



## Cylindrical Valves SCP Series

are ideally suited for Shut-off, Flow Control and Throttling of corrosive, abrasive or even toxic process media in either liquid or gaseous state.

### Modular Design

Cylindrical Valves SCP Series are available as DIN- or ANSI-Valves, with handle for manual operation as per standard.

The sturdy design bodies are made of cast steel 1.0619 (WCB), coating RAL 5005 signal-blue or stainless steel casting 1.4408 (CF-8M), with resistant linings such as PFA or PFA-AS (anti-static).



### Main Features

- Heavy-duty, robust construction, maintenance-free
- Bubble-tight shut-off throughout the full pressure and temperature range
- Cavity-free design, max. permeation protection
- Zero stem leakage provided by an innovative stem sealing mechanism
- Consistent low operating torque through cylindrical plug design and resilient liner/cylinder contact
- Maximum flow rates at lowest pressure drops
- Easy replacement of components on site
- Flanges acc. to DIN PN10/16 resp. ANSI 150lbs for installation into existing piping systems

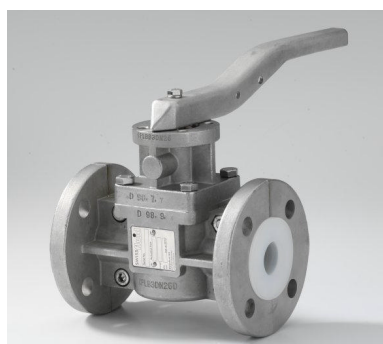
**CE** Conformity according to European Pressure Equipment Directive 97/23/EC (PED)

