

**KAJI**  
**COMPRESSOR**

Applying new technology to meet the demand of  
diversification and advancement



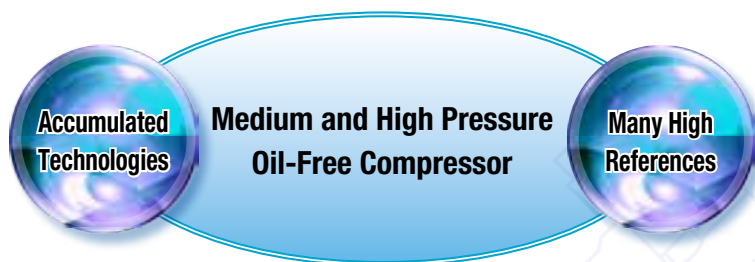
HD2B-400GH-OL

# Oil Free Compressor

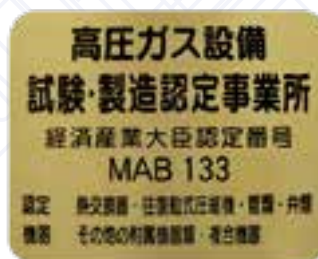


KAJI TECHNOLOGY CORPORATION

## CONTRIBUTING TO THE WORLD AND LOOKING INTO THE FUTURE WITH THE LATEST TECHNOLOGY



- Developed by our long years of experiences in compressor manufacturing, backed up by modern technologies and our recent integrated research works.
- Fabricated by the governmentally certified workshop of our company, officially entitled to test and fabricate high-pressure gas handling installations for advanced and diversified technological needs. Our company has facilities to take up complete works, including design, fabrication, installation, maintenance, and after service, for complete lines that consist of compressors, auxiliaries, and all other related equipment.



Complying with governmental requirements as per “High Pressure Gas Control Law” (HPGCL), our compressors withstand the tests, such as :

- Completion test (HPGCL Art.20)
  - Safety test (HPGCL Art.35)
  - Regular voluntary test for safety (HPGCL Art.35, Par.2)
- Featured by adaptability to wide range of applications, especially for higher pressure, larger volume, more unitized, and more automated social needs. Our policy is even to partially take part in High Technology, with an aim to further strengthen our standing as compressor manufacturer.
- Typical example of Oil-free compressor applications
- PET bottles blowing
  - Electronics
  - Environment, Biogas
  - Industrial automatic controls:
    - Automatic measurement by precision instruments
    - Automatic handling
  - Chemical industries:
    - Agitation, filtration, pneumatic transport, suction, and also recovery, compression, and purifications of gases.
  - Pharmaceutical and food industries:
    - Air supply to cultivation chambers and agitation
  - Electronic industries:
    - Gas spraying, and drying
  - Petrochemical industries:
    - Compression and pneumatic transport
  - Energy industries:
    - Installations for coal gasification and liquefaction, heat pump, fuel cell, etc.
  - Power generating plant:
    - Control equipment for nuclear power stations, compression of sealing gas for nuclear power generating plant, pushing down of water level at Hydroelectric power stations.
  - Medical equipment:
    - High pressure forming facilities
  - Others:
    - Shock test for vehicles, clean rooms, etc.

### Extent of Governmental Certifications

Certification Number	Equipment Classification	Name of Equipment	Design Temperature (°C)	Design Pressure (MPa)	Power (kW)
MAB 133-B	Heat exchanger	Multi-tube type Coil type and Double-tube type	-10 to 350	Less than 5.9	—
MAB 133-F	Reciprocating compressor	—	-10 to 350	Less than 54 Less than 5.9	Less than 380 Less than 470
MAB 133-M	Pipings	Machine mounted pipings	-10 to 350	Less than 54	—
MAB 133-N	Valves	Safety valves	-10 to 350	Less than 3.0 Less than 54	—
		Other valves Check valves Air operated valves			
MAB 133-Z	Integrated Equipment	Compressor unit	-10 to 350	Less than 54 Less than 5.9	Less than 380 Less than 470



KAJI OIL-FREE TYPE COMPRESSOR  
YD3-140-OL AIR 4.9MPa 600m<sup>3</sup>/hr 150kW

## ◦ FEATURES

### High reliability:

Fabricated by using only high quality materials after repeated tests against corrosion and abrasion. Our excellent manufacturing facilities, supported by modern technologies and first class quality controls system, guarantee highly stabilized performance for long-term compressor operation.

### Economical overall operation guaranteed by simplified operation and maintenance systems:

For that purpose, not only our patented Dual Control System but also our Multiple operation control system and integrated control system enable simplified selection of optimum operational conditions, for individual or particular purpose.

### Economical design by Building Block System:

Our compressor parts such as cylinders, pistons, valves, etc. are highly standardized to cover a wide range of compressor specifications. Building Block System is a simplified system to assemble a variety of units, according to the specified pressure, capacity, and operational conditions. This enables supply of highly reliable machine at economical cost in short delivery time.

### Special precaution for all individual cases:

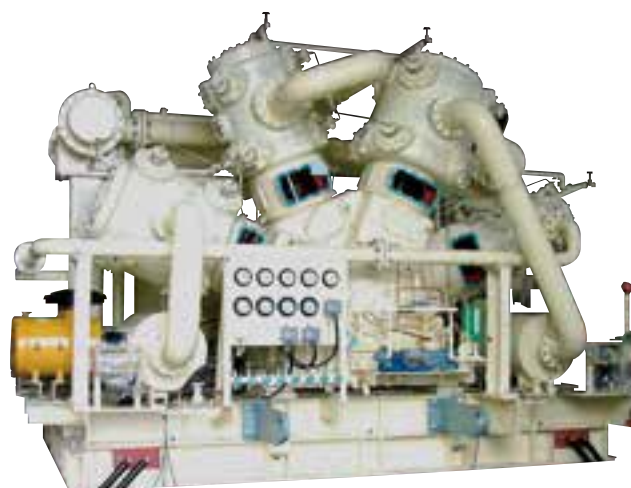
Proper selections of seal rings are made, and measures for anticorrosion are taken individually for all gas applications.

### Economical design with many interchangeable parts:

Compressors of different sizes cover capacity range from 3.7kW to 730kW by unit system. Almost all compressor parts within this capacity range are interchangeable, facilitating the user to store a variety of parts, for compressor of many different sizes.



VS-75GH-OL Hydrocarbon  
Suction Press:1.86MPa, Discharge Press:5.88MPa, 55kW



Oil-Free Compressor for PET bottles blowing  
XQ3-700-OL AIR 4.8MPa 60m<sup>3</sup>/min 730kW

## ● Cylinder head

Independent sealings are provided for both gas and cooling water sides. There is no leakage of gas and cooling water under such system.

## ● Suction and discharge valves

Both are guideless type and are perfectly treated against both corrosion and abrasion.

## ● Rod packing

Packing elements made of special carbon or TFE (tetrafluoroethylene), composite are located one above the other in a gland holder. The gland holder is so designed that cylinder pressure can be used as a pilot pressure to press the packing. Elements from the backside against the piston rod. Because of strong self-sealing effect of such system, leakage is held to the minimum.

## ● Piston rod

High quality carbon steel is used as raw material with high-frequency induction hardening on the surface, followed by hard chromium plating and mirror finishing, in the area that passes through the rod packing. This makes our piston rod not only excellent against corrosion and abrasion, but also very durable and airtight, if it passes through the rod packing. Concurrently, our piston rod is of extra long type with extended idle length that perfectly prevents oil carryover.

## ● Crosshead

Crosshead is made of aluminum alloy or ductile cast iron to minimize reciprocating inertia force, so that the vibrations resulting from unbalanced inertia force is reduced to the minimum.

## ● Main Bearing

Double self-aligning bearing with wide margin is used as main bearing, so that bearing gap adjustment is not necessary.

## ● Piston

Aluminum alloy, or ductile cast iron, or stainless steel is used as raw material. Special treatments are made on the surface to prevent corrosion that may affect compressor performance. Since outside diameter of piston is slightly smaller than that of rider ring, the piston may not come in direct contact with cylinder surface, even when the piston ring is eroded.

