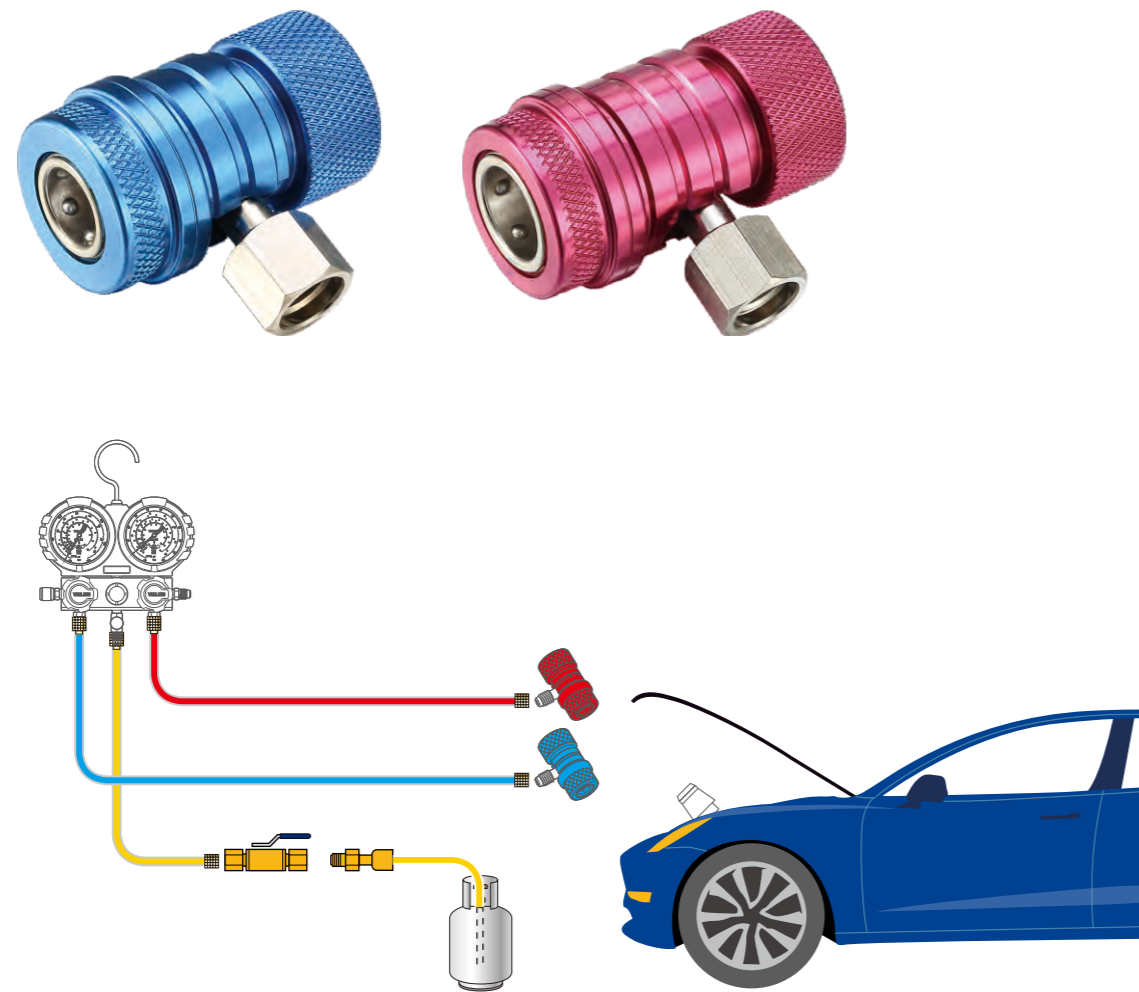
- Effectively complete the pipeline switching

Model	Connector Size	
	R410A	R134a
Refrigerant scale	~800 psi	~800 psi; ~500 psi
VRP-U-R	1/4"-5/16"	1/4"-1/4"
VRP-U-Y	1/4"-1/4"	1/4"-1/4"
VRP-U-B	1/4"-5/16"	1/4"-1/4"
Length	90cm 120cm 150cm	

Model	Connector Size		
	R410A	R134a , R22 , R12	R134a , R22 , R12
Refrigerant scale	~800 psi		
VRP-C-R	1/4"-5/16"	1/4"-1/4"	1/2" M14x1.5
VRP-C-Y	1/4"-1/4"	1/4"-1/4"	1/2" -1/2"
VRP-C-B	1/4"-5/16"	1/4"-1/4"	1/2" M14x1.5
Length	90cm 120cm 150cm		

## Quick Coupler

Making Your Job More Enjoyable !



## Quick-connect

### Easy to Use

- Automatically locks, one-step connection

### Durable

- High strength, high pressure resistance
- Long service life

### High Oil-resistance, Anti-seeping

- 3 layer reinforce refrigerant tube, Effective avoid seeping
- Longitudinal die-casting seal, prevent leakage of connector

VHF quick couples series

Model	VHF-SA	VHF-SB	VHF-SC	VHF-SY
Description	1/4" SAE	M14 × 1.5	3/8" SAE	M12 × 1.5

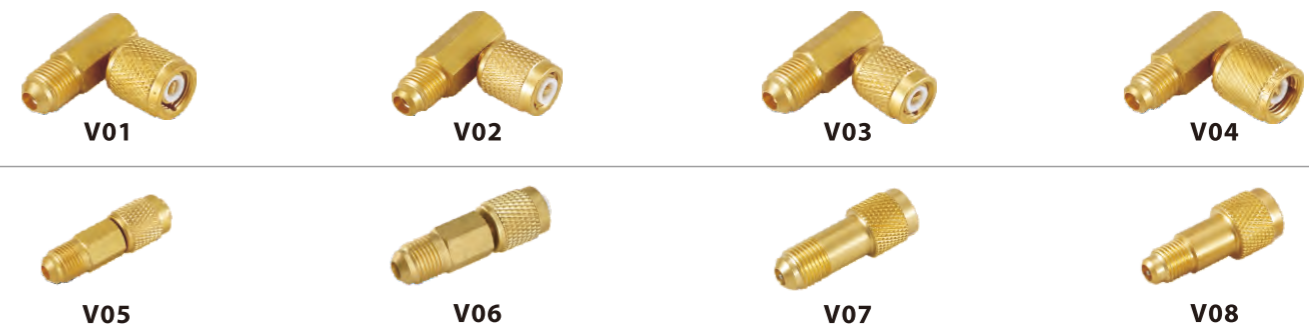
## Check Valve

Making Your Job More Enjoyable !



Item	Description	Item	Description
CV01	Male: 1/4"SAE Female: 5/16" SAE	Cv07	Male: 1/4"SAE Female: 1/4" SAE
CV02	Male: 1/4"SAE Female: 5/16" SAE 45°	CV08	Male: 5/16"SAE Female: 5/16"SAE 45°
CV03	Male: 1/4"SAE Female: 5/16" SAE 60°	CV09	Male: 5/16"SAE Female: 5/16"SAE 60°
CV04	Male: 5/16"SAE Female: 5/16" SAE	CV10	Male: 5/16"SAE Female: 1/4" SAE
CV05	Male: 1/4"SAE Female: 1/4" SAE 45°	CV11	Male: 5/16"SAE Female: 1/4"SAE 45°
CV06	Male: 1/4"SAE Female: 1/4" SAE 60°	CV12	Male: 5/16"SAE Female: 1/4" SAE 60°

## Adapter



Item	Description	Item	Description
V01	Male: 5/16"SAE 90° Female: 5/16" SAE	V05	Male: 1/4"SAE Female: 5/16" SAE
V02	Male: 1/4"SAE 90° Female: 5/16" SAE	V06	Male: 5/16"SAE Female: 1/4" SAE
V03	Male: 5/16"SAE 90° Female: 1/4" SAE	V07	Male: 1/4"SAE Female: 5/16" SAE
V04	Male: 1/4"SAE 90° Female: 1/4" SAE	V08	Male: 5/16"SAE Female: 1/4" SAE

## Difference comparison between R22 and R410A systems

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## Characteristics of R410A and Notes

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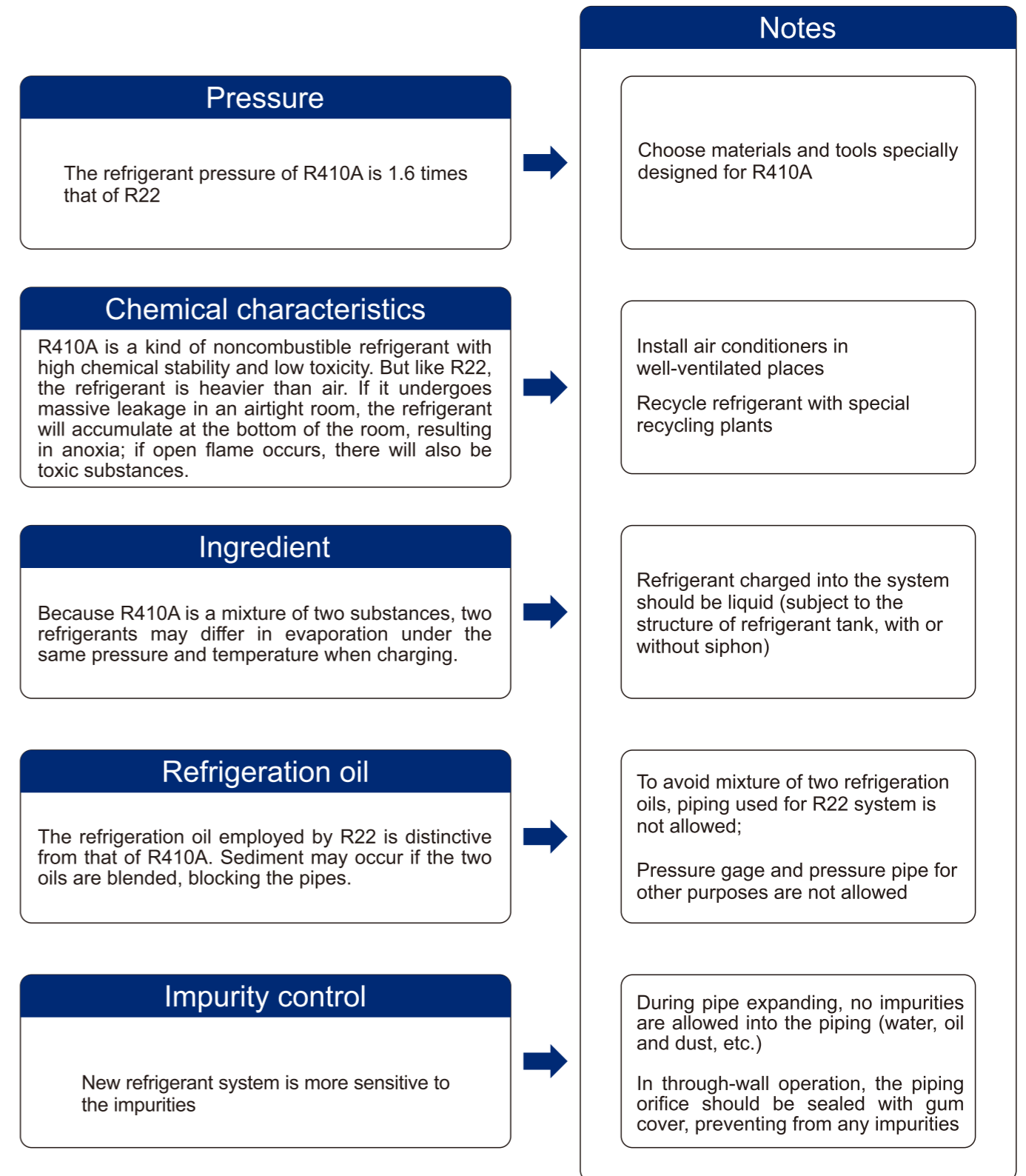
### Characteristics of refrigerant (39°C)

