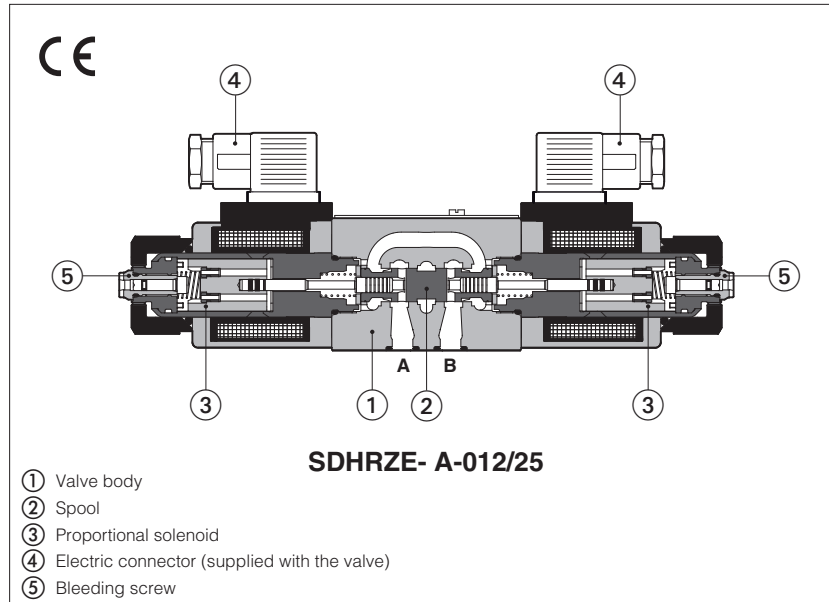


# Proportional pressure reducing valves type **SDHRZE**

direct, without transducer



## SDHRZE-A

3 way, direct operated proportional pressure reducing valves, size 06.

They operate in association with electronic drivers, see section 2, which supply the proportional solenoids with proper current to align the pressure regulation to the reference signal.

### Technical characteristics

They provide the pressure reduction on ports A, or B or A and B, depending on the valve model. The direct execution performs low internal leakages, fast response and low hysteresis.

The solenoid coils are plastic encapsulated with insulation class H and they are available with different nominal resistances depending to the voltage supply (12 V<sub>dc</sub> or 24 V<sub>dc</sub>) and to the electronic driver type, see section 2 and 3.

### Typical applications

Pressure reduction in low flow systems  
Pilot stage of pilot operated valves

Mounting surface: **ISO 4401 size 06**

Max flow: **24 l/min**

Max pressure: **315 bar**

Max regulated pressure: **25 bar**

## 1 MODEL CODE

<b>SDHRZE</b>	-	<b>A</b>	-	<b>010</b>	/	<b>25</b>	/	<b>*</b>	/	<b>*</b>	/	<b>**</b>	/	<b>*</b>
Proportional pressure reducing valve size 06														
<b>A</b> = for off-board driver, see section 2														
<b>Configuration:</b>														
<b>010</b> = reduced pressure on port A (port B for option /B)														
<b>012</b> = reduced pressure on port A and B														
<b>Regulated pressure:</b>														
<b>25</b> = reduced pressure range 3÷25 bar														
(1) Select coil voltage /18 in case of electronic drivers not supplied by Atos, with power supply 24 Vdc														

### 3 COIL OPTIONS

#### Coil voltage

**Option /6** optional coil to be used with Atos drivers with power supply 12 V<sub>DC</sub>

**Option /18** optional coil to be used with electronic drivers not supplied by Atos

### 4 MAIN CHARACTERISTICS - based on mineral oil ISO VG 46 at 50 °C

Assembly position / location	Any position		
Subplate surface finishing (RZME)	Roughness index Ra 0,4 - flatness ratio 0,01/100 (ISO 1101)		
MTTFd valves according to EN ISO 13849	150 years, for further details see technical table P007		
Ambient temperature	<b>Standard</b> and <b>/PE</b> option = -20°C ÷ +70°C; <b>/BT</b> option = -40°C ÷ +60°C		
Storage temperature	<b>Standard</b> and <b>/PE</b> option = -20°C ÷ +80°C; <b>/BT</b> option = -40°C ÷ +70°C		
Coil code	<b>Standard</b> standard coil to be used with Atos drivers with power supply 24V <sub>DC</sub>	<b>option /6</b> optional coil to be used with Atos drivers with power supply 12 V <sub>DC</sub>	<b>option /18</b> optional coil to be used with electronic drivers not supplied by Atos, with power supply 24 V <sub>DC</sub>
Coil resistance R at 20°C	3,1 Ω	2,1 Ω	13,1 Ω
Max. solenoid current	2,5 A	3 A	1,2 A
Protection degree (CEI EN-60529)	IP65		
Duty factor	Continuous rating (ED=100%)		

Max regulated pressure (Q=1 l/min) [bar]	25
Min. regulated pressure (Q=1 l/min) <b>(1)</b> [bar]	3
Max. pressure at port P [bar]	315
Max. pressure at port T [bar]	210
Max. flow [l/min]	24
Response time 0-100% step signal <b>(2)</b> (depending on installation) [ms]	≤ 45
Hysteresis [% of the max pressure]	≤ 1,5
Linearity [% of the max pressure]	≤ 3
Repeatability [% of the max pressure]	≤ 2