## ● Cylinder and Cylinder Liner

The running bore surface of cylinder is hard chromium plated and mirror-finished, not only to increase gas and air tightness against rings, but also to minimize erosions. The gas passage of cylinder is so designed that overall passage resistance is held to the minimum with extended cooling surface for flow gas to reduce gas temperature, thus achieving excellent efficiency for long hours of operation. Since cylinder and back head are cast in one piece, there is absolutely no possibility of leakage of gas or coolant, which unless otherwise must be taken into consideration. Liners are not contacted by the coolant, making intrusion of coolant into cylinder and resulting corrosion of liners, absolutely improbable.

## ● Oil seal and Oil wiper ring

Oil seal and oil wiper ring made of heat-and oil-resisting synthetic rubber are provided, to prevent oil vapor in the crank case from coming up along the piston rod and leaking into cylinder.

## ● Connecting rod

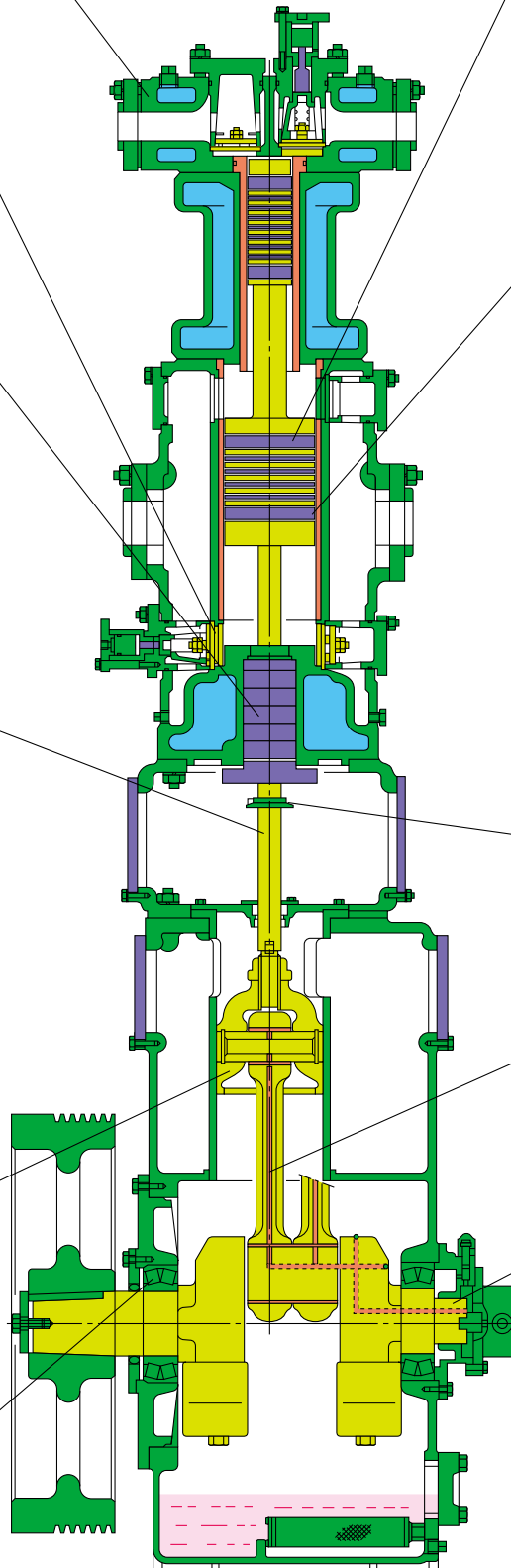
Connecting rod is made of ductile cast iron, precisely machined, and is provided with precision metal at the big end. Clearance adjustment is, therefore, not necessary.

## ● Crankshaft

Crankshaft is made of either ductile cast iron or forged steel and is precisely machined, and one end of the crankshaft is tapered to facilitate mounting and dismantling of driving pulley.

## ● Lubricating system

Usually, for 45 kW or less, splash system is used and for 55 kW or more, forced lubrication system with geared pump connected directly to the crankshaft. Oil reservoir is provided with strainer, and for safety, with relief valves and oil pressure switches.

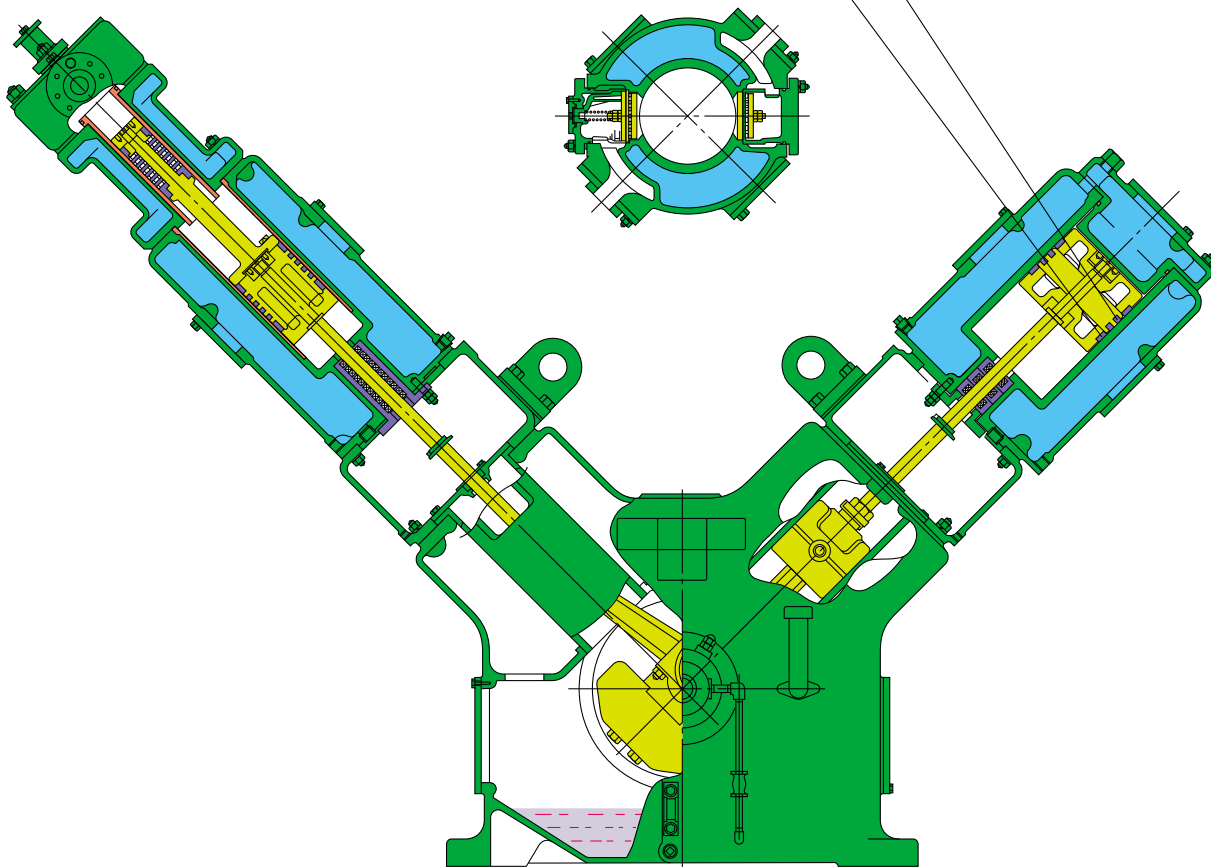


● Rider ring

Rider ring made of special carbon or TFE composite is used. Both have long life, and in particular, endless type is for longer time of service, since this type is not affected by backpressure.