Refrigerant	Thermal conductivity W/ (m · k)	Gas density: kg/m <sup>3</sup>	Dynamic viscosity: Pa · s	Critical temperature: °C
R22	0.077	64	0.000141	96.13
R410A	0.088	98	0.000099	72.13

### Other characteristics are shown as below:

Name	R22	R407C	R410A
Ingredient	HCFC-22	HFC-32/125/134a	HFC-32/125
Composition	100%	25/25/52%	50/50%
Key characteristics		Frosting may occur to greenhouse due to non-azeotropic heat transfer performance declines	Similar to azeotropic refrigerant, with operating pressure of 1.6 times of R22, and less pressure loss
Performance characteristics (compared with R22)	100	Theoretical refrigerating capacity: 95~101 Theoretical COP: 93~99	Theoretical refrigerating capacity: 138~142 Theoretical COP: 89~93
Best match system COP	100	95~100	94~101
ODP (CFC11=1)	0.055	0	0
GWP (CO <sub>2</sub> =1)	1900	1600	2100
Combustibility	None	None	None
Allowable concentration (ppm)	1000	1000	1000
Molecular weight	86.5	86.2	72.6
Boiling point (°C)	-40.8	-43.56	-51.6
Temperature glide (°C)	0	4.8	0.1
Gas density (compared with R22)	1	1	1.4 (High density)
Discharge pressure (theoretical condition) (Pa)	2118 × 10 <sup>3</sup>	2246 × 10 <sup>3</sup>	3285 × 10 <sup>3</sup>

1. R410A is **14%** higher than R22 in thermal conductivity, with high heat exchange performance;
2. R410A is **50%** higher than R22 in gas density, and **50%~60%** higher in operating pressure;
3. R410A is **30%** lower than R22 in dynamic viscosity, and less flow resistance and longer flow path.

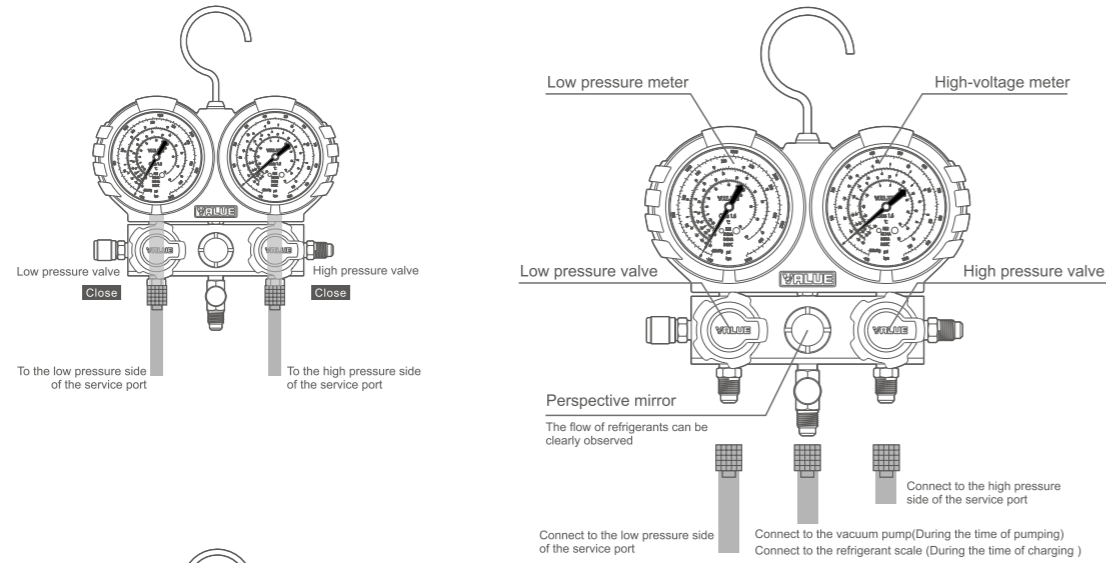




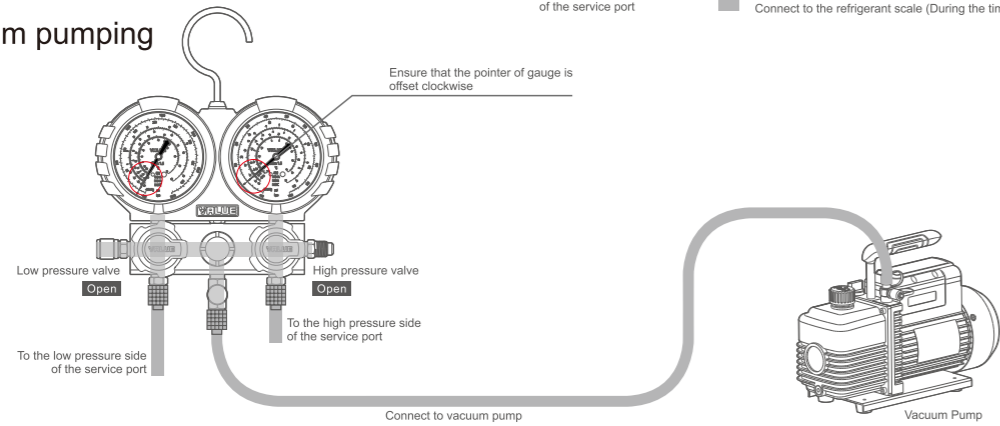
## Usage Method of Manifold

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### ① Internal pressure measurement



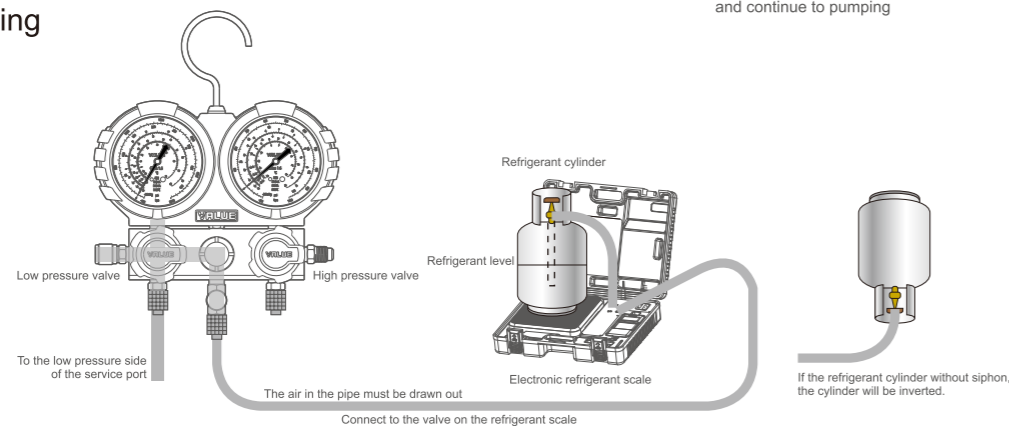
### ② Vacuum pumping



### ③ Vacuum leak detection



### ④ Charging



## Performance comparison of common refrigerants

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Name	R22	R123a	R134a	R410A	R407C
Composition	CHCLF <sub>2</sub>	CF <sub>3</sub> CHCL <sub>2</sub>	CH <sub>2</sub> FCF <sub>3</sub>	R32、R125 (50%、50%)	R32、R125、R134a (23%、25%、52%)
Refrigerating capacity (%)	100	Similar to R22, it is an ideal refrigerant, but with service life	100	99.2	99
COP (%)			93	105	95
Thermal performance (%)			+2	-7	-4
Compressor performance (%)			+3	+5	-1
Heat exchanger performance (%)			-6	+5	-2
Pipeline (%)			-2	+2	0
Overall performance (%)			-9	+5	-7
Merit and demerit	Limited services life	<p>The working evaporator is under negative pressure, and air and water vapor may permeate into the unit, thus air extractor should be installed; the moisture permeated into the unit may spark chemical reaction with refrigerant, and generate acids, corroding machine winding, greatly decreasing the insulating property, burning up the motor, and finally destroying the whole refrigerating system.</p> <p>① As to compressors with the same exhaust volume, the refrigerating capacity of R134a unit is only 60% of R22</p> <p>② The thermal conductivity of R134a has decreased by 10% compared with R22, thus the heat exchange area of the heat exchanger has increased.</p> <p>③ R134a is strong in water absorption. Therefore the dryer in the unit system should be capable of resisting ice blockage.</p> <p>④ R134a is highly corrosive to copper, and coppering may occur in use, thus additive is required.</p> <p>□ R134a will easily swell rubber substances so that refrigerant will seep out in service.</p> <p>⑥ Special compressors and are required lipid lubricating oils are needed for R134a system. Lubricating oils are less stable than mineral oils of R22 due to high hygroscopicity, foamability and diffusivity.</p> <p>⑦ Currently, the prices of HFC refrigerant and its special lubricating oil are higher than that of R22, thus the running cost of equipment may rise.</p>	<p>With excellent thermal conductivity and fluidity, it will substitute R22 unitary air conditioner. It has a relatively small specific volume (m<sup>3</sup>/kg), high density and large unit volume so as to reduce pipeline diameter and pressure chamber dimensions. But the high pressure has made high request for compressor and pipeline, and created problems to the maintenance and repair. In case of seep, all the refrigerants of R410A need to be replaced to ensure the proportion of mixtures, and achieve the best refrigeration effect.</p>	<p>With similar evaporating pressure to R22, it is a perfect substitute of R22. But the poor thermal conductivity has greatly increased the heat exchange area. At the same time, as a non-azeotropic refrigerant, temperature gradient is significant in heat exchanger. Therefore its pipeline should be especially arranged, which may cause difficulties to the production, commissioning and maintenance of air conditioning system. When seep occurs to R407C, the refrigerants should all be changed to guarantee a right proportion of each mixture and the best refrigeration effect. When R22 is replaced by R407C unit, the lubricating oil should be changed. Furthermore, the refueling amount and throttling elements need to be adjusted without modifying the compressor and other facilities. The refrigerating capacity and EER of R407C, however, is slightly reduced in relation to R22, the significant flaw of which may be temperature glide</p>	

## Refrigerant Scale VES-50A/100A

Making Your Job More Enjoyable !