### Operating Options



#### Standard Valve

Body 1.0619 (WCB)/PFA, bare shaft



#### Stainless Steel

Body CF-8M/PFA, with handlever

**SCP: Technical Data**

22 Cylindrical Valves, plastomer-lined

**PM 22 M.01 e**

April 2005



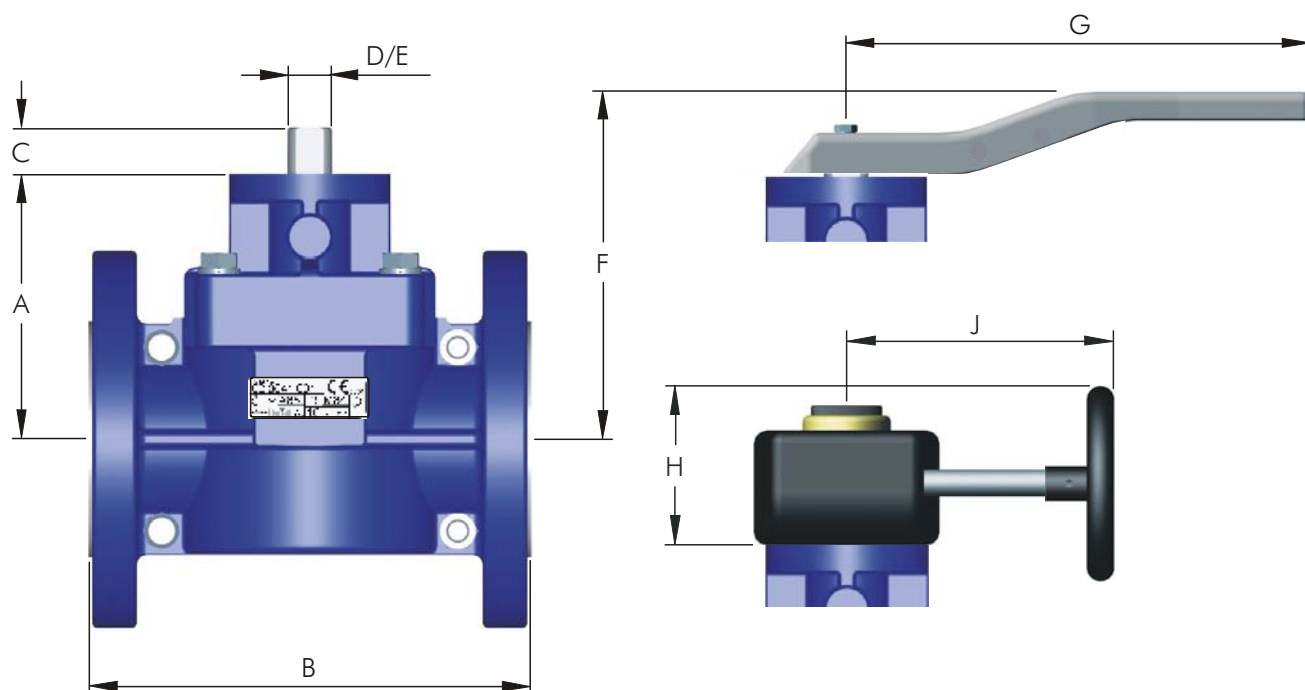
**Operating Conditions**

- Temperature range from -40°C up to +200°C (depending on material of liner resp. encapsulation)
- Pressure range from 1 mbar up to 16 bar

**Testing / Marking**

- Pressure- and tightness testing acc. to EN 12266-1, leakage rate A, and spark testing at 35 kV to assure lining integrity. Marking of valves on body and name plate acc. to EN 19.
- Material- resp. test certificate acc. to EN 10204-3.1

**Outline Drawing / Actuator Options**



**Dimensions** in mm (lbs = kg x 2.2)

Size DN	A	B DIN	B ANSI	C	D Dia.	E DD	F	G	H	J	ISO	kg Valve	kg Handle	kg Gear
15/1/2"	86	130	130	19	14	11	129	230	78	126	F05	3.2	0.5	2.3
20/3/4"	89	150	150	19	14	11	132	230	78	126	F05	3.8	0.5	2.3
25/1"	92	160	127	19	14	11	135	230	78	126	F05	4.4	0.5	2.3
40/1 1/2"	102	200	165	19	18	14	150	270	78	126	F05	7.3	0.8	2.3
50/2"	107	230	178	19	18	14	155	270	78	126	F05	9.9	0.8	2.3
80	137	310	-	24	24	17	190	325	96	185	F07	22.8	1.0	2.5
3" red.	107	-	203	19	18	14	155	270	78	126	F05	13.8	0.8	2.3
100	147	350	-	24	24	17	200	325	96	185	F07	31.8	1.0	2.5
4" red.	137	-	229	24	24	17	190	325	96	185	F07	22.9	1.0	2.5
6" red.	147	-	267	24	24	17	200	325	96	185	F07	35.0	1.0	2.5

Face to face B acc. to DIN EN 558-1 range 1 resp. ASME B16.10

Size 3", 4" and 6" with reduced port to 50, 80 resp. 100 mm



**Construction of Valve**

Mounting top flange acc. to EN ISO 5211, incl. O-ring

Double-D shaft acc. to EN 12116

Rated breaking point

Marking acc. to EN 19

Body and bonnet made of cast steel 1.0619 (WCB), powder-coated RAL 5005 signal-blue or stainless steel casting 1.4408 (CF-8M)

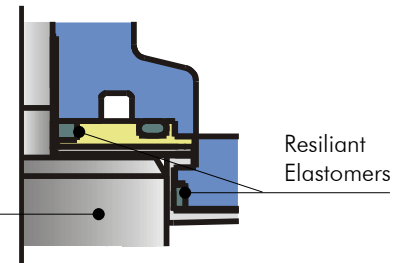
Name plate SS304

Flange Standard acc. to EN 1092 or ASME B16.5

Body bolts and nuts 1.4301, A2-70

Liners made of PFA or PTFE-AS (anti-static), thickness min. 3 mm, with VMQ or FPM backing