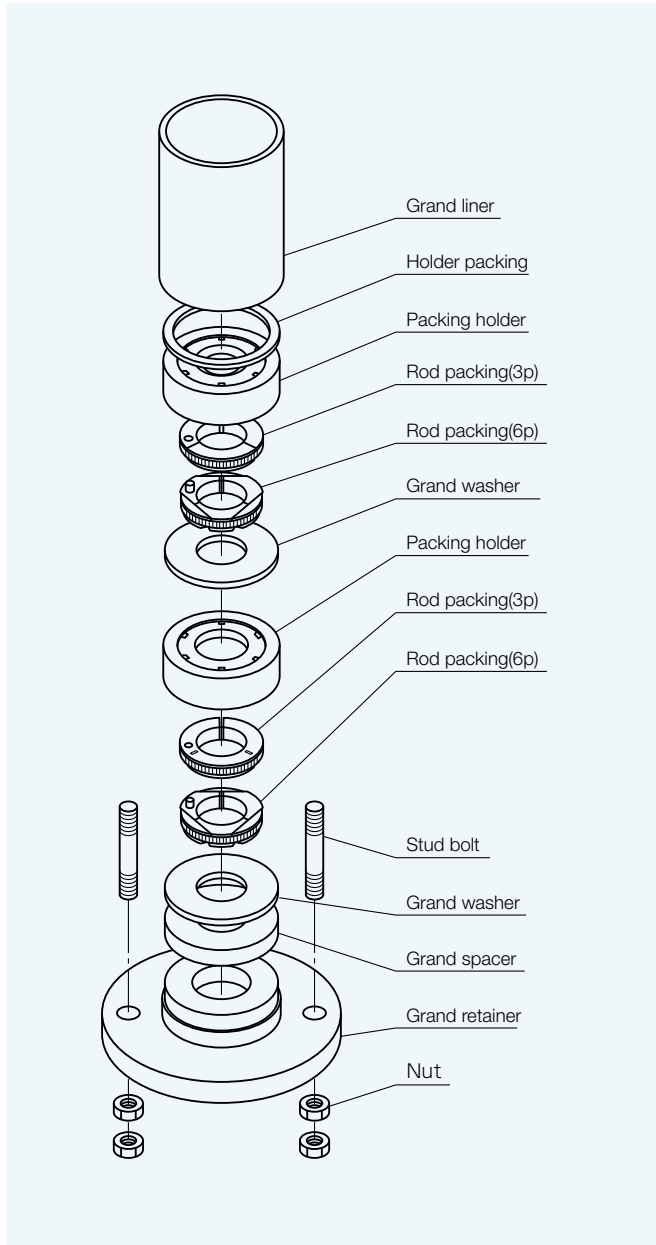
● Piston ring

Piston ring made of special carbon or TFE composite is used. Both have excellent property against leakage and abrasion, and have twice as much of life of our previous type.



## ROD PACKING KEEPS STABILIZED PERFORMANCE FOR LONG-TERM OPERATION

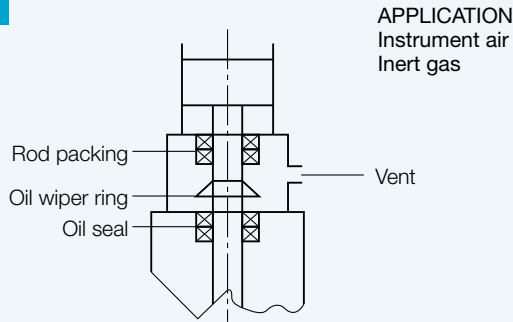
### ROD PACKING ASSEMBLY



- Packing holder is so made that it takes cylinder pressure to the backside of rod packing, to utilize cylinder pressure as pilot pressure for rod packing. Thanks to the excellent self-sealing effect of this patented system, there is almost no possibility of gas leakage.
- Rod packing is made by fastening 3 or 6 segmental ring elements by garter spring from the outside. Packing elements are made either of carbon, carbon fiber, or TFE composite.

4 TYPES OF ROD PACKING ARRANGEMENT

Type 1



(Suitable for Instrumentation Air and Inert Gas)

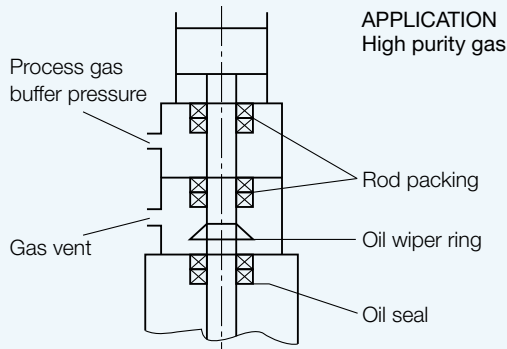
**Gas Seal:**

Sealing is made by using Rod Packing so that gas from Cylinder will not leak at Rod part.

**Oil Seal:**

Scraping of oil attached to Piston Rod entering from Crank case is made at Oil Seal. In addition, further prevention from oil transfer is made at Oil proof plate.

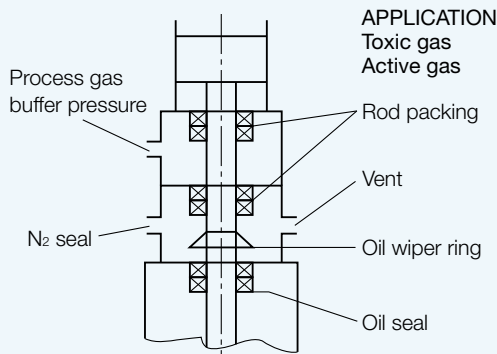
Type 2



(Suitable for High-Purity Gas which is severely undesired for composition change of compressed gas.)

The structure is by locating one each upper and lower distance piece, the same gas will always be filled at low pressure in upper distance piece. In case of a little gas leak from upper distance piece to lower distance piece, mechanism of vent to air is applied. So oil transfer can be regulated more severely than Type 1.

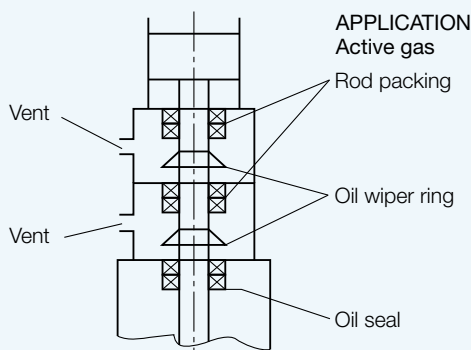
Type 3



(Suitable for Toxic Gas and Flammable Gas)

Like Type 2, one each upper and lower distance piece will be used. In case of compressing toxic gas or flammable gas, etc, gas at lower distance piece will be diluted by using inert gas such as N<sub>2</sub> gas so as to eliminate leak from rod packing, then the mechanism of vent to air will be applied.

