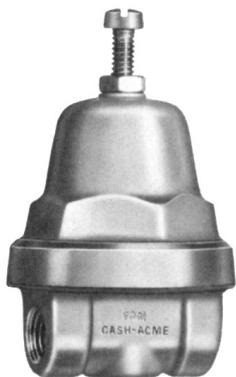


CASH VALVE TYPES CP and CP-2

ROTARY SCREW COMPRESSOR PILOT VALVES

CP and CP-2 regulators significantly contribute to savings in energy. Additionally, they lead to quieter compressor operation and reduced wear.



Description

Types CP and CP-2 are frequently used as pilot valves in Rotary Screw compressors to control receiver pressure or compressor discharge pressure. The pilot valve, supplied with air pressure from the receiver, regulates the air pressure to a cylinder or diaphragm which positions the control device in the compressor suction line and/or positions the speed control on engine-driven units. One additional use for the pilot is to maintain proper circulation of the lube oil in the compressor. Use of the Types CP and CP-2 significantly contribute to considerable savings in energy. Additionally, they lead to quieter compressor operation and reduced wear.

Construction

Type CP and Type CP-2 have bronze body and spring chamber, stainless steel seat, phosphor bronze diaphragm, fiber gaskets. Type CP-2 has a larger seat for increased capacity. Type CP is available in 1/4" pipe size with either side inlet/side outlet or side inlet/bottom outlet. Type CP-2 is available in 1/4" or 3/8" sizes with either side inlet/side outlet or side inlet/bottom outlet. All connections are threaded female.

Principle of Operation

The Type CP and Type CP-2 provide a regulated output pressure that increases at a pre-determined rate as the receiver pressure or compressor discharge pressure increases above the desired pressure setting of the pilot. The pilot is provided to increase, in straight line fashion, on a ratio of 1 to 1, 2 to 1, 3 to 1; or whatever ratio or differential control is required for proper functioning of the compressor. For example, assume the pilot is to start to open when receiver pressure reaches 100 psi; further assume that the pilot is operating with a 2 to 1 ratio. At this point the pilot output pressure is 0 psi. On 10 psi increase the pilot will provide a controlled discharge pressure from 0 to 20 psi as compressor increases from 100 psi to 110 psi. (See graph on Page 2)

CASH VALVE TYPES CP and CP-2

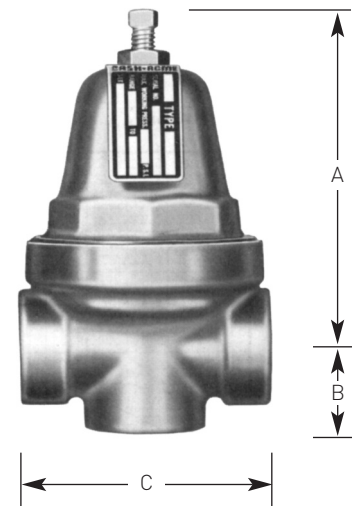
ROTARY SCREW COMPRESSOR PILOT VALVES

Type CP Adjustment Ranges (psi)				
2-25	15-65	40-100	75-175	100-250

Type CP-2 Adjustment Ranges (psi)				
0-30	31-50	51-80	81-150	151-250
				200-400

Dimensions

Type	Size (Inches)	Connections	Dimensions (Inches)			Ship. Weight (Pounds)
			A	B	C	
CP	1/4 x 1/4	side inlet; side or bottom outlet	3 3/8	1/2	2 1/4	1 1/8
CP-2	1/4 x 1/4	side inlet; side or bottom outlet	4 1/2	3/4	2 11/16	2 1/2
CP-2	3/8 x 3/8	side inlet; side or bottom outlet	4 1/2	3/4	2 11/16	2 1/2



Typical Installation Schematic

In order to provide a better idea of how the Type CP and Type CP-2 are used we have provided the system schematic at left. This is intended to represent a "typical" application, and, as such, is greatly simplified. For your specific application requirements, please consult the factory.

