



## ZDLQ/X Electronic Electric Three-way 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 ZDLQ/X electronic electric three-way regulating valve consists of a 3810L (or PSL series) direct stroke electronic electric actuator and a three-way valve. Equipped with a servo function, it receives a unified 4-20mA or DC1-5V standard signal, converts the current signal into a corresponding linear displacement, automatically controls the opening of the regulating valve, and achieves continuous adjustment of process parameters such as pressure, flow rate, temperature, and liquid level of the fluid in the pipeline. The valve core structure of the three-way valve adopts a cylindrical thin-walled window and is guided by the side of the valve core. It can be used for proportional regulation or bypass regulation, especially suitable for regulating the fluid temperature control system of heat exchangers in the petroleum industry. One three-way valve can replace two single or double seat valves, occupying smaller space, saving installation pipelines and costs.

### Model Description

-Z	-DL	-Q	-	-4	-Y	-50	-50	-16	-D	-
Control valve category	Structure form	Trim type	Bonnet type	Connection mode	Sealing material	Nominal diameter	Valve core size	Nominal pressure	Flow characteristics	Action mode

### Technical parameters & performance -- Valve body

Type	Three-way cast ball shape valve
Nominal diameter	Merging valve: 25~300mm Diverging valve: 80~300mm
Nominal pressure	PN16, 4.0, 64bar
Flange standard	JB/T79.1-94, 79.2-94, etc.
Material	Cast steel (ZG230-450), Stainless steel (ZG1Cr18Ni9Ti, ZG1Cr18Ni12Mo2Ti), etc.
Top bonnet	Standard type: -17~230°C Heat sink type: 230~450°C Bellow seal type: -40~350°C
Bonnet type	Bolt tightened type
Packing	V-shaped PTFE, PTFE impregnated asbestos, graphite

### Technical parameters & performance -- Valve trim

Valve core type	Thin walled cylindrical valve core
Flow characteristic	EQ%, Linear
Material	Stainless steel (1Cr18Ni9Ti, 1Cr18Ni12Mo2Ti, 17-4PH, 9Cr18, 316L), Stainless steel surfacing STL, Titanium corrosion-resistant alloy, etc.

### Technical parameters and performance-actuator

Model	381LSA-08	381LSA-20	381LSB-30	381LSB-50	381LSC-65	381LSC-99	381LSC-160
Explosion-proof model	381LXA-08	381LXA-20	381LXB-30	381LXB-50	381LXC-65	381LXC-99	381LXC-160
Output thrust (N)	800	2000	3000	5000	6500	10000	16000
Max. stroke (mm)	30		60		100		
Working speed (mm/s)	4.2	2.1	3.5	1.7	2.8	2.0	1.0
Main technical parameters	Supply voltage: 220V/50Hz Input signal: 4-20mA or DC1-5V Output signal: 4-20mA-DC Protection class: Equivalent to IP55 Explosion-proof standard: Exd II BT4 Manual operation function: Lever Ambient temperature: -25~+70°C Ambient humidity: ≤95°C						

Valve action mode: Electric to close (B); Electric to open (K)

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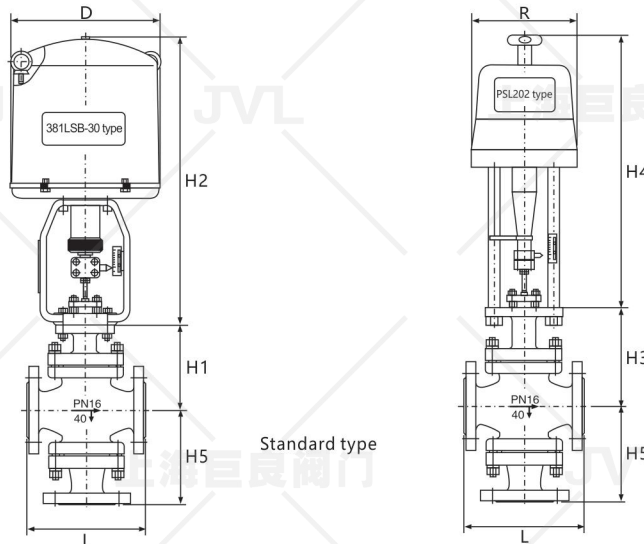
## Performance

Item	Technical index	
Basic error %	±2.5	
Return difference %	≤2.5	
Deadband %	≤3.0	
Start & end point deviation %	Electric to open Start	±2.5
	Electric to open End	±2.5
	Electric to close Start	±2.5
	Electric to close End	±2.5
Rated stroke deviation %	≤2.5	
Leakage rate l/h	0.1% * Valve rated capacity	
Regulating range R	30:1	

## Rated flow coefficient Kv, rated stroke, matching actuator model, allowable differential pressure

Nominal diameter DN (mm)	25	32	40	50	65	80	100	125	150	200	250	300	
Rated flow coefficient Kv	Merging	8.5	12	21	34	53	85	135	210	340	535	800	1360
	Diverging	-	-	-	-	-	85	135	210	340	535	800	1360
Rated stroke L (mm)	16			25			40			60			100
Matching actuator model	381LS/XA-20			381LS/XA-30			381LS/XA-50			381LS/XA-65			381LS/XA-99
Allowable differential pressure (bar)	32	22	22	14	13.8	9.4	6.1	5.1	3.6	2	1.9	1.3	

• Note: For bellows sealed regulating valves, the max. allowable differential pressure is 10 bar. If the value in the table is less than 10 bar, it remains unchanged. If it is larger than 10 bar, it is taken as 10 bar.



## Outline dimensions & weight

Unit: mm

Nominal diameter	25	32	40	50	65	80	100	125	150	200
L	185	200	220	250	275	300	350	410	450	550
D	225	225	225	225	225	225	225	310	310	310
R	177	177	177	177	177	177	177	226	226	226
H1	155	175	180	200	235	250	260	330	350	420
H2	373	495	495	495	700	700	700	725	725	725
H3	181	195	200	220	262	277	287	357	377	447
H4	459	459	459	459	520	520	520	570	570	570
H5	135	145	160	170	190	200	220	280	320	380
Weight (kg)	13	17	19	20	38	50	60	84	87	110

- Note: 1. The outline dimensions of other structures shall refer to the ZJHQ/X pneumatic diaphragm double seat regulating valve.
- 2. The weight in the table is based on data of valve equipped with PSL actuator.
- 3. The valve flange and flange face to face dimension can be manufactured according to user specified standards, such as ANSI, JS, DIN standards.