Blow box

Weighing pan

Hand-held controller

## High Measurement

### High Precise Sensor

- Precise measurement
- Higher precision

### LCD Backlit Display

- Clearly display, easy to read

### Easy to Carry

- Clearly display, easy to read

## Refrigerant Scale VES-50A/100A

Making Your Job More Enjoyable !



**1** Open the electrical scale

**2** Place the refrigerant tank and clear the electrical scale

**3** Enter the filling and recovery function, enter the net weight values of the refrigerant, and press Enter



**4** When close to fixing weight of filling/recovery, electronic scale will alarm and prompts the filling/recovery has been completed

**5** After filling/recovery, stop the scale manually, and press Enter

Model	VES-50A	VES-100A
Weighting range	50 kg	100 kg
Resolution	2 g	5 g
Accuracy	±0.05% F.S	
Display	LCD	
Power	DC 9V/AC(100V~230V)	
Working environment	-10℃~40℃, ≤75% Humidity	
Platform size	237×237 mm	
Weight	5 kg	

## Refrigerant Scale VES-50B/100B

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## High Measurement

### High Precise Sensor

- Precise measurement
- Higher precision

### Easy to Carry

- Lighter

### LCD Backlit Display

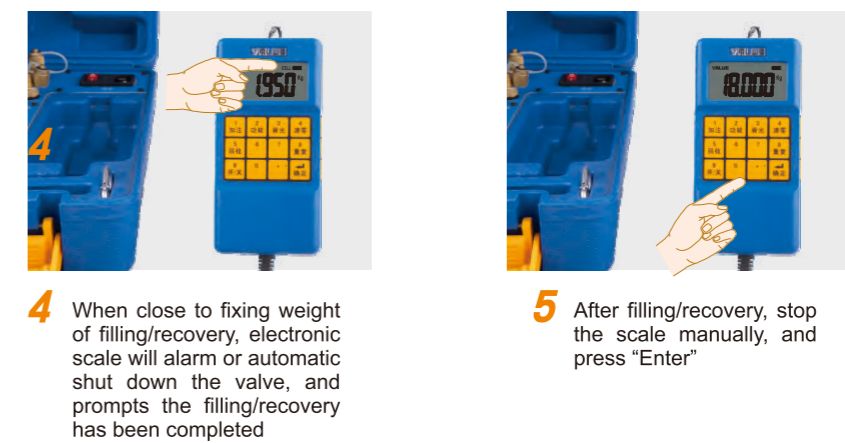
- Clearly display, easy to read

### High Precise Valve

- Quantitative filling precision control

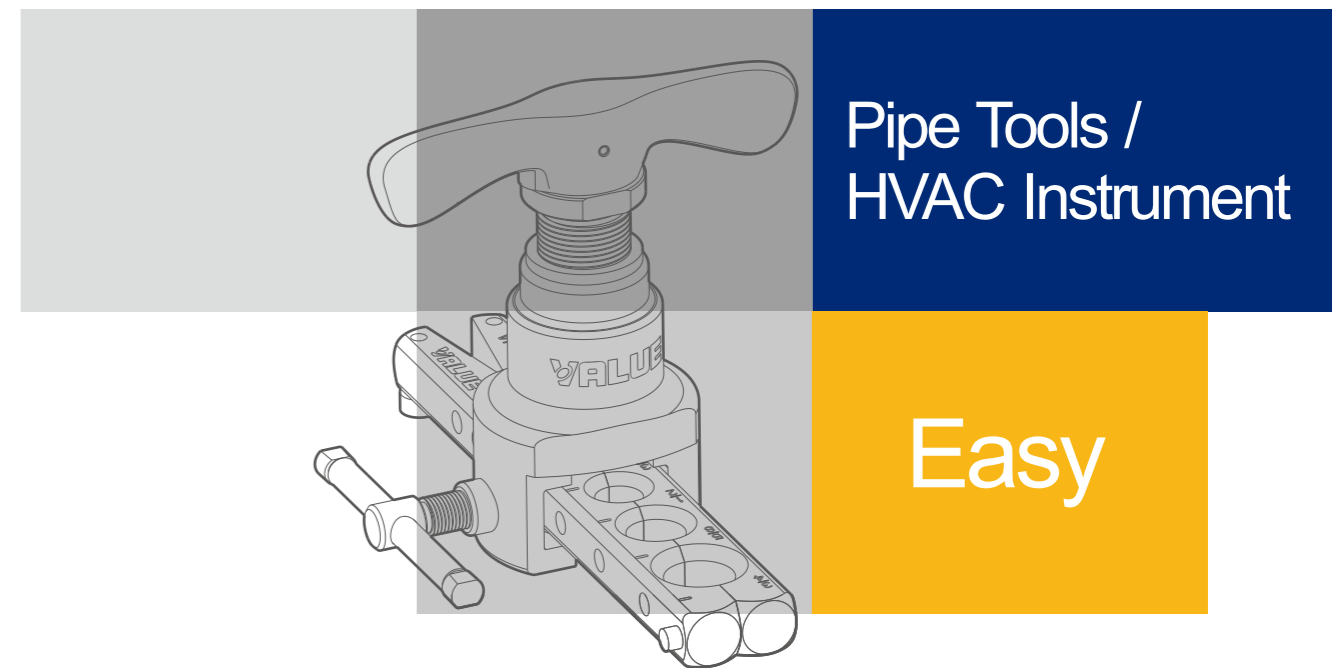
## Refrigerant Scale VES-50B/100B

Making Your Job More Enjoyable !



Model	VES-50B	VES-100B
Weighting range	50 kg	100 kg
Resolution	2 g	5 g
Accuracy	±0.05% F.S	
Display	LCD	
Power	DC 9V/AC(100V~230V)	
Working environment	-10℃~40℃, ≤75% Humidity	
Platform size	237×237 mm	
Weight	6.5 kg	
Automatic shut-off	Yes	

# Tools

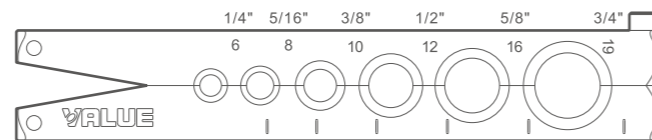
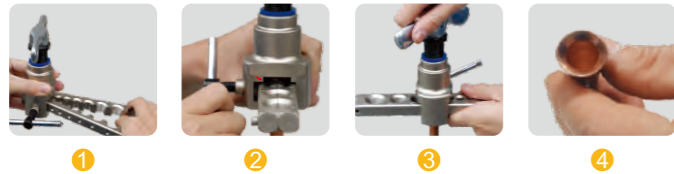


Pipe Tools /  
HVAC Instrument

Easy



Usage method of quick-clamp



## Accurate Flaring

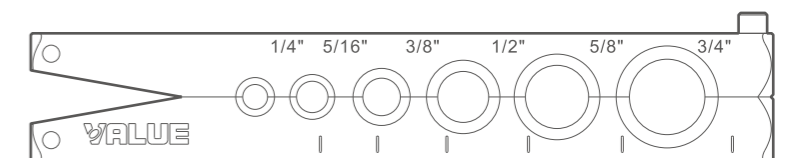
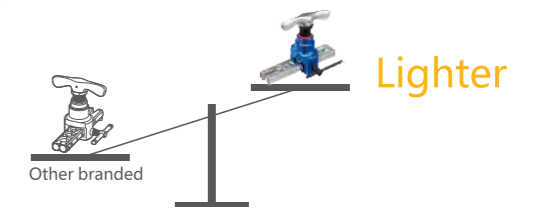
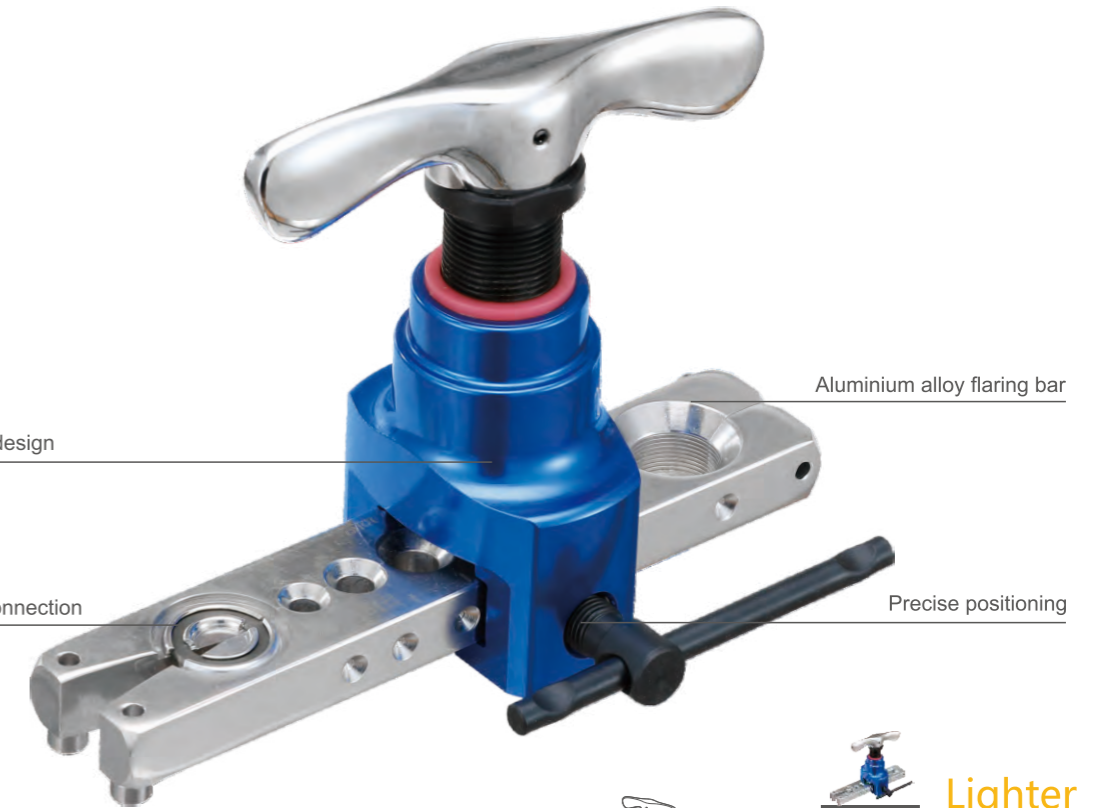
### Annular Rivet Connection

