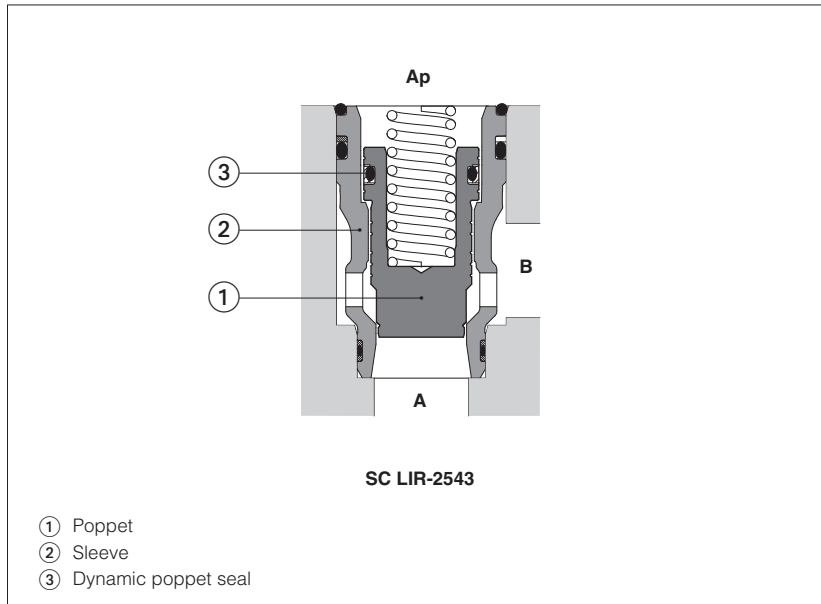


ISO cartridge valves type SC LIR

directional control, ISO 7368 size from 16 to 50, **high flow with leak-free poppet**

Available only on request



2-way cartridge valves with high flow performances and sealed poppet execution, for applications requiring improved leak-free features as hydraulic circuits with accumulators or with vertical loads.

They can be housed into ISO7368 standard cavity and coupled with Atos functional covers performing directional controls, see tech. tables H030 and H040.

Cartridges are available with different poppet shape, without or with damping nose.

A special dynamic poppet seal avoids internal leakages from port B to Ap (pilot line) side.

Size: **16 to 50**

Max flow up to **2500** l/min at $\Delta p = 5$ bar

Max pressure up to **420 bar**

1 MODEL CODE

SC LIR	-	16	43	1	*	/	*
High flow cartridges with leak-free poppet according to ISO 7368					Series number		Seals material: - = NBR PE = FKM BT = HNBR
Size, the same of relevant cover: 16 25 32 40 50							
Type of poppet 33 = without damping nose, area ratio 1 :1,5 43 = with damping nose, area ratio 1 :1,5				Spring cracking pressure: 3 = 3 bar for all poppets 6 = 5,5 bar for all poppets			

Note: new SC LIR are mechanically interchangeable with old SHLIR types

They can be coupled with Atos functional covers performing directional controls, see tech. tables H030 and H040