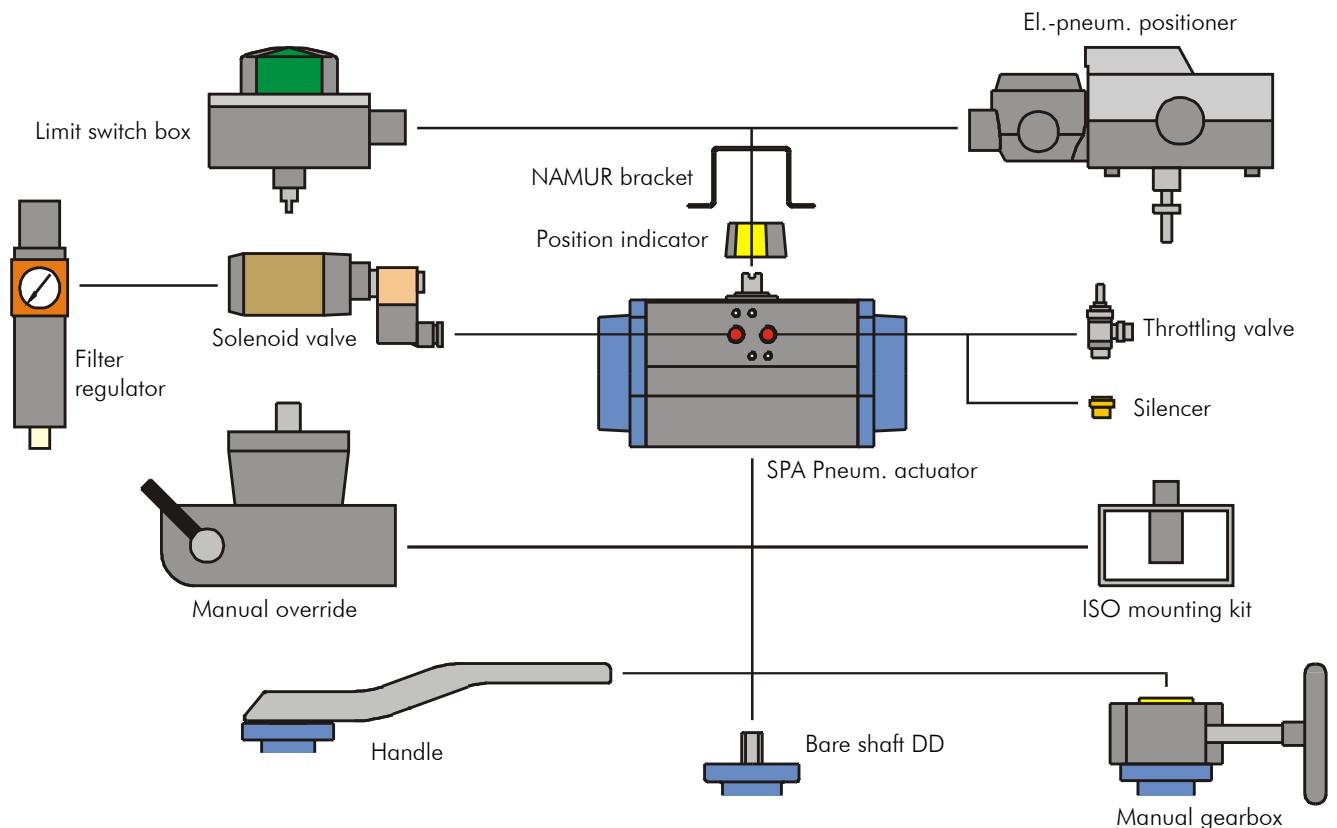
One-piece cylinder/shaft, solid or encapsulated min. 2.5 mm thick