- More precise of flared

### 45° Eccentric design

- Point contact flare, dimension standard, easy to use

Model	Tubing O.D.	Accessory	Packaging
VFT-808-IN	1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	/	Blister packing
VFT-808-I	1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	/	Blow case
VFT-808-I-02	1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	/	Carton
VFT-808-MI	6, 8, 10, 12, 16, 19mm 1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	/	Blow case
VFT-808-MI-02	6, 8, 10, 12, 15, 16, 18mm 1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	/	Blow case
VFT-808-IS	1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	VTC-28B	Blow case
VFT-808-MIS	6, 8, 10, 12, 16, 19mm 1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	VTC-28B	Blow case
VFT-808-IE	1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	VST-22	Blow case



## Accurate Flaring

### Aluminium Alloy Flaring Bar

- Lighter, easy to carry

### Annular Rivet Connection

- More precise of flared

### 45° Eccentric design

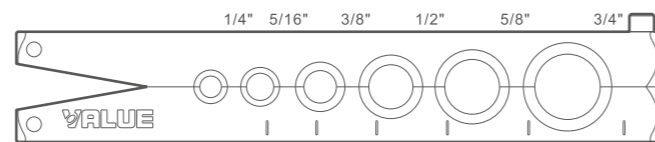
- Point contact flare, dimension standard, easy to use

Model	Tubing O.D.	Accessory	Packaging
VFT-808-A	1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	/	Carton

## Flaring Tool VFT-809

Making Your Job More Enjoyable !

Special design for R410A system



## Accurate Flaring

### Annular Rivet Connection

- More precise of flared

### 45° Eccentric design

- Point contact flare, dimension standard, easy to use

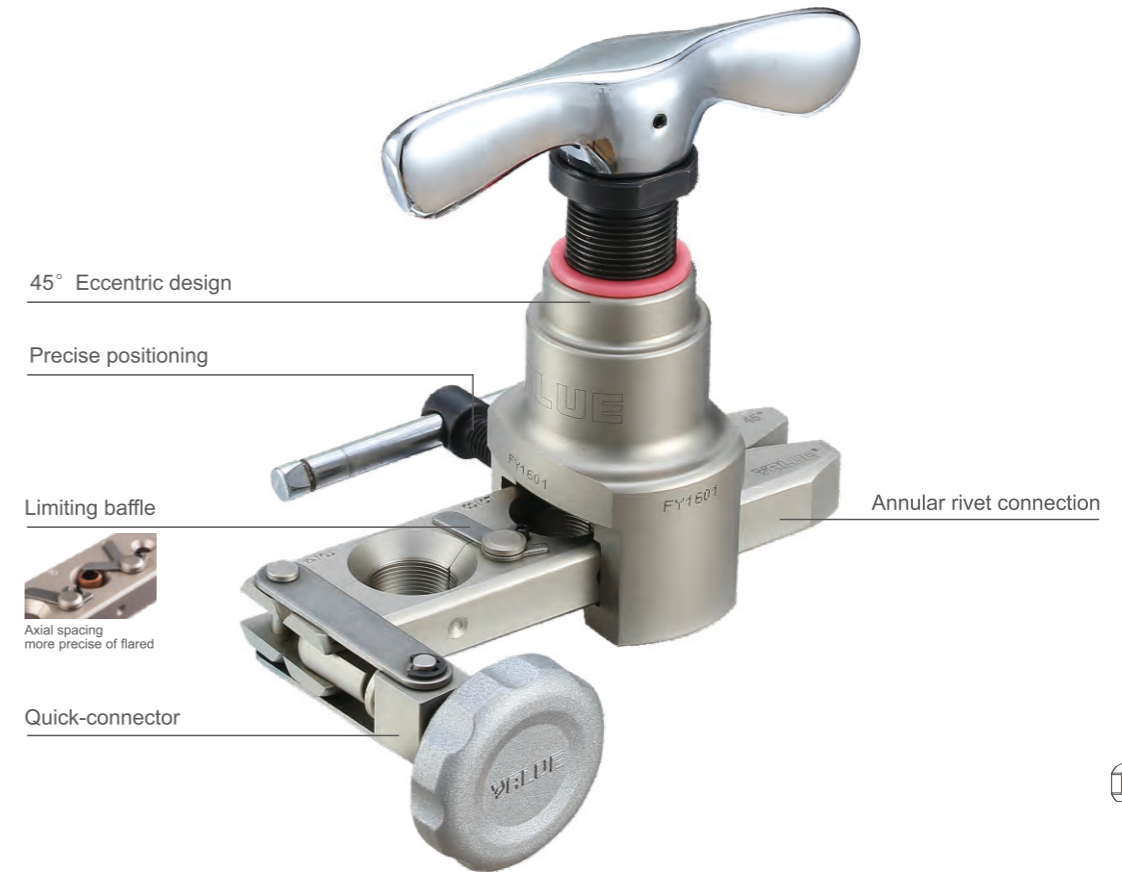
### 2 In 1 Flaring Bar

- It's suitable for metric-inch, easy to use

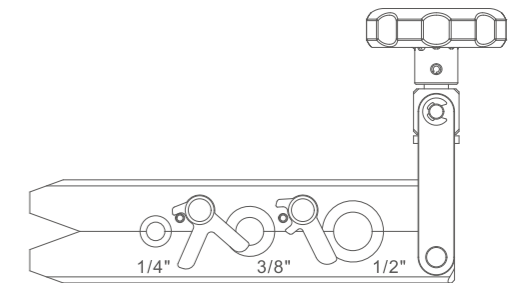
Model	Tubing O.D.	Accessory	Packaging
VFT-809-I	1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	/	Blow case
VFT-809-IS	1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	VTC-28B	Blow case

## Flaring Tool VFT-808C

Making Your Job More Enjoyable !



### Usage method of quick-clamp



## Accurate Flaring

### Annular Rivet Connection

- More precise of flared

### 45° Eccentric design

- Point contact flare, dimension standard, easy to use

### Axial Spacing

- More precise of flared

### Quick-connector

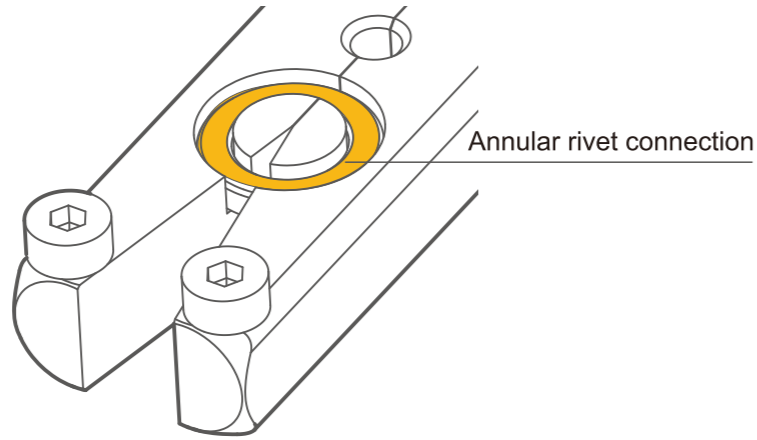
- Easy to use

Model	Tubing O.D.	Accessory	Packaging
VFT-808C	1/4", 5/16", 3/8", 1/2", 5/8", 3/4"	/	Blow case

The Outstanding Advantage of  
VALUE's Flaring Tool

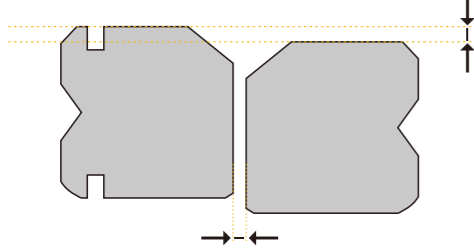
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## Annular rivet connection



## The differences between traditional flaring bar and VALUE's annular rivet connection

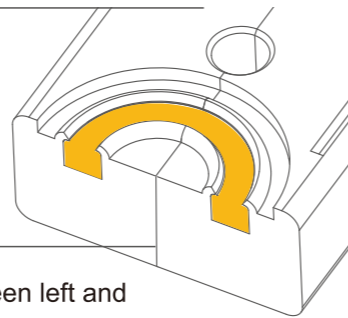
Large space between up and down flaring bar, and uneven surface




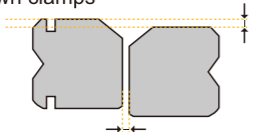
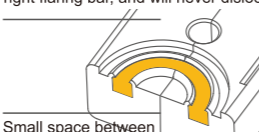

Excessive gap between left and right flaring bar (traditional)

**VS**

Annular rivet connection makes left and right flaring bar clamps, and will never dislocate



Small space between left and right flaring bar (VALUE annular rivet connection)

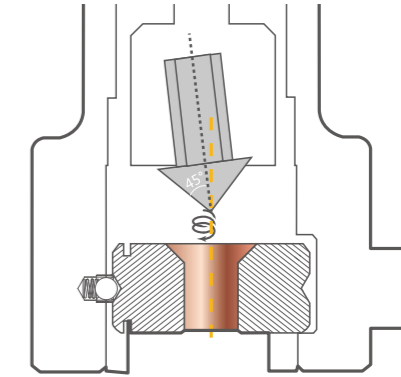
FAQ of copper pipe	Reason	Solutions	Result of flaring
<p>Uneven bell mouth dimensions falls short, and cannot be normally used</p> 	<p>Traditional flaring bar Large space between up and down clamps</p>  <p>Excessive gap of flaring bar</p>	<p>Annular rivet connection Annular rivet connection makes left and right flaring bar, and will never dislocate</p>  <p>Small space between left and right bar</p>	<p>Even and smooth orifice, accurate dimensions</p> 

