

Minimum Pressure Valve

Types: MPVLC20, MPVLC25 and MPVLC32

Application:

For oil-injected, oil-lubricated screw compressors and other rotary compressors: to uphold the minimum oil pressure required for cooling and lubrication during start-up, off-load and when user ports are fully open

Function:

Spring loaded two way valves with built-in check-valve

Installation:

The minimum pressure valve is installed either at the outlet of the separator or in the discharge line after the separator.

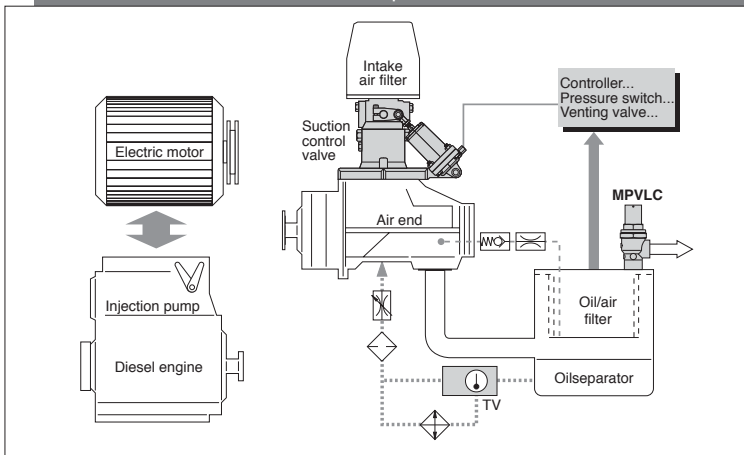
Operation

Valve opening:

The piston and check valve open against the force of a spring. The valve begins to open when the inlet pressure exceeds the set opening pressure (see data

⚠ Attention! Never attempt to disassemble the valve whilst under pressure!

Installation for air ends which can be pressurized at the suction duct



Installation for air ends which cannot be pressurized at the suction duct

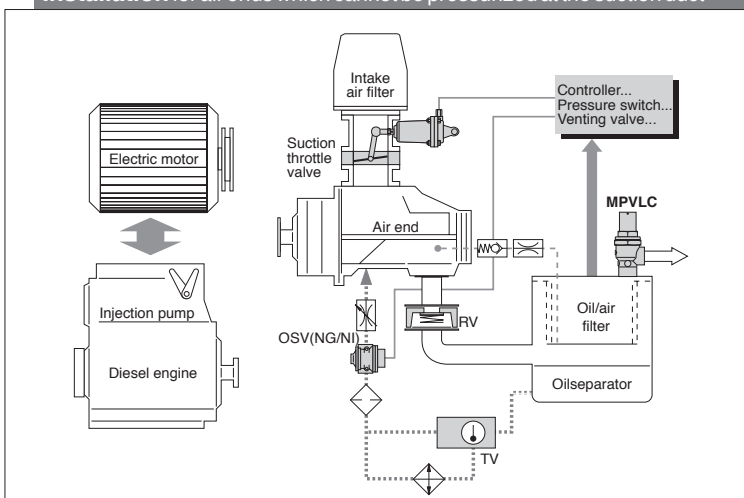


table). The valves as supplied are adjusted so that at the opening pressure the airflow through the valve corresponds roughly to the suction volume of the compressor in the off-load condition.

On-Load Operation :

The minimum pressure valve is fully open when the compressor discharge pressure is 1.5 - 2.0 bar higher than the set opening pressure. Flow rate and pressure drop then correspond to the values shown in the table.

Valve closing :

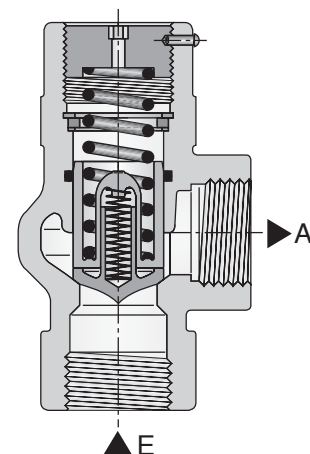
The minimum pressure valve closes when the pressure drops at either the inlet or the outlet of the valve. Closing begins when outlet pressure falls to less than 1.0 - 1.5 bar above set opening pressure:

- If the compressor is on-load, the minimum pressure valve closes enough to maintain set opening pressure in the separator.
- If the compressor is shut down or if, during off-load, separator pressure falls below the set opening pressure, the minimum pressure valve shuts tight at about 0.5 - 1 bar below set opening pressure.
- If there is no air demand the check valve of the minimum pressure valve shuts tight.

Ordering Details:

Type, opening pressure (minimum pressure) and article no.