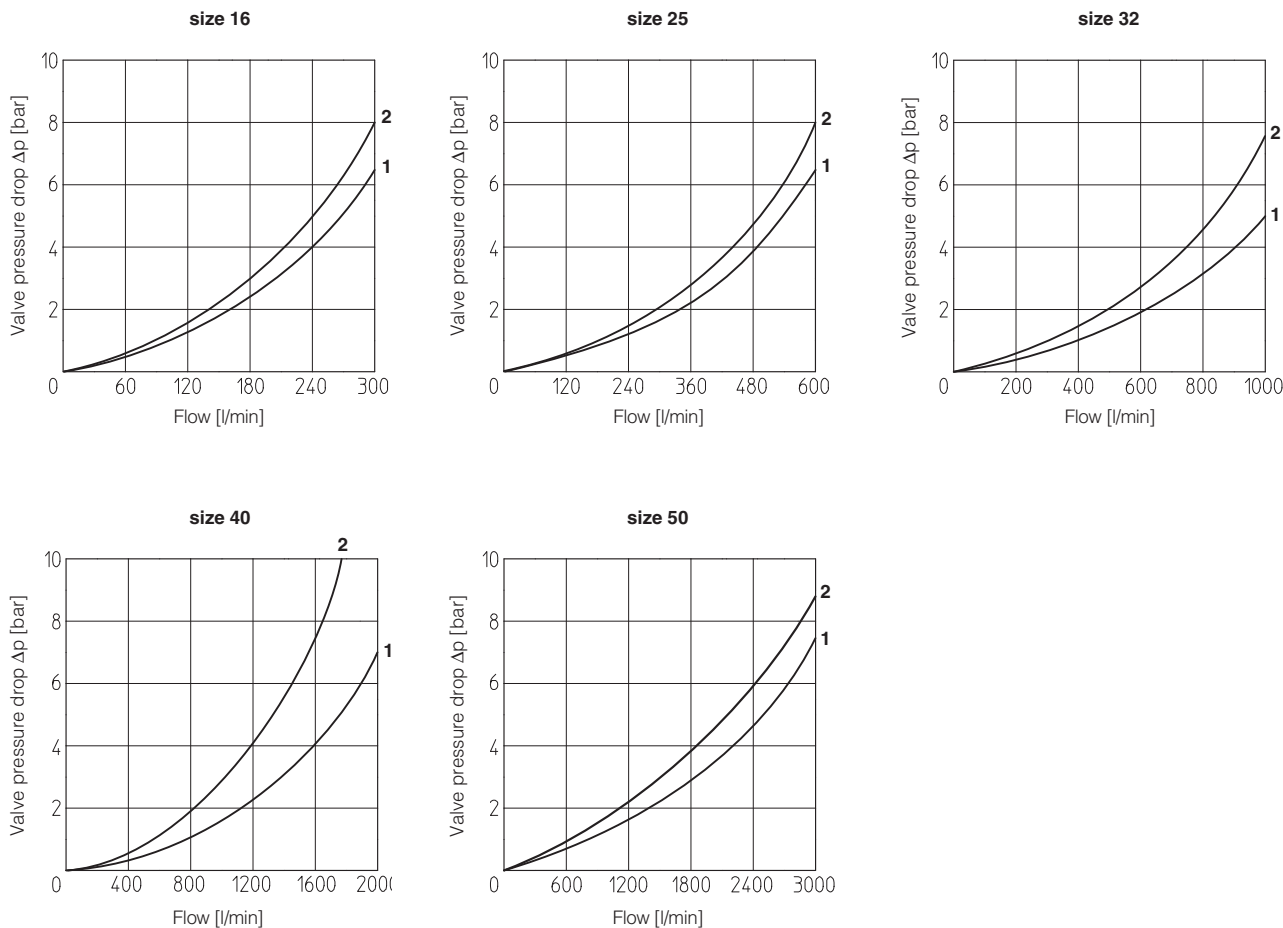
2 TYPE OF POPPET

Type of poppet	33	43
Functional sketch (Hydraulic symbol)		
Operating pressure	420 bar max	
Nominal flow at Δp 5bar (l/min)	Size 16 : 270 25 : 550 32 : 1000 see diagrams Q/ Δp at section ⁹ 40 : 1700 50 : 2500	Size 16 : 240 25 : 500 32 : 800 40 : 1400 50 : 2200
Area ratio A:Ap	1:1,5	
Cracking pressure A→B	Spring 3 : 2,5 bar 6 : 6 bar	Spring 3 : 2,5 bar 6 : 6 bar
Cracking pressure B→A	Spring 3 : 3,8 bar 6 : 9 bar	Spring 3 : 3,8 bar 6 : 9 bar

3 MAIN CHARACTERISTICS, SEALS AND HYDRAULIC FLUIDS - for other fluids not included in below table, consult our technical office

Assembly position / location	Any position		
Subplate surface finishing	Roughness index Ra 0,4 - flatness ratio 0,01/100 (ISO 1101)		
MTTFd values according to EN ISO 13849	150 years, for further details see technical table P007		
Ambient temperature	Standard execution = -30°C ÷ +70°C /PE option = -20°C ÷ +70°C /BT option = -40°C ÷ +70°C		
Seals, recommended fluid temperature	NBR seals (standard) = -20°C ÷ +60°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	15 ÷ 100 mm ² /s - max allowed range 2.8 ÷ 500 mm ² /s		
Fluid contamination class	ISO 4406 class 21/19/16 NAS 1638 class 10, in line filters of 25 µm (β ₂₅ ≥ 75 recommended)		
Hydraulic fluid	Suitable seals type	Classification	Ref. Standard
Mineral oils	NBR, FKM, HNBR	HL, HLP, HLPD, HVLP, HVLPD	DIN 51524
Flame resistant without water	FKM	HFDU, HFDR	ISO 12922
Flame resistant with water	NBR, HNBR	HFC	
Flow direction	From A→B or B→A		

4 Q/Δp DIAGRAMS based on mineral oil ISO VG 46 at 50 °C



1 = poppet type 33
 2 = poppet type 43

Note: for cavity dimensions, see table P006