The Outstanding Advantage of  
VALUE's Flaring Tool

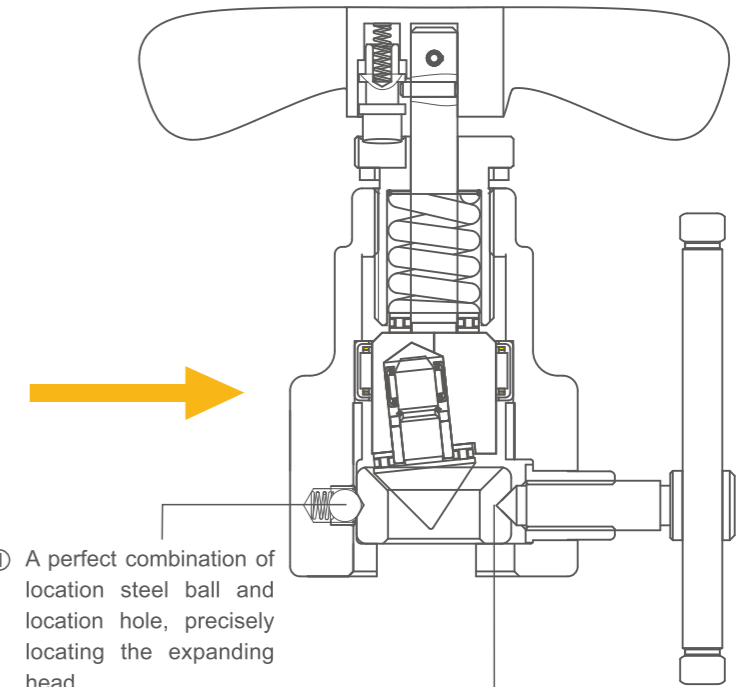
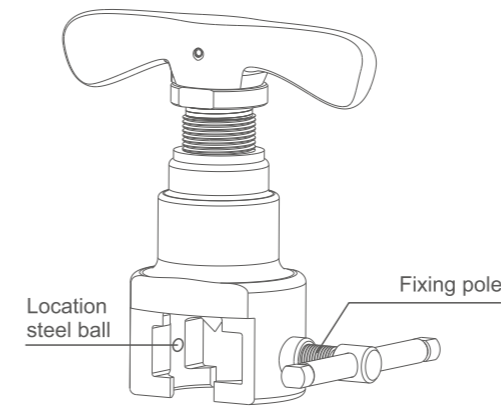
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## 45° Eccentricity

45° eccentricity, point contact reaming, standard dimensions, more convenient to use

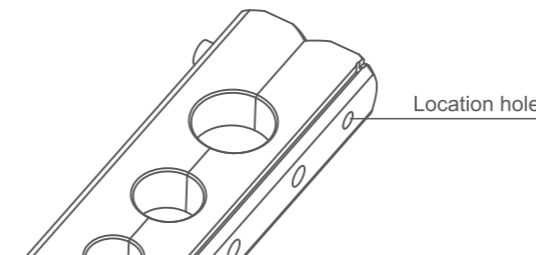


## Precise location



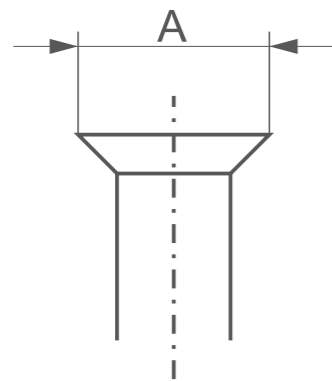
① A perfect combination of location steel ball and location hole, precisely locating the expanding head

② Fastening bolt and fastening expansion pipe clamp avoid clamp glide, and ensure pipe accuracy



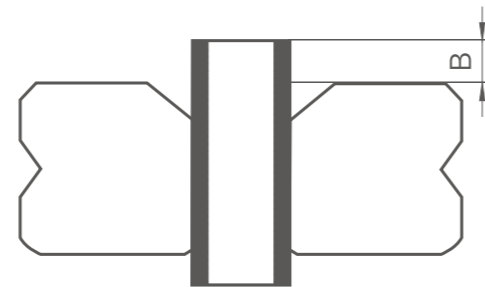
## R410A Series Air Conditioning Operation Specification

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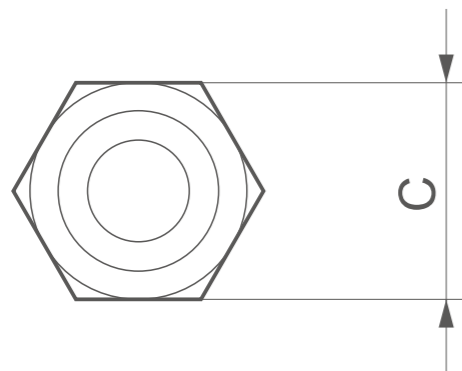
Flared dimensions: A (mm)

External diameter of copper pipe(mm)	A <sup>+0</sup> <sub>-0.4</sub>	
	R410A	R22
6.35	9.1	9.0
9.52	13.2	13.0
12.7	16.6	16.2



The protrusion length of copper pipe during flaring: B (mm)

Internal diameter of copper	When using a R10A only tool		When using a R22 only tool	
	R410A only	R22 only	R410A only	R22 only
6.35	0~0.5	0~0.5	1.0~1.5	0.5~1.0
9.52	0~0.5	0~0.5	1.0~1.5	0.5~1.0
12.7	0~0.5	0~0.5	1.0~1.5	0.5~1.0



Nut of flared: C (mm)

External diameter of copper pipe(mm)	R410A用	R22用
6.35	17	17
9.52	22	22
12.7	26	24



Thickness of copper pipe

Nominal diameter	Thickness (mm)		
	O steel material and OL steel material	R410A	R22 for reference
1/4	6.35	0.80	0.80
3/8	9.52	0.80	0.80
1/2	12.70	1.00	0.80
5/8	15.88	1.20	1.00

A copper pipe with thickness of 0.7mm can not be used in R410A air conditioner

## Operation Specification of R410A New Refrigerant Air Conditioner

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S/N	Tools	Purpose	R410A Air condition installation		Previous air conditioners
			New materials	Previous materials	New materials available for previous air conditioners
1	Tools for bell mouth	Processing piping bell mouth	Yes	△ ( Note 1 )	○
2	Substitute adjustment gauge	Previous bell mouth processing	Yes	△ ( Note 1 )	△ ( Note 1 )
3	For wrench Φ12.7	Connecting to bell mouth nut	Yes	×	×
4	Manifold pressure gage	Refrigerant refueling for vacuum supply	Yes	×	×
5	Air hose	Confirming revolving	Yes	×	×
6	Electronic balance for refrigerant refueling	Refrigerant refueling	Yes	×	○
7	Refrigerant cylinder	Refrigerant refueling	Yes	×	×
8	Leak detector	Detecting gas leakage	Yes	×	○
9	Refrigerant tank (pink)	Refrigerant refueling		×	×

Note 1: When processing R410A bell mouth with previous tools, adjustment should be made, and gauge for copper pipe measurement should be prepared.

Note 2: The operation method of adjustable wrench is the same as that of adjustable wrench refrigerant if applicable

(2) General tools (for traditional refrigerant air conditioners)

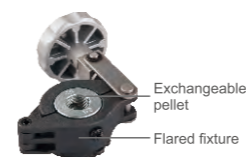
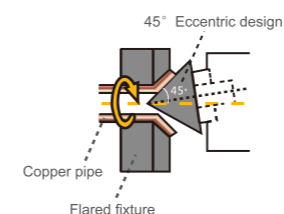
Besides the foregoing special tools, other general tools applicable to R22 are

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| (1) Vacuum pump                 | (7) Screwdriver (cross, straight) |
| (2) Metal wrench (Φ6.35, Φ9.52) | (8) Wrench or adjustable wrench   |
| (3) Pipe cutter                 | (9) Percussion drill              |
| (4) Reamer                      | (10) Hexagon wrench               |
| (5) Pipe bender                 | (11) Tape                         |
| (6) Level                       | (12) Straightedge                 |



## Cordless Power Flaring Tools VET-19-S

Making Your Job More Enjoyable !



Pipe Tools

## Quick Accurate Flaring

### Easy to Use

- High performance, large capacity lithium battery
- Variable speed
- Rechargeable
- No power supply needed

### Speed and Accuracy

- Designed for harsh environments
- Quick and accurate
- High quality flares

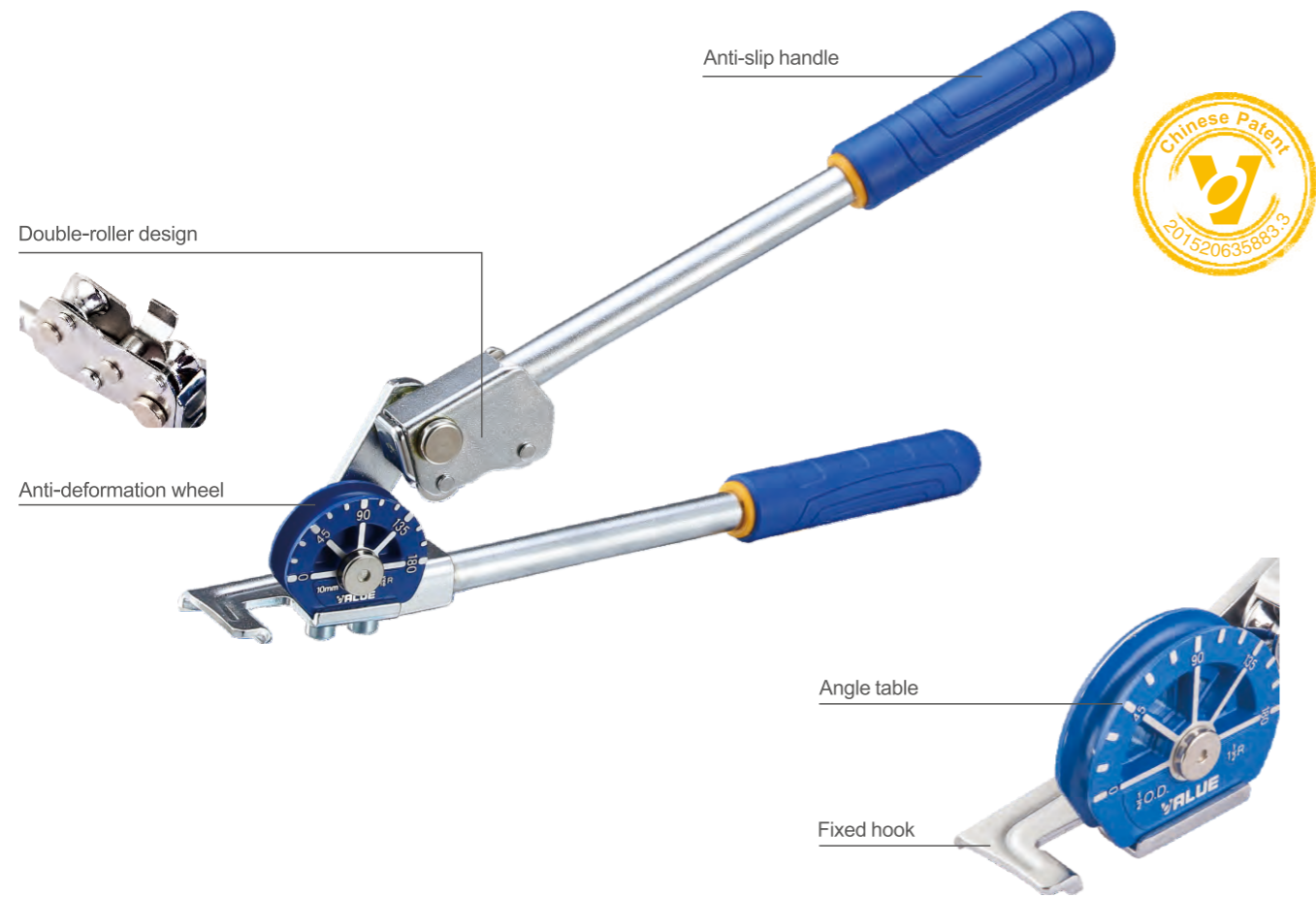
### Convenient for Narrow Space



Model	VET-19-S
Power	DC motor
Applicable Pipe	Copper pipe
Tubing O.D.	1/4", 5/16", 3/8", 1/2", 5/8", 3/4"
Flaring Shape	Flared
Accessory	VTC-28B, VTT-5

Bending Tool VBT-1/2

Making Your Job More Enjoyable !