Type 4

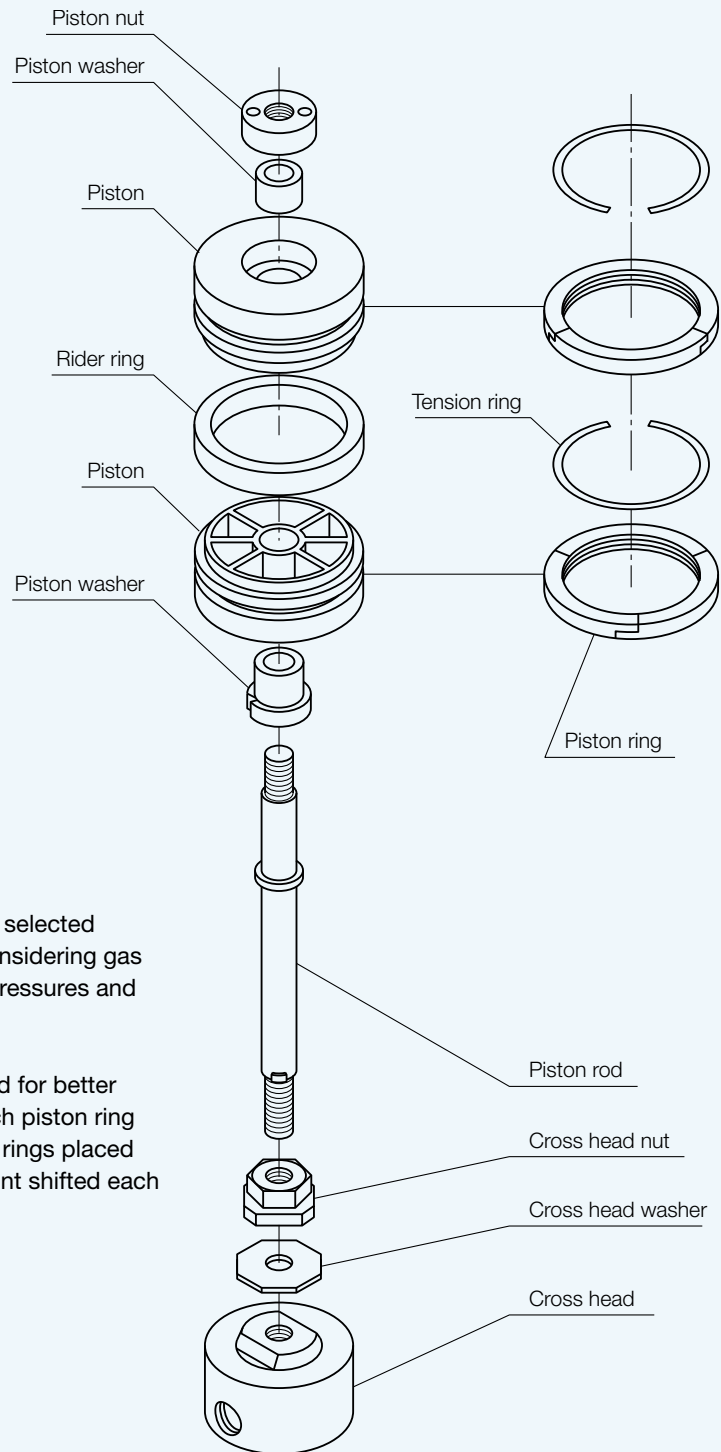


(Suitable for Flammable Gas)

Like Type 2, one each upper and lower distance piece will be used. Vent to air mechanism will be applied at each distance piece. Then, by double oil proof plates, contact between compressed gas and oil vapor will be blocked.

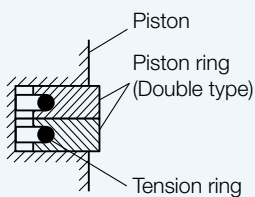
\*Other various seal types are available.

## PISTON RING, RIDER RING



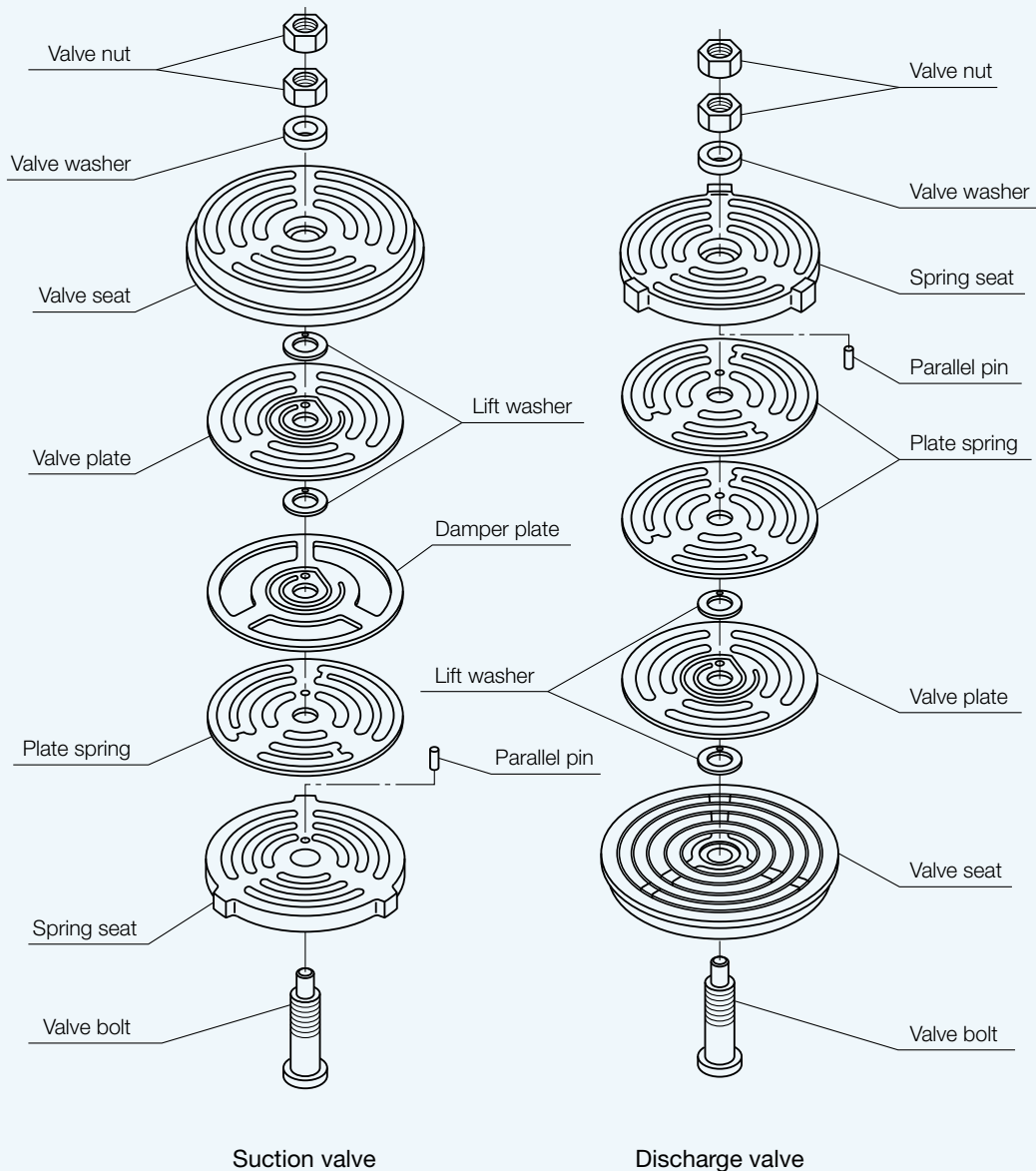
- Number of rings and materials are carefully selected through our long experience in the past, considering gas analysis as well as suction and discharge pressures and temperatures.

- Dual type TFE composite piston ring is used for better sealing effect and longer operation life. Such piston ring consists of two individual single piece type rings placed one above the other, but with each open joint shifted each other. (Double type)





SUCTION VALVE, DISCHARGE VALVE



- Excellent anti-corrosion and anti-erosion features, as well as reliability for long-term continuous operation are absolute requisite for suction and discharge valves. Larger sized valves are of guideless type, because of better hydrodynamical performance. Maintenance is made by spare parts that are common to both suction and discharge valves, necessitating only the minimum of spare parts strage.