**Notes:** above performance data refer to valves coupled with Atos electronic drivers, see section 2

**(1)** Min pressure value to be increased of T line pressure

**(2)** Average response time value; the pressure variation in consequence of a modification of the reference input signal to the valve is affected by the stiffness of the hydraulic circuit: greater is the stiffness of the circuit, faster is the dynamic response

### 5 SEALS AND HYDRAULIC FLUID - for other fluids not included in below table, consult our technical office

Seals, recommended fluid temperature	NBR seals (standard) = -20°C ÷ +80°C, with HFC hydraulic fluids = -20°C ÷ +50°C FKM seals (/PE option) = -20°C ÷ +80°C HNBR seals (/BT option) = -40°C ÷ +60°C, with HFC hydraulic fluids = -40°C ÷ +50°C		
Recommended viscosity	20 ÷ 100 mm <sup>2</sup> /s - max allowed range 15 ÷ 380 mm <sup>2</sup> /s		
Max fluid contamination level	normal operation longer life	ISO4406 class 18/16/13 NAS1638 class 7 ISO4406 class 16/14/11 NAS1638 class 5	see also filter section at www.atos.com or KTF catalog
<b>Hydraulic fluid</b>	<b>Suitable seals type</b>	<b>Classification</b>	<b>Ref. Standard</b>
Mineral oils	NBR, FKM, HNBR	HL, HLP, HLPD, HVLP, HVLPD	DIN 51524
Flame resistant without water	FKM	HFUD, HFDR	ISO 12922
Flame resistant with water	NBR, HNBR	HFC	

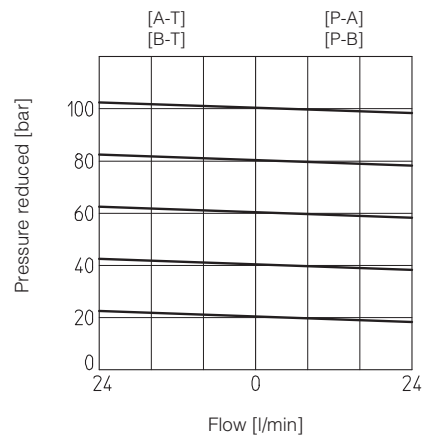
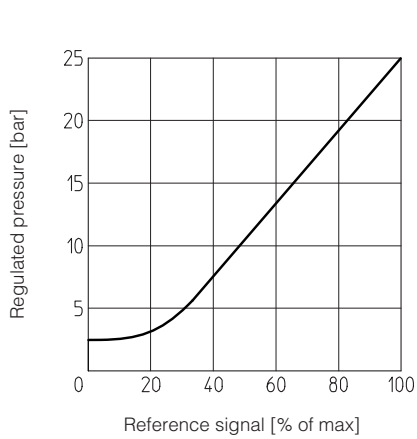
### 6 GENERAL NOTES

SDHRZE proportional valves are CE marked according to the applicable Directives (e.g. Immunity/Emission EMC Directive and Low Voltage Directive).

### 7 CONNECTIONS

SOLENOID POWER SUPPLY CONNECTOR TYPE 666		
PIN	Signal description	
1	SUPPLY	
2	SUPPLY	
3	GND	

**8 DIAGRAMS** based on mineral oil ISO VG 46 at 50°C



**9 INSTALLATION DIMENSIONS FOR SDHRZE [mm]**

**ISO 4401: 2005**

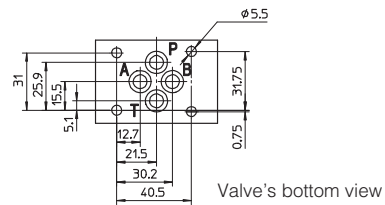
**Mounting surface: 4401-03-02-0-05**

Fastening bolts: 4 socket head screws M5x30 class 12.9

Tightening torque = 8 Nm

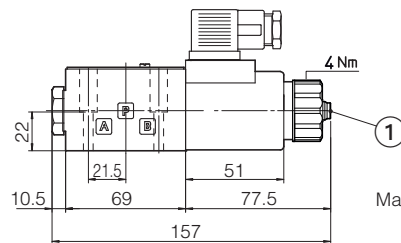
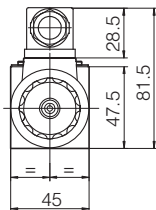
Seals: 4 OR 108;

Diameter of ports A, B, P, T:  $\varnothing 7,5$  mm (max)



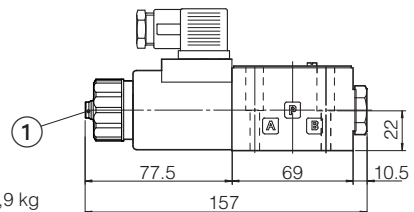
Valve's bottom view

**SDHRZE-A-010**

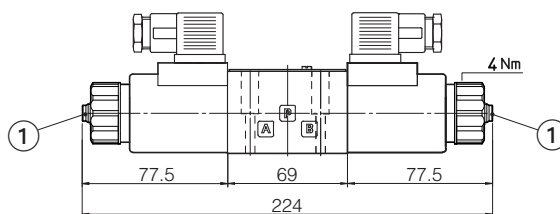


Mass: 1,9 kg

**SDHRZE-A-010/B**



**SDHRZE-A-012**



Mass: 2,6 kg

① screw for air bleeding