## Easy To Bend

**Double-roller**

- Unique X-TURN steering structure It's easier to bend on 90°
- Double-roller design, reducing the pipe's friction, easy to bend

**Angle Table**

- The angle of bending is clearly visible

**Anti-slip Handle**

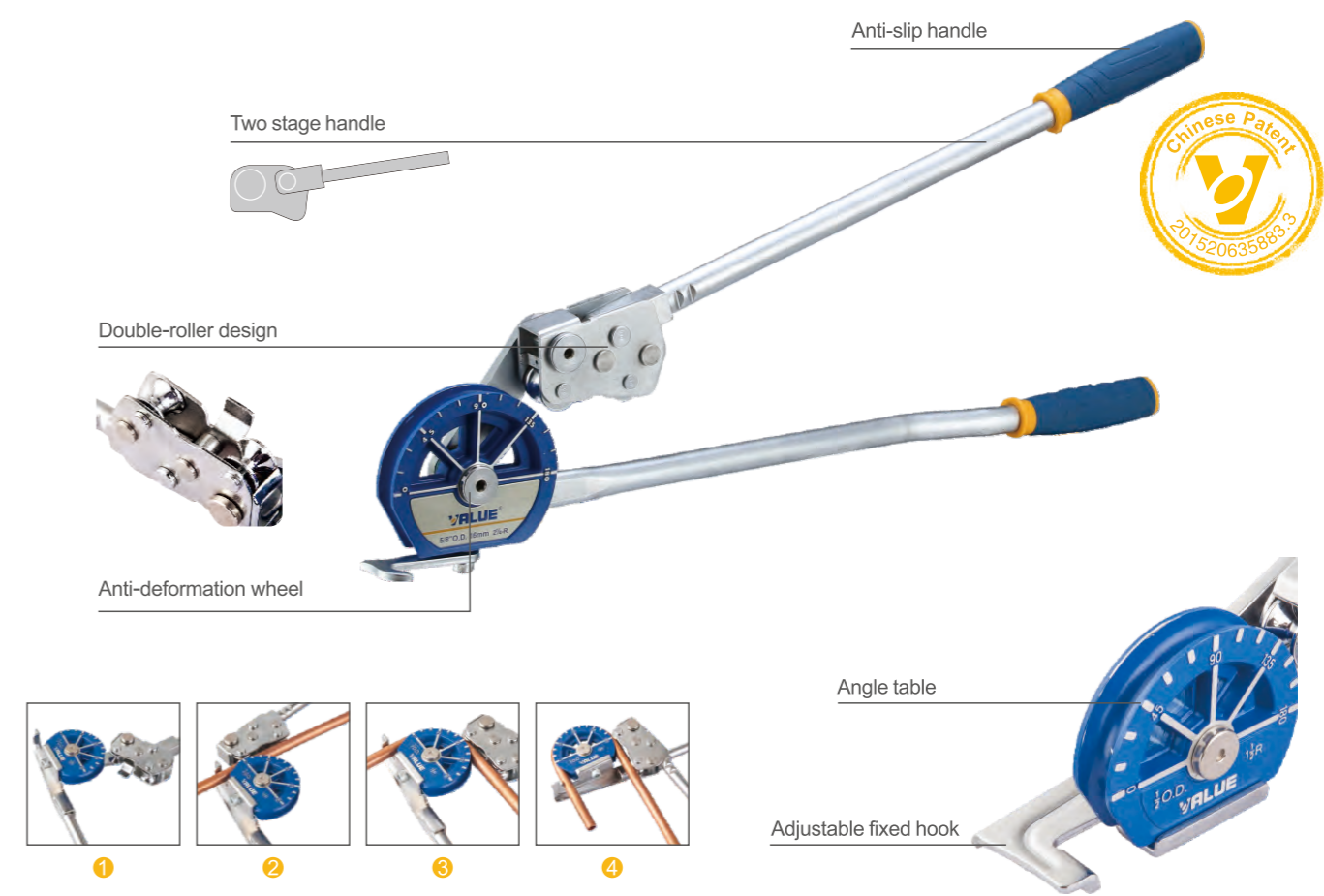
- Easy to use

VBT-1/2 Bending Tool

Model	VBT-1	VBT-1A	VBT-2	VBT-2
Bending Size	3/8"	10mm	1/2"	12mm
Bending Radius	15/16"	15/16"	1-1/2"	1-1/2"
Bending Angle	0~180°			
Applicable Material	All soft pipes, thin-wall copper pipes and annealed treated hard pipe			

Bending Tool VBT-3/4/5

Making Your Job More Enjoyable !



## Easy To Bend

**Double-roller**

- Unique X-TURN steering structure It's easier to bend on 90°
- Double-roller design, reducing the pipe's friction, easy to bend

**Two Stage Handle**

- Easy to bend, larger angle of bending

**Angle Table**

- The angle of bending is clearly visible

**Anti-slip handle**

- Easy to use

VBT-3/4/5 Bending Tool

Model	VBT-3	VBT-4	VBT-5
Bending Size	5/8", 16mm	3/4", 19mm	7/8", 22mm
Bending Radius	2-1/4"	3"	3-1/4"
Bending Angle	0~180°		
Applicable Material	All soft pipes, thin-wall copper pipes and annealed treated hard pipe		

Hydraulic Tube Expander VHE-29B/42B

Making Your Job More Enjoyable !



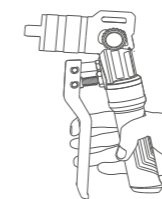
Pipe Tools



Hydraulic Expander 



Easy One-hand Operation



1

2

3

4

5

6

## Easy To Expand

**Hydraulic Expander**

- Easier use
- Suitable for larger diameter copper

**Compact**

- Convenient for narrow spaces
- Easy to use

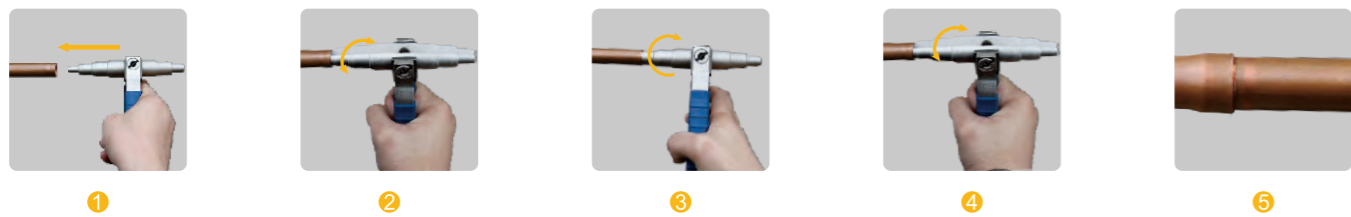
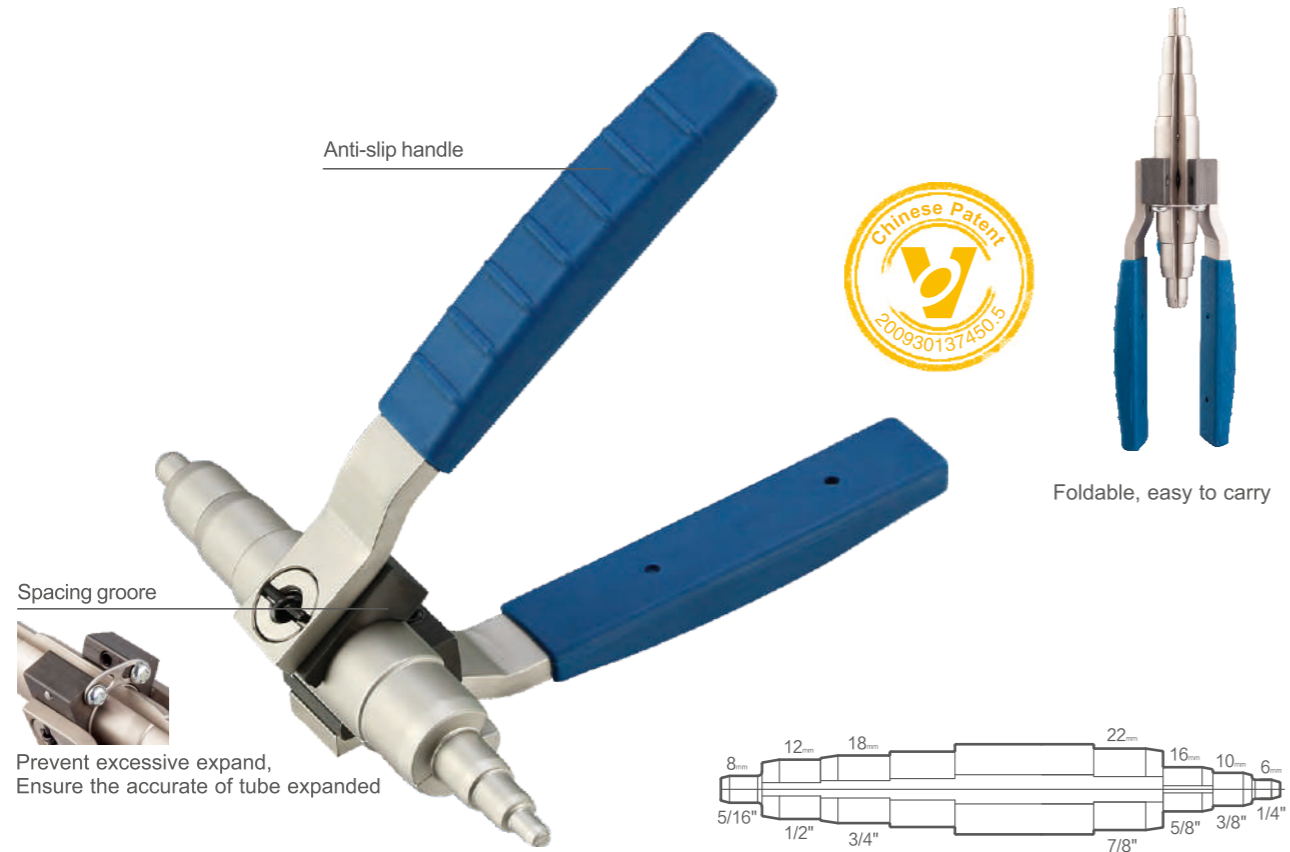
**Easy One-hand Operation**