## 0.69MPa SERIES

Model	Cyl. Bore (ømm) x No.	Stroke (mm)	No of rev. (rpm)	Piston displacement (m <sup>3</sup> /min)	Motor (kW) x (p)	Cooling water (l/min)
VS-11C-OL	130×1	100	420	1.1	5.5×6	3
			665	1.7	7.5×4	4
			900	2.3	11×4	5
VS-22C-OL	165×1	140	530	3.1	15×6	7
			660	3.9	18.5×4	8
			780	4.6	22×4	10
VS-30-OL	200×1	140	520	4.5	22×6	10
			720	6.3	30×4	13
VS-45B-OL	250×1	160	400	6.2	30×6	13
			480	7.4	37×6	16
			560	8.7	45×4	20
VS-55C-OL	300×1	180	480	12.0	55×6	25
VS-75D-OL	350×1	180	400	13.6	65×6	29
			480	16.4	75×6	33
YD-45-OL	165×2	160	460	6.2	30×6	13
			570	7.7	37×4	16
YD2-45-OL	200×1 130×1	160	670	6.7	37×4	37
YD2-55-OL	250×1 165×1	160	540	8.4	45×4	45
			650	10.1	55×4	55
YD2-75-OL	300×1 200×1	180	500	12.6	65×6	65
			585	14.7	75×6	75
YD2-110-OL	350×1 200×1	180	530	18.2	90×6	85
			585	20.1	100×6	95
YD2-140-OL	400×1 250×1	180	480	21.5	110×6	100
			540	24.1	125×6	105
			585	26.2	132×6	115
YD2-180B-OL	450×1 280×1	180	480	27.2	132×6	115
			540	30.6	150×6	120
			585	33.2	165×6	125
YD2-220-OL	520×1 300×1	180	480	36.5	180×6	125
			540	41.0	205×6	150
			585	44.4	220×6	170
WT2-250-OL	400×2 300×1	180	500	44.7	230×12/15	180
			585	52.2	260×10/12	200
WT2-300-OL	450×2 350×1	180	500	56.7	290×12/14	250
			585	66.4	340×10/12	280
WT2-350-OL	520×2 350×1	180	500	75.9	370×12/14	300
			585	88.9	450×10/12	330

The described Cooling Water volume is for Compressor cylinder cooling only.  
Depending on use environment and conditions, Cooling Water volume will be changed. So, please regard the Cooling Water data for reference only.

### STANDARD ACCESSORIES

Unloader device, suction filter, inter-cooler & mist separator, interstage safety device, flow indicator, drainage valve for cooling water, companion flange for discharge port, oil level gauge and pressure lubrication device (gearing pump, oil pressure gauge and pressure switch) for 55kW or more, and additionally manual lubrication pump for 110kW or more

### ACCESSORIES

Tool box complete with tools for disassembling, anchor bolts, piping for unloader, spare valve plate, O-ring for valve seat cover and oil seal for piston rod.

### OPTIONAL ACCESSORIES

V-belt, motor pulley, receiver, cooler and separator, common base, motor, pressure gauge (with stop valve) control panel, various controllers and monitors, dehumidifier, piping and stop valves.



VS-30-OL



YD2-55-OL



YD2-180B-OL

## 0.97MPa SERIES

Model	Cyl. Bore (ømm) x No.	Stroke (mm)	No of rev. (rpm)	Piston displacement (m <sup>3</sup> /min)	Motor (kW) x (p)	Cooling water (l/min)
YD2-45-OL	200×1 130×1	160	580	5.8	37×6	40
YD2-55-OL	250×1 165×1	160	500	7.8	45×6	47
			600	9.4	55×6	55
YD2-75-OL	300×1 200×1	180	430	10.8	65×6	67
			480	12.1	75×6	75
			585	14.7	90×6	90
YD2-110-OL	350×1 200×1	180	450	15.5	90×6	87
			530	18.2	110×6	100
			585	20.1	125×6	112
YD2-140-OL	400×1 250×1	180	480	21.5	125×6	125
			520	23.2	132×6	135
			585	26.2	150×6	145
YD2-180B-OL	450×1 280×1	180	480	27.2	150×6	145
			540	30.6	165×6	160
			585	33.2	180×6	175
YD2-220-OL	520×1 300×1	180	440	33.4	200×6	170
			480	36.5	215×6	185
			540	41.0	240×6	210
			585	44.4	260×10/12	225

The described Cooling Water volume is for Compressor cylinder cooling only. Depending on use environment and conditions, Cooling Water volume will be changed. So, please regard the Cooling Water data for reference only.

### STANDARD ACCESSORIES

Unloader device, suction filter, inter-cooler & mist separator, interstage safety device, flow indicator, drainage valve for cooling water, companion flange for discharge port, oil level gauge and pressure lubrication device (geared pump, oil pressure gauge and pressure switch) for 55kW or more, and additionally manual lubrication pump for 110kW or more

### ACCESSORIES

Tool box complete with tools for disassembling, anchor bolts, piping for unloader, spare valve plate, O-ring for valve seat cover and oil seal for piston rod.

### OPTIONAL ACCESSORIES

V-belt, motor pulley, receiver, cooler and separator, common base, motor, pressure gauge (with stop valve) control panel, various controllers and monitors, dehumidifier, piping and stop valves.



YD2-140-OL



YD2-220-OL

## 1.47MPa SERIES

Model	Cyl. Bore (ømm)x No.	Stroke (mm)	No of rev. (rpm)	Piston displacement (m <sup>3</sup> /min)	Motor (kW) x (p)	Cooling water (l/min)
YD2-45-OL	200×1 100×1	160	440	4.4	30×6	31
			530	5.3	37×6	37
			640	6.4	45×4	45
YD2-75-OL	250×1 130×1	180	470	8.2	55×6	56
			560	9.8	65×6	65
YD2-110-OL	300×1 165×1	180	430	10.8	75×6	77
			500	12.6	90×6	90
			560	14.1	110×6	100
YD2-140-OL	350×1 165×1	180	480	16.4	110×6	105
			560	19.1	125×6	120
YD2-180-OL	400×1 200×1	180	430	19.2	132×6	125
			480	21.5	150×6	140
			560	25.0	165×6	160
YD2-220-OL	450×1 250×1	180	460	26.1	180×6	170
			540	30.6	210×6	195

The described Cooling Water volume is for Compressor cylinder cooling only. Depending on use environment and conditions, Cooling Water volume will be changed. So, please regard the Cooling Water data for reference only.

### STANDARD ACCESSORIES

Unloader device, suction filter, inter-cooler & mist separator, interstage safety device, flow indicator, drainage valve for cooling water, companion flange for discharge port, oil level gauge and pressure lubrication device (geared pump, oil pressure gauge and pressure switch) for 55kW or more, and additionally manual lubrication pump for 110kW or more

### ACCESSORIES

Tool box complete with tools for disassembling, anchor bolts, piping for unloader, spare valve plate, O-ring for valve seat cover and oil seal for piston rod.

### OPTIONAL ACCESSORIES

V-belt, motor pulley, receiver, cooler and separator, common base, motor, pressure gauge (with stop valve) control panel, various controllers and monitors, dehumidifier, piping and stop valves.



YD2-45-OL



YD2-220-OL

## 2.45MPa SERIES

\*Pressure up to 1.96MPa

Model	Cyl. Bore (ømm) x No.	Stroke (mm)	No of rev. (rpm)	Piston displacement (m <sup>3</sup> /min)	Motor (kW) x (p)	Cooling water (l/min)
VS2-11-OL	130x1 65x1	100	665	0.8	5.5x4	5.5
			900	1.1	7.5x4	7.5
VS2-22-OL	165x1 80x1	140	420	1.2	11x6	11
			560	1.6	15x6	15
			680	2.0	18.5x4	18
VS2-45-OL	250x1 130x1	160	450	3.4	30x6	31
VD2-19-OL	130x1 80x1	140	420	1.5	11x6	11
			510	1.8	15x6	14
			630	2.3	18.5x6	17
VD2-30-OL	165x1 80x1	140	440	2.6	22x6	22
			600	3.5	30x4	30
VD2-55-OL	200x1 100x1	160	440	4.4	37x6	37
			540	5.4	45x6	46
			600	6.0	55x4	50
VD2-75-OL	250x1 130x1	180	430	7.5	65x6	60
			510	8.9	75x6	70
VD2-110-OL*	300x1 130x1	180	440	10.8	90x6	85
			510	12.7	110x6	100
VD2-150-OL*	350x1 165x1	180	430	14.7	125x6	115
			510	17.4	150x6	135
YD2-45-OL	200x1 100x1	160	440	4.4	37x6	37
			540	5.4	45x6	44
			600	6.0	55x6	50
YD2-75-OL	250x1 130x1	180	430	7.5	65x6	60
			510	8.9	75x6	70
YD2-110-OL*	300x1 130x1	180	440	11.1	90x6	90
			510	12.9	110x6	100
YD2-140-OL*	350x1 165x1	180	430	14.7	125x6	115
			510	17.4	150x6	135
YD2-180-OL*	400x1 200x1	180	440	19.7	165x6	155
			510	22.8	190x6	175

The described Cooling Water volume is for Compressor cylinder cooling only.