How To Order

Cash Valve Types CP and CP-2 Pilots are suitable for adaptation to specialized compressor designs. For application of these valves in a special design or along the more standard applications discussed in this Data Sheet, please contact the factory.

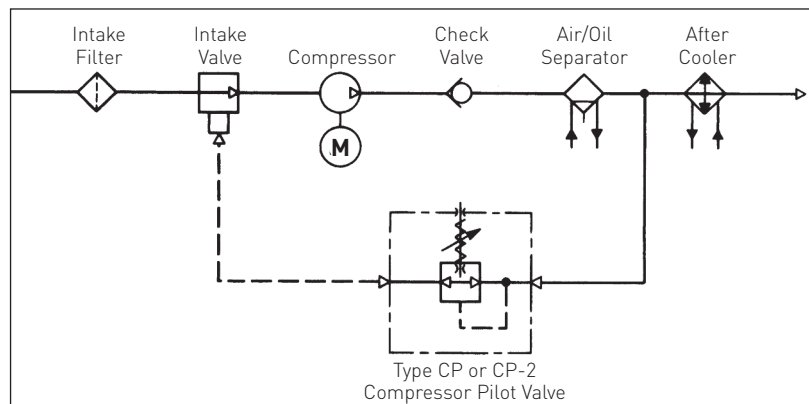


Fig. 1 – Typical Rotary Screw Compressor System Schematic

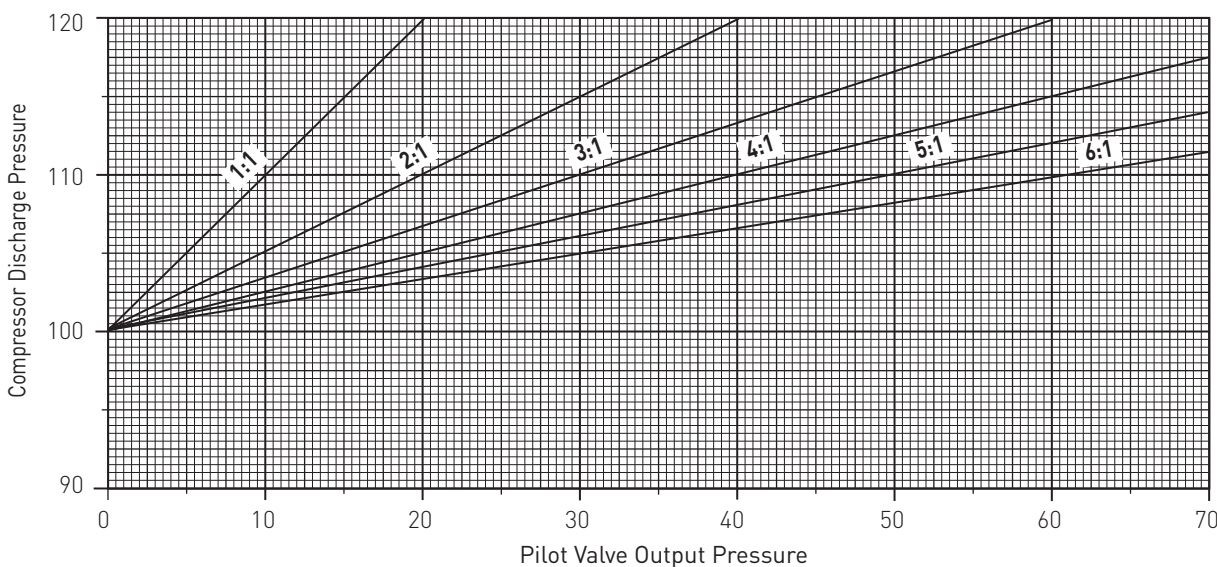


Fig. 2 – Performance Graph

The graph below illustrates the linear output of the Types CP and CP-2 valves for a given set point and a variety of ratios. The graph is given in .5 psi increments.



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