- Reduced labor and improved efficiency

Model	Tube O.D.	Accessory
VHE-29A	3/8", 1/2", 5/8", 3/4", 7/8", 1", 1-1/8"	/
VHE-29AM	10, 12, 15, 16, 18, 22, 28mm	/
VHE-29B	3/8", 1/2", 5/8", 3/4", 7/8", 1", 1-1/8"	VTT-5 VTC-32
VHE-29BM	10, 12, 15, 16, 18, 22, 28mm	VTT-5 VTC-32
VHE-42B	3/8", 1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2", 1-5/8"	VTT-5 VTC-42
VHE-42BM	10, 12, 15, 16, 18, 22, 28, 35, 42mm	VTT-5 VTC-42

Tube Expander VST-22/22B

Making Your Job More Enjoyable !



## Easy To Expand

**Easy to Use**

- Simple structure for expanding copper tubing

**Easy to Carry**

- Foldable design for portability

**Spacing Groove**

- To prevent over flared, ensure the accurate of tube flared

**Anti-slip handle**

- Easy to use

Model	Tube O.D.
VST-22	3/8", 1/2", 5/8", 3/4", 7/8"
VST-22B	1/4", 5/16", 3/8", 1/2", 5/8", 3/4", 7/8" 6, 8, 10, 12, 16, 18, 22mm

Tube Cutter VTC-28B

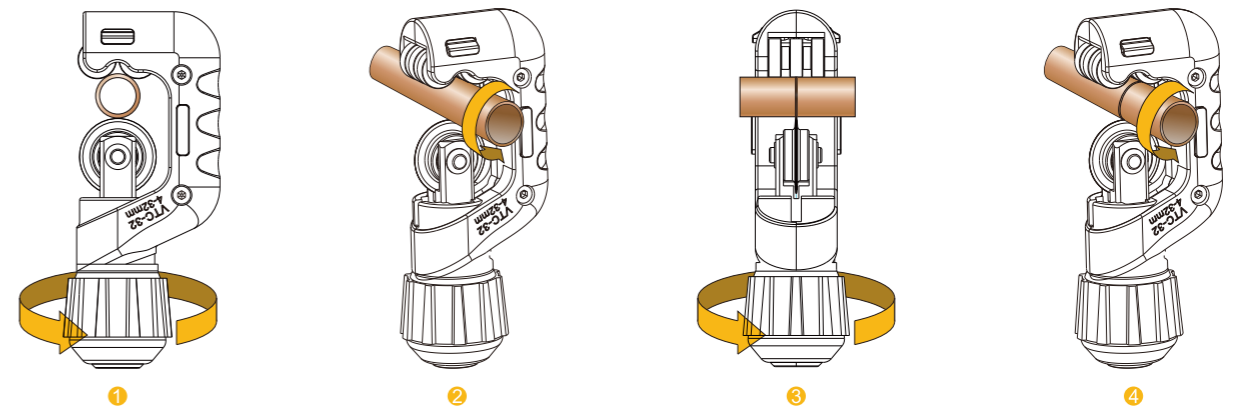
Making Your Job More Enjoyable !

Tube Cutter VTC-28B

Making Your Job More Enjoyable !



Usage method of cutter



# Easy to Cut

**High-Quality Cutting Blade**


- Sharp and durable

**Ball Bearing**

- Easy cutting and better quality

**Aluminum Alloy**

- Light weight, easy to carry and use

FAQ	Cause	Consequence	Solution
Cutting surface is tilt	The copper pipe is tilted, not vertical with the blade	Refrigerant leakage machinery damage	 <p>High-quality cutting blade, sharp and durable, easy to cut, avoid burr in the concave.</p> <p>The contact area of the double row 6 bearings with the copper tube is large, ensure that cooper tube is cut without incline</p>
Burr inward of cutting surface	Blade is not sharp		

Model	VTC-19	VTC-28	VTC-28B	VTC-35	VTC-42	VTC-70
Tube O.D.	1/8"~3/4" 3~19mm	1/8"~1-1/8" 4~28mm	1/8"~1-1/8" 4~28mm	1/8"~1-3/8" 4~35mm	1/4"~1-5/8" 6~42mm	1/4"~2-5/8" 6~67mm

## Tube Deburring VTT-5

Making Your Job More Enjoyable !

VALUE VTT-5 scraper is mainly used for burring of copper pipes in all calibers. With sharp blade, it is user-friendly and can easily bur. 2 spare blades are included. In case the blade is damaged, it can be quickly replaced by pressing the replacing button.

Easy burring, easy work!



## Easy to Deburr

### Compact Design

- Easy to carry

### Spare Blade

- 2 spare blades are included

### Replaceable Blades

- It's easy to change blade

## Capillary Tube Plier VRT-101

Making Your Job More Enjoyable !

VALUE VRT-101 capillary tongs are processed by quality stainless steel, featured by high hardness, sharp cutting edge, strong shear force, and can easily cut the capillary.

Easy shear, easy work!



## Easy to Shear

### Sharp Blade

- Excellent stainless steel blade, easy to shear capillary

### Spacing Spring

- Easy to use

### Anti-slip Handle

- Power holding, anti-slip, easy to shear

## Sealing Pliers VRT-102

Making Your Job More Enjoyable !

VALUE VRT-102 sealing clamp boasts high hardness, strong toughness and clamp force; and can quickly seal up the pipeline by pinching the capillary.

Easy burring, easy work!



## Easy to Seal

### Inactivate Jaw

- Power clamp force, it can seal copper pipe quickly

### Force Adjusting Nut

- Easy to adjust clamp force

### Ergonomic Design Handle

- Anti-slip design, easy to use

## Ratchet Spanner VRT-201/202

Making Your Job More Enjoyable !



## Easy to Rotary

### Ratchet

- Advanced ratchet, leave out the tedious transformation steps, easy to use, and easy to rotary

### Anti-slip Handle

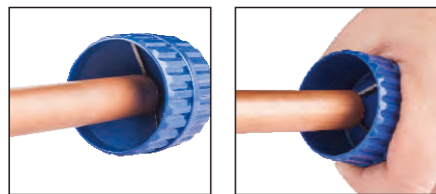
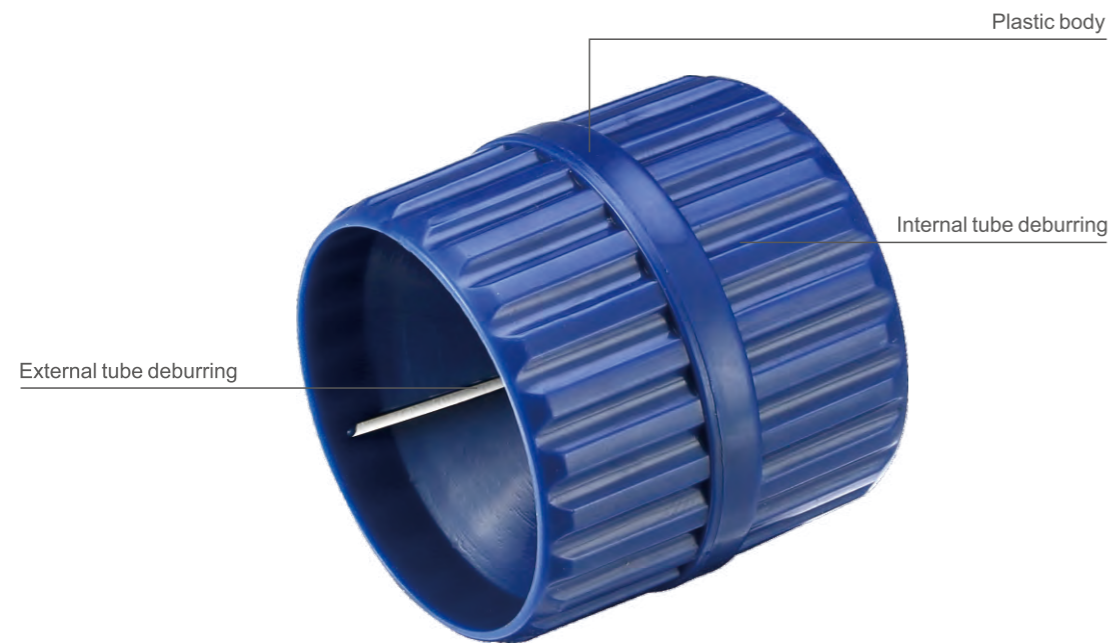
- Power holding, anti-slip, easy to rotary

## Deburring Tool VRT-301

Making Your Job More Enjoyable !

VALUE VRT-301 plastic burring machine is designed with multiple blades, and can easily bur for 4-40mm (1/8"-1-5/8") copper pipe, aluminum pipe, PVC and other plastic casing in light weight.

Easy burring, easy work!