Depending on use environment and conditions, Cooling Water volume will be changed. So, please regard the Cooling Water data for reference only.

### STANDARD ACCESSORIES

Unloader device, suction filter, inter-cooler & mist separator, interstage safety device, flow indicator, drainage valve for cooling water, companion flange for discharge port, oil level gauge and pressure lubrication device (geared pump, oil pressure gauge and pressure switch) for 55kW or more, and additionally manual lubrication pump for 110kW or more

### ACCESSORIES

Tool box complete with tools for disassembling, anchor bolts, piping for unloader, spare valve plate, O-ring for valve seat cover and oil seal for piston rod.

### OPTIONAL ACCESSORIES

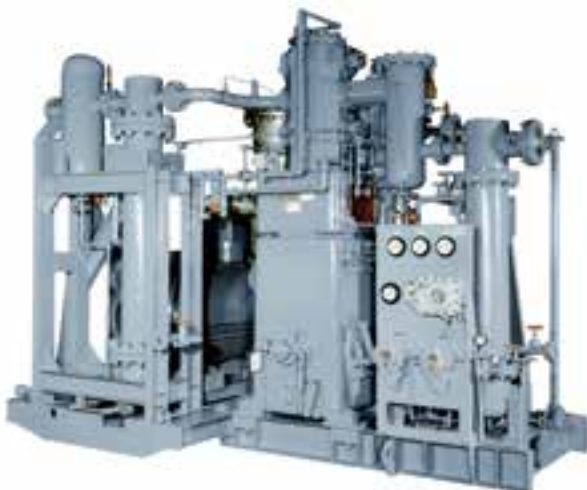
V-belt, motor pulley, receiver, cooler and separator, common base, motor, pressure gauge (with stop valve) control panel, various controllers and monitors, dehumidifier, piping and stop valves.



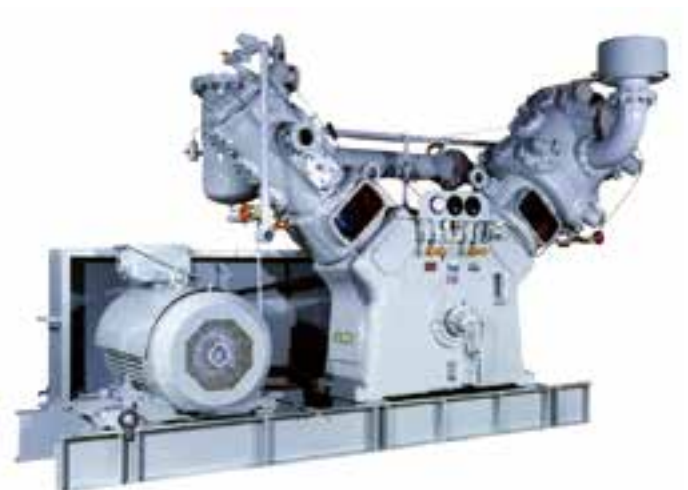
VS2-22-OL



VS2-45-OL



VD2-150-OL



YD2-180-OL

## 4.9MPa SERIES

Model	Cyl. Bore (ømm) x No.	Stroke (mm)	No of rev. (rpm)	Piston displacement (m <sup>3</sup> /min)	Motor (kW) x (p)	Cooling water (l/min)
VD3-19-OL	130×1 100×1 50×1	140	440	1.6	15×6	19
			550	2.0	18.5×6	24
			640	2.3	22×4	28
VD3-30-OL	165×1 100×1 50×1	140	520	3.1	30×6	38
			660	3.9	37×4	47
VD3-55-OL	200×1 130×1 65×1	160	480	4.8	45×6	57
			580	5.8	55×4	90
VD3-75-OL	250×1 165×1 80×1	180	450	7.9	75×6	90
			540	9.4	90×6	110
VD3-110-OL	300×1 200×1 100×1	180	440	11.0	110×6	130
			500	12.5	125×6	150
			540	13.5	132×6	160
VD3-150-OL	350×1 250×1 130×1	180	430	14.7	150×6	180
			480	16.4	165×6	200
			540	18.4	180×6	220
YD3-55-OL	200×1 130×1 65×1	160	390	3.9	37×6	47
			460	4.6	45×6	57
			540	5.4	55×6	70
YD3-75-OL	250×1 165×1 80×1	180	450	7.9	75×6	90
			540	9.4	90×6	110
YD3-110-OL	300×1 200×1 100×1	180	440	11.0	110×6	100
			500	12.5	125×6	115
			540	13.5	132×6	150
YD3-140-OL	350×1 200×1 100×1	180	430	14.7	132×6	120
			480	16.4	150×6	135
			540	18.4	165×6	135
YD3-180-OL	400×1 250×1 130×1	180	430	19.2	165×6	200
			480	21.5	190×6	230
			540	24.2	210×6	260
WT3-300-OL	450×1 250×1 130×1	180	585	33.2	300×10/12	900
WT3-350-OL	510×1 250×1 130×1	180	490/505	35.8/36.8	300×12 310×14	900
WT3-480-OL	540×1 280×1 150×1	180	585	47.9	430×10/12	1,200
XQ3-600-OL	510×2 380×1 200×1	180	490/505	71.6/73.7	600×12 600×14	1,700
XQ3-700-OL	510×2 380×1 200×1	180	585	85.4	730×10/12	2,000

The described Cooling Water volume is for Compressor cylinder cooling only. Depending on use environment and conditions, Cooling Water volume will be changed. So, please regard the Cooling Water data for reference only.



### STANDARD ACCESSORIES

Unloader device, suction filter, inter-cooler & mist separator, interstage safety device, flow indicator, drainage valve for cooling water, companion flange for discharge port, oil level gauge and pressure lubrication device (gearing pump, oil pressure gauge and pressure switch) for 55kW or more, and additionally manual lubrication pump for 110kW or more

### ACCESSORIES

Tool box complete with tools for disassembling, anchor bolts, piping for unloader, spare valve plate, O-ring for valve seat cover and oil seal for piston rod.

### OPTIONAL ACCESSORIES

V-belt, motor pulley, receiver, cooler and separator, common base, motor, pressure gauge (with stop valve) control panel, various controllers and monitors, dehumidifier, piping and stop valves.



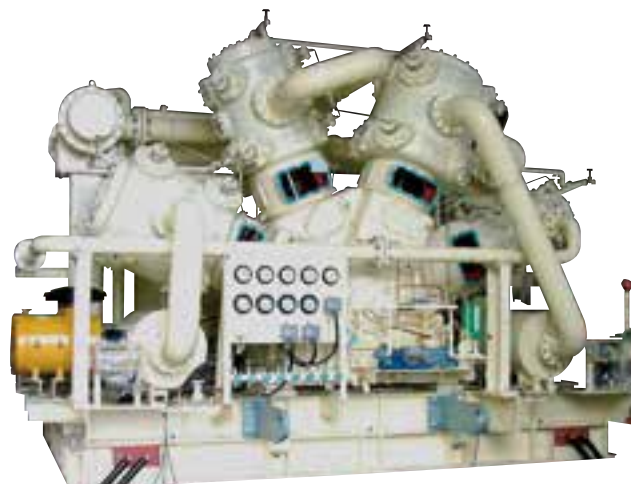
YD3-55-OL



VD3-110-OL



WT3-480-OL



XQ3-700-OL

## 7.35MPa SERIES

Model	Cyl. Bore (ømm) x No.	Stroke (mm)	No of rev. (rpm)	Piston displacement (m <sup>3</sup> /min)	Motor (kW) x (p)	Cooling water (l/min)
VD3-19-OL	130×1 100×1 50×1	140	480	1.7	18.5×6	24
			550	2.0	22×6	28
VD3-30-OL	165×1 100×1 50×1	140	460	2.7	30×6	38
			560	3.3	37×6	47
VD3-55-OL	200×1 130×1 65×1	160	420	4.2	45×6	57
			510	5.1	55×6	70
VD3-75-OL	250×1 165×1 80×1	180	400	7.0	75×6	90
			480	8.4	90×6	110
VD3-110-OL	300×1 200×1 100×1	180	390	9.7	110×6	130
			440	11.0	125×6	150
			480	12.0	132×6	160
VD3-150-OL	350×1 200×1 100×1	180	420	14.3	150×6	180
			480	16.4	165×6	200

The described Cooling Water volume is for Compressor cylinder cooling only. Depending on use environment and conditions, Cooling Water volume will be changed. So, please regard the Cooling Water data for reference only.