Resilient Elastomers

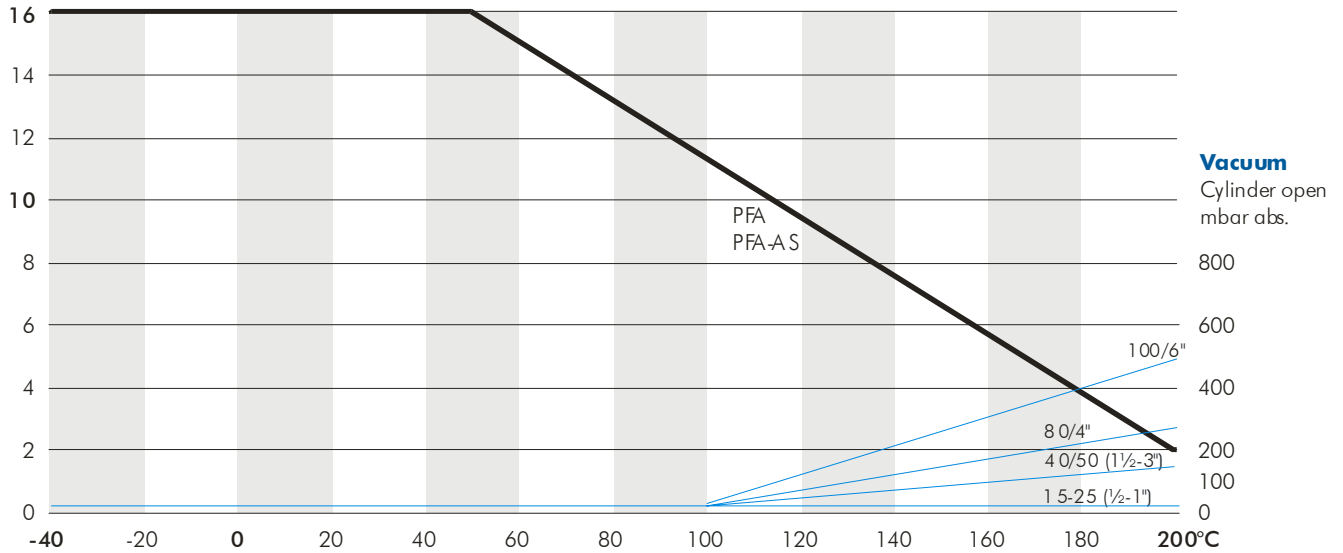
**Dynamic Shaft Seal**

**Mounting Options**



**Pressure-/Temperature Diagram**

**PS max.**  
bar



**Torque Values** in Nm (in-lbs = Nm x 8.85)

Torque values for PFA-encapsulated cylinder and PFA-liner

Size DN	15/1/2"	20/3/4"	25/1"	40/1 1/2"	50/2"/3"	80/4"	100/6"
Torque nom.	16	22	28	42	55	110	210
max. allowable	145	145	145	320	320	700	700

- Stated values to be break-away torques without any consideration of safety factors for actuators.

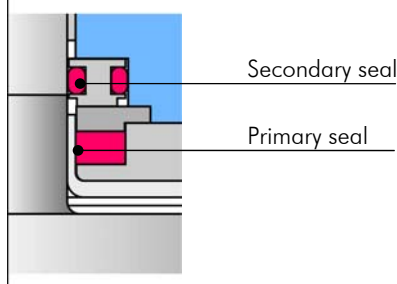
**Flow Rate Values Cv** usg/min. (Kv = Cv/1.16)

Size DN	15/1/2"	20/3/4"	25/1"	40/1 1/2"	50/2"/3"	80/4"	100/6"
Full Port Valve	18	36	70	216	320	930	1'425

**Option**

**Type Fb**

Fugitive emission bonnet according to TA-Luft (VDI 2440), incl. leak detection port for environmentally safe operation