External tube deburring Internal tube deburring

## Easy to Deburr

### Multi-blade Alloy Steel Internal Surface

- Easy to deburring

### Slip-resistant Aluminum Body Design

- Light weight

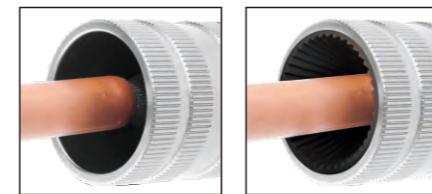
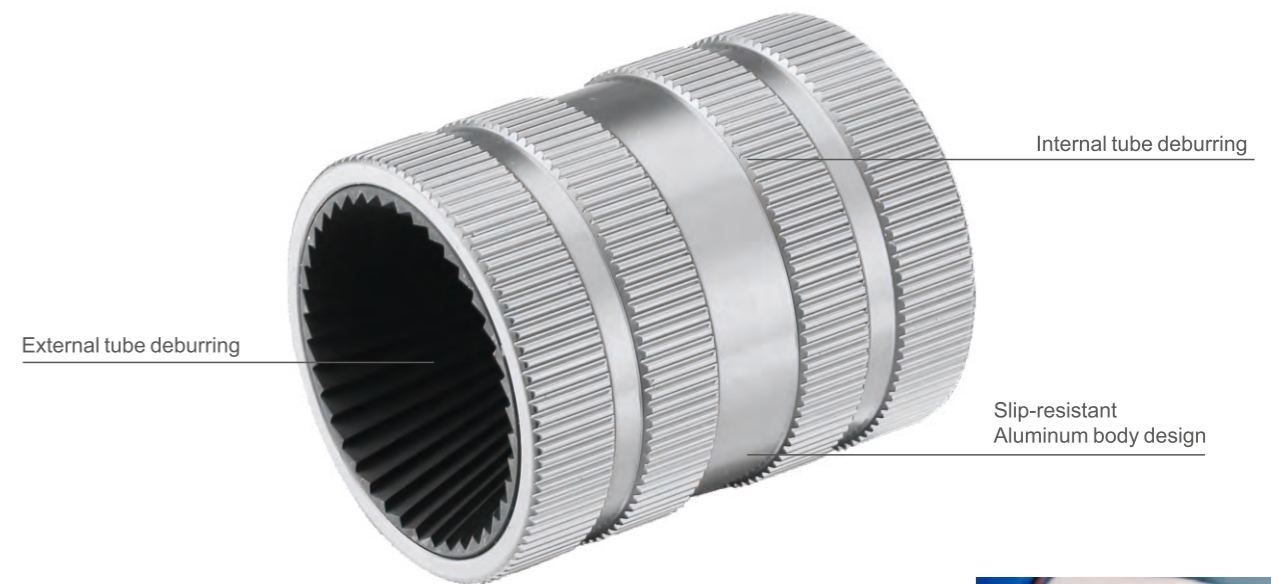
Model	Tube O.D.
Tube O.D.	4-40mm (1/8"-1-5/8")

## Internal & External Reamer VRT-302

Making Your Job More Enjoyable !

VALUE VRT-302 aluminum alloy burring machine is designed with multiple blades, and can easily bur for 4-40mm (1/8"-1-5/8") copper pipe, aluminum pipe, PVC. The aluminum alloy shear is light, with firmer case, making burring more easily!

Easy burring, easy work!



External tube deburring Internal tube deburring



## Easy to Deburr

### Multi-blade Alloy Steel Internal Surface

- Easy to deburring

### Slip-resistant Aluminum Body Design

- Light weight

Model	Tube O.D.
Tube O.D.	4-40mm (1/8"-1-5/8")



Tool Kit VTB-5A

Making Your Job More Enjoyable !



## Easy to carry

**Easy to Carry**

- Aluminum alloy toolbox design, easy to carry

**Protect Tools**

- Aluminum alloy toolbox, better protection tools during transportation

Complete With	Description	Quantity
Vacuum Pump	1.5CFM	1pc
Flaring Tool	VFT-808-I	1set
Tube Cutter	VTC-28B	1pc
Tube Deburring	VTT-5	1pc
Manifold Gauge	VMG-2-R410A	1set
Tube Expanders	VST-22	1pc
Package	Aluminum alloy box	1pc

Tool Kit VTB-5B

Making Your Job More Enjoyable !



## Easy to carry

**Easy to Carry**

- Blow molding toolbox design, easy to carry

**Easy to Use**

- It contains tools of cutter, tube expander, manifold, refrigerant tube, to avoid leakage with tools and easy to use

Model	VTB-5B-I		VTB-5B-II		VTB-5B-III	
	Description	Quantity	Description	Quantity	Description	Quantity
Flaring Tool	VFT-808-I	1set	VFT-808-I	1set	VFT-808-I	1set
Tube Cutter	VTC-28B	1pc	VTC-28B	1pc	VTC-28B	1pc
	VTC-19	1pc	VTC-19	1pc	VTC-19	1pc
Manifold Gauge	VMG-2-R410A	1set	VMG-2-R410A	1set	VMG-2-R410A	1set
Tube Deburring	VTT-5	1pc	VTT-5	1pc	VTT-5	1pc
Adapter	/	/	V01 V08	1set	V01 V08	1set
Adapter	/	/	/	/	CV01-CV12	1set
Package	Blow case	1pc	blow box	1pc	blow box	1pc

Tool Kit VTB-8C

Making Your Job More Enjoyable !



## Easy to carry

**Easy to Carry**

- All the tools are combined in a backpack, which is easier to carry

**Protect Tools**

- Avoid damage during transportation

**Easy to Use**

- It contains most of the tools for air conditioning maintenance, and it is easier to use with the tools

Complete With	Description	Quantity
Flaring Tool	VFT-808-MI	1set
Tube Cutter	VTC-32	1pc
Manifold Gauge	VMG-2-R410A-B	1set
Digital Clamp Multimeters	VCM-202	1pc
Tube Expanders	VST-22	1pc
Tube Deburring	VTT-5	1set
Ratchet Spanner	VRT-201	1pc
Ratchet Spanner	VRT-202	1pc

Tool Kit VTB-5D

Making Your Job More Enjoyable !



## Easy to carry

**Easy to Carry**

- All the tools are combined in a backpack, which is easier to carry

**Protect Tools**

- Avoid damage during transportation

**Easy to Use**

- It contains most of the tools for air conditioning maintenance, and it is easier to use with the tools

Complete With	Description	Quantity
Flaring Tool	VFT-808-MI	1set
Tube Cutter	VTC-32	1pc
Manifold Gauge	VMG-2-R410A-B	1set
Tube Expanders	VST-22	1pc
Tube Deburring	VTT-5	1set

## Modern Digital Multimeters VDM-132C

Making Your Job More Enjoyable !

VALUE VDM-132C digital multimeter is widely applied. With overload protection in 30 ranges, it is safer. The LCD makes reading clearer.

Precise measurement, easy work!



## Accurate measurement

### Wide Range of Measurement

- Multiple functions, It is suitable for measuring on a variety of occasions

### LCD Backlit Display

- Clearly display, easy to read

### Compact Design

- Easy to carry, and more convenient

Model	VDM-132C	VDM-151
Working Temperature	0°C~40°C ( 32°F~104°F )	0°C~40°C ( 32°F~104°F )
DC Voltage Range	200mV/ 2V/ 20V/ 200V/1000V	200mV/ 2V/ 20V/ 200V/500V
AC Voltage Range	2V/ 20V/ 200V/ 750V	200V/500V
DC Current Range	2mA/ 20mA/ 200mA/ 20A	2mA/ 20mA/ 200mA/ 20A
AC Current Range	20mA/ 200mA/ 20A	无
Resistance Range	200Ω/ 2KΩ/ 20KΩ/200KΩ/ 2MΩ/ 20MΩ	200Ω/ 2KΩ/ 20KΩ/200KΩ/ 2MΩ/ 20MΩ
Capacitance Range	/	20nF/ 200nF/ 2μF/100μF
Temperature Range	-40 °C ~1000°C	-40 °C ~1000°C ( -40°F~1832°F )

## Digital Clamp Multimeters VCM-210

Making Your Job More Enjoyable !

VALUE VCM-210 digital clamp multimeter is compact and energy-saving. Therefore, it is more convenient to carry and measure for long time. The LCD makes reading clearer and accurate.

Precise measurement, easy work!



## Accurate measurement

### Wide Range of Measurement

- Suitable for measuring AC/DC voltage, AC current, resistance, diode, °C/°F temperature and so on

### Energy Saving Design

- Automatic shut down for saving energy and low battery alarm

### Compact Design

- Compact size, smooth lines, easy to carry

### LCD Backlit Display

- Clearly display, easy to read

Model	VCM-210	VCM-202
DC Current Range	2A/20A/200A	2A/20A/200A/400A
AC Voltage Range	2V/20V/200V/600V	2V/20V/200V/600V
DC Voltage Range	200mV/2V/20V/200V/600V	200mV/2V/20V/200V/600V
Resistance Range	200Ω/2KΩ/20KΩ/200KΩ/2MΩ/20MΩ	200Ω/2KΩ/20KΩ/200KΩ/2MΩ/20MΩ
Capacitance range	20NF/200NF/2UF/20UF/200UF/2MF/20MF	/
NCV	With	/
TRMS	/	With

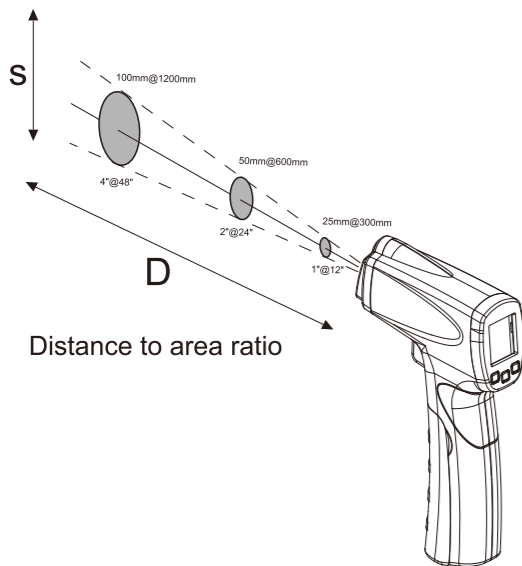
## Infrared Thermometer VIT-300S

Making Your Job More Enjoyable !

Making Your Job More Enjoyable !

VALUE VIT-300S non-contact infrared thermometer can help determine the surface temperature by measuring the infrared energy of the target surface. The design of low power consumption makes the product serve a longer period, reducing the frequency of battery change for users. In addition, the high precision infrared sensor can help users quickly and accurately finish measurement.

Precise measurement, easy work!



## Accurate measurement

### Precision Infrared Sensor

- Accurate measurement, respond faster

### Large-aperture Silicon Mirror

- Measured long distance
- Widely measurement range

### One-key Temperature Measurement

- Easy to use, more convenient

### LCD Backlit Display

- Clearly display, easy to read

Model	VIT-300S	VIT-300
Emissivity	0.10~1.00 adjustable	0.95
Temperature Range	-32°C~400°C (-25.6°F~752°F)	-18°C ~ 280°C (0°F~536°F)
Max Measuring Accuracy	±2°C or ±2%	±2°C or ±2%
Response Time	500mS	500mS
Debug Mode	Single-process debugging	Multi-process debugging