## 9.8MPa SERIES

Model	Cyl. Bore (ømm) x No.	Stroke (mm)	No of rev. (rpm)	Piston displacement (m <sup>3</sup> /min)	Motor (kW) x (p)	Cooling water (l/min)
VD3-30-OL	165×1 100×1 50×1	140	420	2.5	30×6	38
			540	3.2	37×6	47
VD3-110-OL	300×1 200×1 100×1	180	390	9.7	110×6	130
			440	11.0	125×6	150
			480	12.0	132×6	160

The described Cooling Water volume is for Compressor cylinder cooling only. Depending on use environment and conditions, Cooling Water volume will be changed. So, please regard the Cooling Water data for reference only.

### STANDARD ACCESSORIES

Unloader device, suction filter, inter-cooler & mist separator, interstage safety device, flow indicator, drainage valve for cooling water, companion flange for discharge port, oil level gauge and pressure lubrication device (geared pump, oil pressure gauge and pressure switch) for 55kW or more, and additionally manual lubrication pump for 110kW or more

### ACCESSORIES

Tool box complete with tools for disassembling, anchor bolts, piping for unloader, spare valve plate, O-ring for valve seat cover and oil seal for piston rod.

### OPTIONAL ACCESSORIES

V-belt, motor pulley, receiver, cooler and separator, common base, motor, pressure gauge (with stop valve) control panel, various controllers and monitors, dehumidifier, piping and stop valves.



VD3-30-OL



VD3-75-OL



VD3-110-OL

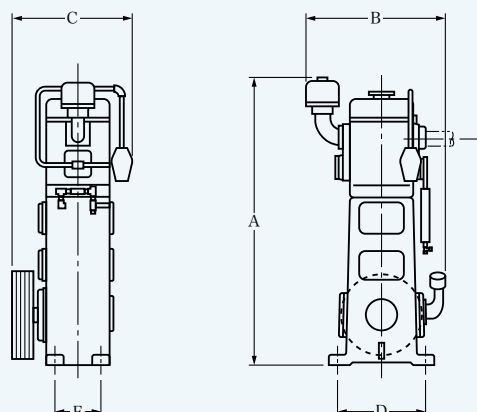


VD3-150-OL

## Vertical, 1-cylinder, 1-stage, double acting type (Fig.1)

Model	Cooling-Water pipe (B)		V-pulley Outer Dia.	V-belt Type x No	Approx. dimensions (mm)					Weight (kg)
	Inlet	Outlet			A	B	C	D	E	
VS-11C-OL	1/2	1/2	392	Bx4	1315	660	540	400	200	280
VS-22C-OL	3/4	3/4	550	Cx4	1650	790	730	500	280	520
VS-30-OL	3/4	3/4	550	Cx4	1700	790	740	500	280	650
VS-45B-OL	3/4	3/4	650	5Vx4	2100	900	750	610	320	1100
VS-55C-OL	3/4	3/4	750	5Vx5	2380	1150	1000	650	370	1700
VS-750-OL	3/4	3/4	820	5Vx6	2520	1210	1070	700	450	1900
VS-75L-OL	3/4	3/4	820	5Vx6	2600	1150	1320	700	450	2200
VS-90L-OL	3/4	3/4	820	5Vx6	2600	1250	1350	800	450	2400

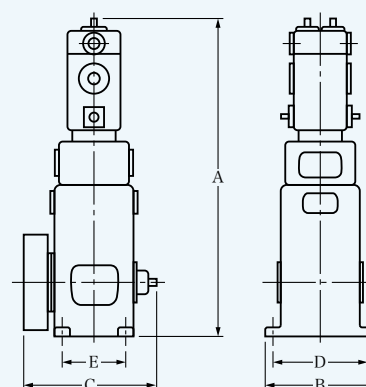
Fig.1



## Vertical, 1-cylinder, 2-stage, SINGLE acting type (Fig.2)

Model	Cooling-Water pipe (B)		Approx. dimensions (mm)					Weight (kg)
	Inlet	Outlet	A	B	C	D	E	
VS2-11C-OL	1/2	1/2	1965	560	510	400	200	450
VS2-22-OL	3/4	3/4	1965	560	510	500	280	650
VS2-45-OL	3/4	3/4	2545	710	890	610	320	1300

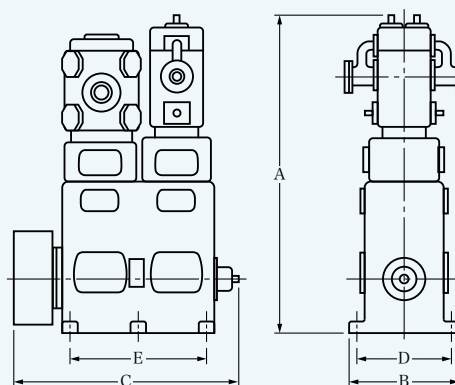
Fig.2



## Vertical, 2-cylinder, 2-stage, double acting type (Fig.3)

Model	Cooling-Water pipe (B)		Approx. dimensions (mm)					Weight (kg)
	Inlet	Outlet	A	B	C	D	E	
VD2-19-OL	3/4	3/4	1720	530	865	470	600	900
VD2-30-OL	3/4	3/4	1900	640	1190	540	670	1050
VD2-55-OL	3/4	3/4	1900	640	1190	540	670	1500
VD2-75-OL	3/4	3/4	2500	800	1700	700	1000	2500
VD2-110-OL	3/4	3/4	2800	900	1990	800	1210	4000
VD2-150-OL	3/4	3/4	2800	900	2200	800	1210	4000

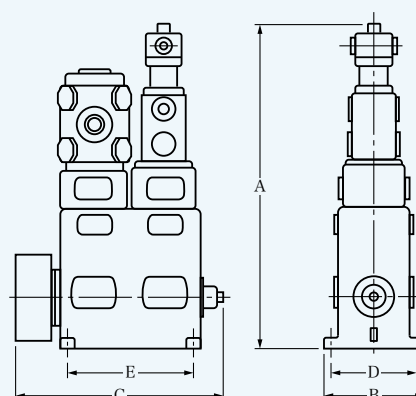
Fig.3



Vertical, 2-cylinder, 3-stage, double acting type (Fig.4)

Model	Cooling-Water pipe (B)		Approx. dimensions (mm)					Weight (kg)
	Inlet	Outlet	A	B	C	D	E	
VD3-19-OL	3/4	3/4	2160	530	870	470	600	1050
VD3-30-OL	3/4	3/4	2200	640	1190	540	670	1250
VD3-55-OL	3/4	3/4	2300	640	1190	540	670	1800
VD3-75-OL	3/4	3/4	3100	800	1670	700	1000	3000
VD3-110-OL	3/4	3/4	3100	900	1990	800	1210	4500
VD3-150-OL	3/4	3/4	3100	900	2165	800	1210	5000

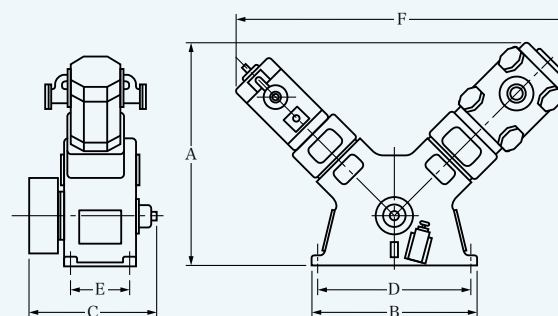
Fig.4



“Y”, 2-cylinder, 1~3-stage, double acting type (Fig.5)