Minimum pressure valve MPVLC



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R283E

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Data Table

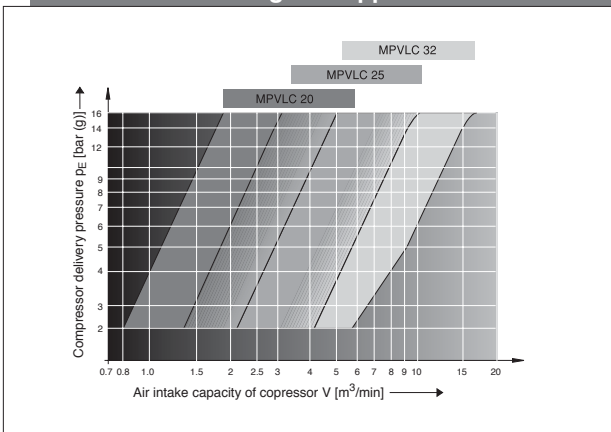
Type		MPVLC 20	MPVLC 25	MPVLC 32
Nominal diameter DN	mm	20	25	32
Max.work.pressure PS	bar (g)	16		
Connections ¹⁾		G3/4	G1	G1 1/4
K _v -value ²⁾	m ³ /h	9	14	23
Suction volume of compressor	m ³ /min	see diagram below for recommended application ranges with pressure drop from 0.03 to 0.2 bar		
Discharge pressure of compressor	bar (g)	5 - 16		
Medium		pressurized air, filtered • recommended compressed air quality according to DIN ISO 8573-1, class 5 Reference oil: see www.hoerbigerkompressortechnik.de		
Opening begins ³⁾	bar (g)	at 3 - 5 • Standard settings : 3.5 and 4.75 (±0.25) :		
Fully open ³⁾	bar (g)	at compressor discharge pressure 1.5 - 2.0 above opening pressure		
Fully closed ³⁾	bar (g)	at 0.5-1 below opening pressure		
Temperature range	°C	-20 to 110 • Short periods: - 25 +130 emergency stop (max.10% operating time)		
Dimensions	mm	see dimension table		
Installation position		optional		
Materials		anodized aluminium alloy, Steel, Viton, Polyamid		
Weight	kg	0.25	0.6	0.9

¹⁾ DIN / ISO 228, other threads on request

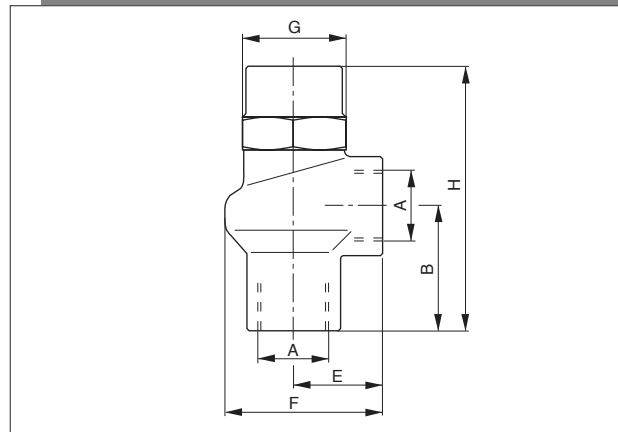
²⁾ Measured to DIN IEC534, values for density 1000 kg/m³, for fully opened valve without fittings in the connections

³⁾ See description under „Operation“

Recommended Ranges of Application



Dimensions



Maintenance

The service manual W283RCC contains information regarding the maintenance intervals. While disassembling the valve for inspection, cleaning or retrofitting purposes, also refer to the respective information contained in the service manual W283RCC. For the actual service manuals visit our homepage www.hoerbigerkompressortechnik.de.

Resetting the Opening Pressure:

Note: Correct minimum pressure in the separator is essential for trouble-free operation of screw compressors. The valve must be reset to the opening pressure specified by the compressor manufacturer.

Setting the Opening Pressure (off the compressor):

Pull out locking pin, remove dust cap from hexagon socket and turn threaded ring clockwise until opening pressure is above specified opening pressure. Then turn it slowly anticlockwise until valve starts to open at specified opening pressure.

Dimension Table (mm)

Dimension	A	B	E	F	G	H
MPVLC 20	G3/4	40	40	65	SW36	94
MPVLC 25	G1	56.5	42.5	74.5	SW50	122
MPVLC 32	G1 1/4	67.5	55	98	SW60	155

Setting the Opening Pressure (on the compressor):

If specified opening pressure is not known, set opening pressure so that valve opens slightly when compressor is off-load, with user connection open and depressurized and with pressure in separator not lowered (switch off off-load bypass).

Locking the Setting:

Push locking pin through housing hole into hole in threaded ring. A new setting will require a new hole drilled 2-3 mm deep into the threaded ring. Pin head should stand slightly proud to facilitate future removal.