**Typical Service Applications**

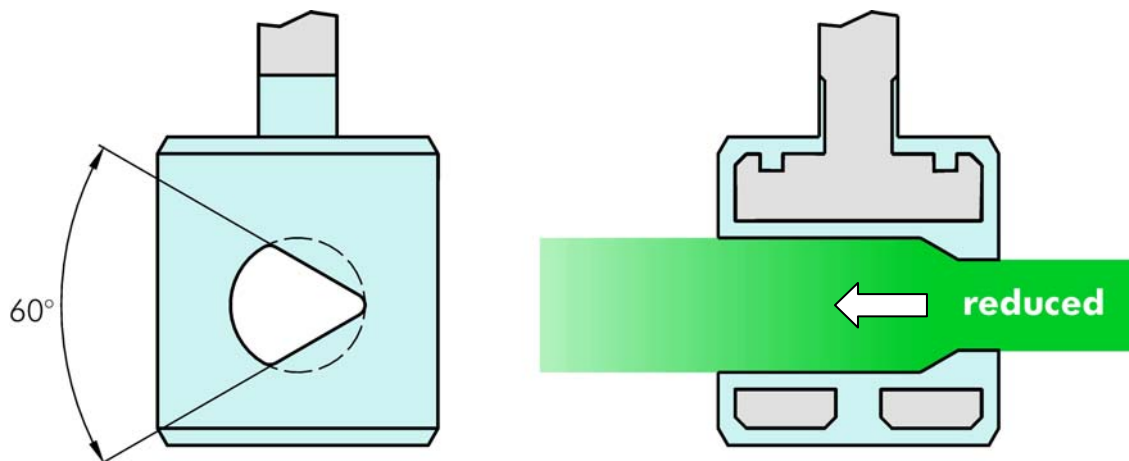
- Chemical CPI
- Petro-Chemical
- Bio-Technical
- Pharmaceutical Industry
- Semi-Conductors
- Pulp and Paper
- Food Processing
- Paint and Pigments
- Fertilizers
- Textile Industry
- Mining and Steel



**Control Valves with V-Port Cylinder**

for effective flow control – under severe operating conditions!

**Sectional View**



**Cv Values**

in usg/min

Size DN mm/inch	Opening angle of cylinder					
	15°	30°	45°	60°	75°	90°
<b>15/1/2"</b>	0	0	0	0.35	5.2	8.1
<b>20/3/4"</b>	0	0	0.6	3	10.7	21.1
<b>25/1"</b>	0	0	1.3	4.5	18.9	31
<b>40/1 1/2"</b>	0	1.4	7.3	13.3	30.9	106
<b>50/2"</b>	0	3	9.7	19	42	124
<b>80/3"red</b>	0	3	9.7	19	42	124
<b>100/4"red</b>						352
<b>6"red</b>						549