Model	Cooling-Water pipe (B)		Approx. dimensions (mm)						Weight (kg)
	Inlet	Outlet	A	B	C	D	E	F	
YD-45-OL	3/4	3/4	1420	810	820	730	340	250	850
VD-75-OL	1	1	1880	1200	1000	1100	420	2820	1300
VD-140-OL	1 1/2	1 1/2	2180	1550	1600	1450	500	3500	3600
VD-180-OL	1 1/2	1 1/2	2280	1550	1600	1450	500	3600	4000
YD2-45-OL	3/4	3/4	1500	810	820	730	340	2050	1000
YD2-55-OL	3/4	3/4	1540	810	820	730	340	2320	1300
YD2-75-OL	1	1	1880	1200	1000	1100	420	2840	1500
YD2-110-OL	1	1	1900	1200	1000	1100	420	2860	1500
YD2-140-OL	1 1/2	1 1/2	2300	1550	1570	1450	500	3400	4000
YD2-180-OL	1 1/2	1 1/2	2300	1550	1600	1450	500	3450	4400
YD2-220-OL	2	2	2300	1550	1600	1450	500	3450	4500
YD3-55-OL	3/4	3/4	1680	810	820	730	340	2550	1600
YD3-75-OL	1	1	2050	1200	1000	1100	420	3000	1800
YD3-110-OL	1	1	2100	1200	1000	1100	420	3060	1800
YD3-140-OL	1 1/2	1 1/2	2450	1550	1570	1450	500	3550	4000
YD3-180-OL	1 1/2	1 1/2	2500	1550	1600	1450	500	3600	4500

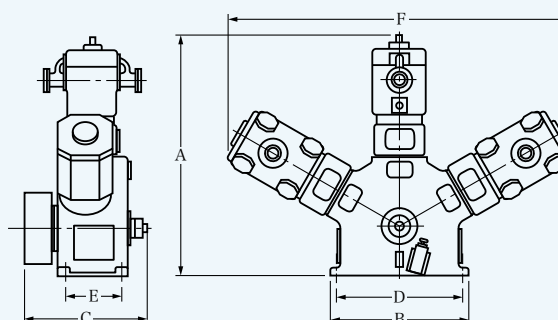
Fig.5



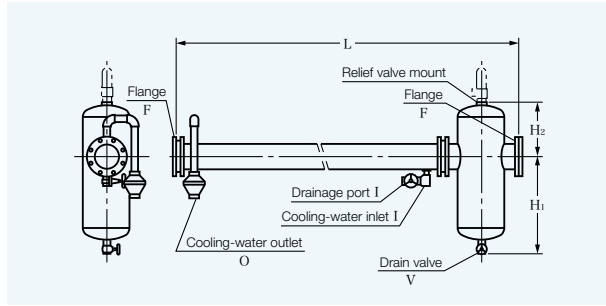
“W”, 3-cylinder, 2-stage, double acting type (Fig.6)

Model	Cooling-Water pipe (B)		Approx. dimensions (mm)					Weight (kg)	
	Inlet	Outlet	A	B	C	D	E		F
WT2-250-OL	2	2	2800	1700	1700	1600	750	4150	5500
WT2-300-OL	2	2	2800	1700	1700	1600	750	4200	5700
WT2-350-OL	2	2	2800	1700	1700	1600	750	4200	6000

Fig.6



## COOLER & SEPARATORS



Model		S-041	S-042	S-043	S-044	S-045	S-046	S-047
Max. working pressure (MPaG)		0.78						
Outlet temperature (°C)		30~45 (Cooling water temperature at 15 (°C))						
Cooling surface (m <sup>2</sup> )		0.55	1.1	2.1	3.3	8.5	14	20
Cooling water consumption (l/min)		15	30	40	100	110	200	250
Approx weight (kg)		45	55	110	220	400	600	800
size	L (mm)	2745	2785	2935	2985	3720	3320	3400
	H <sub>1</sub> (mm)	430	480	600	660	685	835	865
	H <sub>2</sub> (mm)	220	240	275	375	395	465	485
	F	10K-50A	10K-80A	10K-100A	10K-150A	10K-200A	10K-250A	10K-300A
	I	RC 1/2	RC 3/4	RC 3/4	RC 1	RC 1/2	10K-50A	10K-50A
	O	RC 3/4	RC 1	RC 1	RC 1/2	RC 1/2	RC 2	RC 2 1/2
	V	RC 1/2	RC 1/2	RC 1/2	RC 1/2	RC 1/2	RC 1	RC 1

Standard Accessories/ Flow indicator, Drain valve

Optional accessories/ Safety valve, Temperature gauge, Drain gauge, Drain trap, Flow switch, Solenoid valve, Flow indicator

## RECEIVERS



Model	AV-2008	AV-4008	AV-6008	AV-12008	AV-20008	AV-30008	AV-50008	AV-100008
Capacity (l)	200	400	600	1200	2000	3000	5000	10000
Max. working pressure (MPaG)	0.78(8)							
Outer dia x Total height (mm)	584øx960	762øx1140	762øx1550	968øx2000	1224øx2360	1424øx2440	1424øx3960	1928øx4160
Inlet	RC2	RC3	10K-100A (flanged type)	10K-150A (flanged type)	10K-200A (flanged type)	10K-200A (flanged type)	10K-250A (flanged type)	10K-250A (flanged type)
Outlet	RC3	RC3	10K-100A (flanged type)	10K-150A (flanged type)	10K-150A (flanged type)	10K-150A (flanged type)	10K-150A (flanged type)	10K-150A (flanged type)
Relief valve size	20A	25A	40A	50A	80A	80A	80A	100A
Approx weight (kg)	95	190	300	620	1000	1300	2000	3500

Standard accessories/ Safety valve, Drain valve, Pressure gauge, Anchor bolt, Companion flange

\*Accessories such as Coolers, Separators, and Receivers are made in accordance with customer's specific requirements.

## About making any enquiry for Oil-Free Compressor

Before making any enquiry for Oil-Free Compressor, please check the following items and let us have information as much as you can.

- ① Application purpose: For what purpose the compressor is to be used.
- ② Environmental conditions: Whether indoor or outdoor, environmental temperature, dust conditions, limitation for noise and vibration, whether special measures against explosion are required or not.
- ③ Operational conditions: Operation hours in a day, month, and year, whether continuously or intermittently.
- ④ Laws and regulations to be applied and related booklets: Names of laws, regulations, and booklets.
- ⑤ Analysis of gas to be handled: Whether pulver dust is contained or not, and its characteristics.
- ⑥ Suction conditions: Pressure, temperature, and moisture
- ⑦ Discharge condition: Pressure and temperature.
- ⑧ Discharge quantity: At suction condition, standard condition, and normal condition.
- ⑨ Condition for cooling water: What kind of cooling water is to be used. Water temperature, quantity, pressure, whether water is to be circulated or not, water quality, etc.
- ⑩ Operation system: Manual, automatic, or dual control.
- ⑪ Power supplies: For power and control circuits.
- ⑫ Start up system: Whether directly from power line or through voltage reduction.
- ⑬ Monitoring: Temperature (gas, lubrication oil, and cooling water), pressure (gas lubrication oil, instrumentation air, and seal gas), and flow rate (gas and cooling water).
- ⑭ Accessory equipment: Receiver, cooler, common base, control panel, dehumidifier, etc.
- ⑮ Scope of supply: Foundation, installation, piping, wiring, joint site attendance, etc.
- ⑯ Requirements for quality: Various conditions required for the quality.
- ⑰ Particular on the documents and drawings required: List of the documents and drawings to be presented.
- ⑱ Others: Requirements at the time of contract and shipments.

## LINE OF PRODUCTS

- Compressors
  - Oil-Free Compressors (3.7~730kW)
  - Lubricating Compressors (0.4~600kW)
  - Special High Pressure Compressors (Max. 98 MPaG)
  - Oil-less H<sub>2</sub> Gas Compressors for H<sub>2</sub> station
- Gas collecting, refining and refilling equipment
- Heat exchangers
- Pressure vessel



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