



ZMQ Pneumatic Diaphragm Low Temperature Regulating Valve

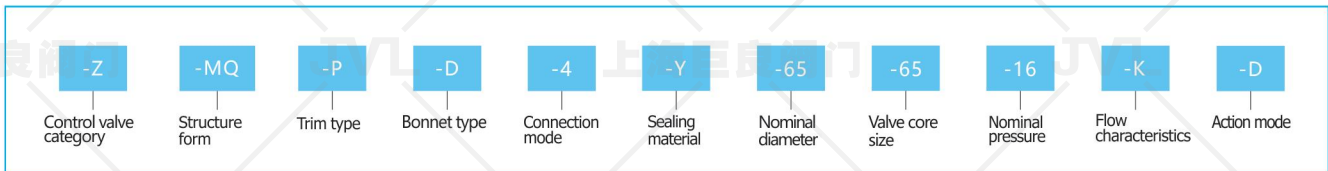
Design Features

- European style finely made, precise control, good sealing performance, advanced design, excellent quality
- Exquisite technology, superior structure, stable flow, quick response, replace import
- Small pressure drop loss, stable output force, large flow coefficient, equal channel smooth cross-section
- Wide regulation range, high flow characteristic precision, top guide structure, easy handwheel operation

Overview

The ZMQ pneumatic diaphragm low-temperature regulating valve is a low-temperature series product of single seat regulating valve, suitable for regulating and controlling low-temperature medium of -60°C~250°C. The valve body component design is advanced and reasonable. The fluid channel adopts a low flow resistance streamlined design, with small pressure drop loss, large flow rate, wide adjustable range, and high flow characteristic accuracy. The valve core has a large guiding area, with smooth operation, and strong vibration resistance. The extended upper bonnet with a long neck tube is used to ensure the reliable operation of the sealing packing. Equipped with Hv type multi spring pneumatic diaphragm actuator, the push rod moves along the guide rail, effectively eliminating the impact of unbalanced force on the valve stem rotation. It has the characteristics of reasonable structure, small volume, light weight, and large output force.

Model Description



Technical parameters & performance -- Nominal diameter & rated flow coefficient

Nominal diameter (mm)	20, 25	32	40	50	65	80	100	125	150	200
Rated flow coefficient Cv	0.1~10.0	16	24	40	63	100	160	250	400	630
Rated stroke (mm)		15		25		40		50		75

Technical parameters & performance -- Nominal pressure & flange standard

Nominal pressure	ANSI CLASS	150	300	600
	JIS	10K	20K	30K
	PN(MPa)	1.6	4.0	6.3
Flange standard	ANSI B16.5	-1981		
	JIS B 2201	-1984		
	GB/T9115.1-2000, GB/T9115.2-2000, JB/T79.1-94			
	JB/T79.2-94, HG20596-97			
Connection mode & sealing form	Flange type: FF (flat face), RF (raised face), MF (male/female face), RJ (ring joint face), TG (tongue/groove face)			

Technical parameters & performance index

Flow characteristics	Linear, EQ %, Quick open (See Figure 1. Flow characteristics diagram)
Adjustable range	30:1 (DN20.Cv≤0.16) 50:1 (DN20@200.Cv≤0.16)
Allowable leakage	Class IV (0.01% * valve rated capacity)
	Leakage standard ANSI B16.104-1976
Performance index	The performance index of the regulating valve have hysteresis and linearity, please refer to 4. actuator

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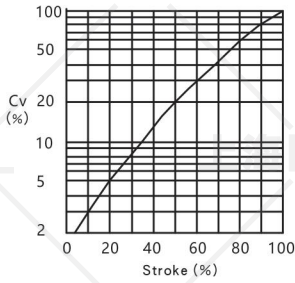


Figure 1.1 IEC standard equal % characteristics chart

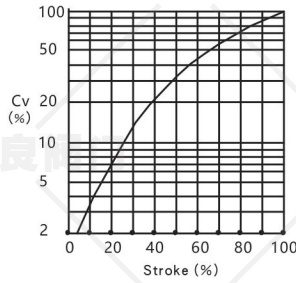


Figure 1.2 Large flow equal % characteristics chart

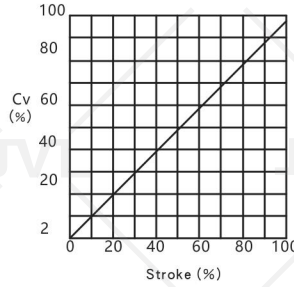


Figure 1.3 Linear characteristics chart

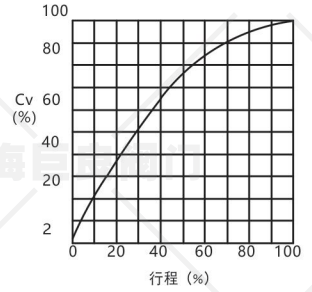


Figure 1.4 Quick open characteristics chart

Figure 1 Flow characteristics chart

3. Valve structure & matching material

The ZMQ low-temperature regulating valve is composed of valve body, upper bonnet, valve core, valve seat, valve stem, packing box, and cooling box cover plate, among which the upper bonnet is extended type. According to the classification of medium temperature, the lower the temperature, the longer the length. (Refer to outline and installation dimensions)

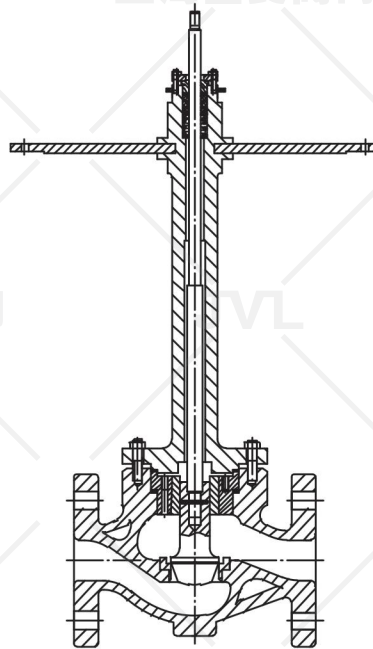


Figure 2 ZMQ Low temperature regulating valve body structural diagram

Part structure & matching material

Part	Structure	Material	Note
Valve body	Straight through single seat cast ball shape valve	CF8,CF8M,CF3,CF3M	
Valve core & valve seat	Single seat plunger type valve core	304,316,316L,304L	
	Low temperature extended I type		-60°C~-100°C
	Low temperature extended II type	304,316,316L,304L	-100°C~-200°C
Upper bonnet	Low temperature extended III type		-200°C~-250°C
	Bolt tightened type	304,316	
Gland type	V-shaped PTFE packing	PTFE	
Packing	Serrated metal gasket	304,316,316L,304L	
Gasket	PTFE coated metal gasket	PTFE coated 304, 316, 316L, 304L	
Surface coating	Stainless steel body without paint		