Size 3", 4" and 6" with reduced port to 50, 80 resp. 100 mm

**Kv Values**

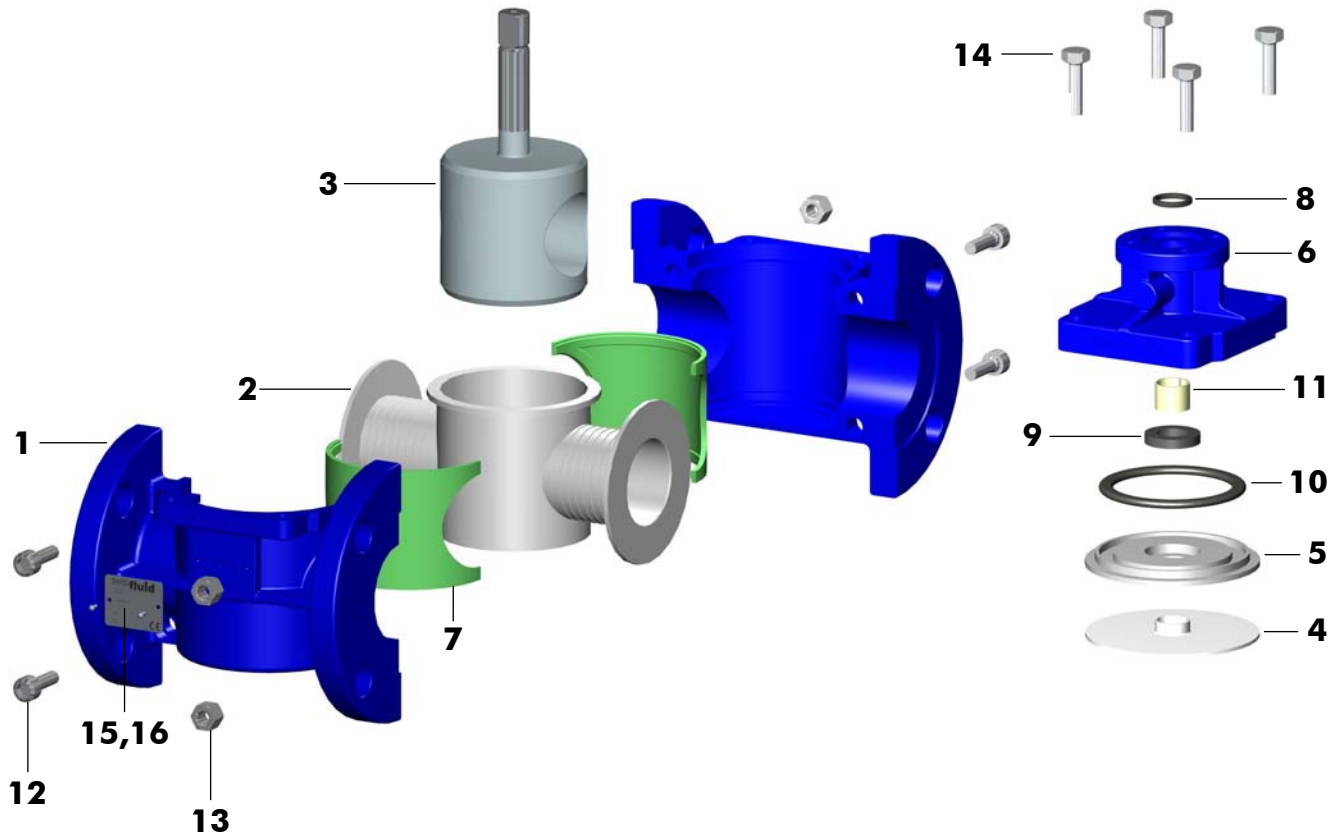
in m³/h

Size DN mm/inch	Opening angle of cylinder					
	15°	30°	45°	60°	75°	90°
<b>15/1/2"</b>	0	0	0	0.3	4.5	7
<b>20/3/4"</b>	0	0	0.5	2.6	9.2	18.2
<b>25/1"</b>	0	0	1.1	3.9	16.3	26.7
<b>40/1 1/2"</b>	0	1.2	6.3	11.5	26.6	91
<b>50/2"</b>	0	2.6	8.4	16.4	36.2	107
<b>80/3"</b>	0	2.6	8.4	16.4	36.2	107
<b>100/4"red</b>						303
<b>6"red</b>						473

Size 3", 4" and 6" with reduced port to 50, 80 resp. 100 mm



**Standard Version** (Picture showing Valve 2"-150lbs, PFA liner, PFA-encapsulated cylinder, bare shaft)



Item	Qty.	Description	Material	No.
1	1	Body two-piece, RAL 5005	WCB	1.0619
2	1	Liner	PFA	
3	1	Cylinder encapsulated	Duplex/PFA	1.4462
4	1	Diaphragm	PTFE	
5	1	Pressure Plate	CF-8M	1.4408
6	1	Bonnet, RAL 5005	WCB	1.0619
7	2	Elastomer	VMQ	
8	1	O-Ring top	FPM	
9	1	Shaft Seal Ring	VMQ	
10	1	Round Gasket	FPM	
11	1	Bearing DU	C.Steel/PTFE	
12	4	Socket Head Cap Screw	A2-70	1.4310
13	4	Hex. Nut	A2-70	1.4310
14	4	Hex. Head Screw	A2-70	1.4310
15	1	Name Plate 42 x 14 CE	A2	1.4301
16	2	Hammer Screw 2.49 x 4.76	A2	1.4310



<b>Project-/Customer Data</b>		Inquiry/Date: _____	<b>Ref. Swissfluid</b> _____
Company: _____	Contact Person: _____	Phone: _____	
Address: _____	Function: _____	Fax: _____	
ZIP/Place: _____	Department: _____	E-mail: _____	
Project: _____	Phone direct: _____	Mobile: _____	

**Operating Conditions**

**Media / Chemical Composition:**

<input type="checkbox"/> Liquid	<input type="checkbox"/> powdery	<input type="checkbox"/> crystallizing	<input type="checkbox"/> sticky	<input type="checkbox"/> Spez. Grav. ____
<input type="checkbox"/> gaseous	<input type="checkbox"/> Solids ____ %	<input type="checkbox"/> viscous	<input type="checkbox"/> Flow Velocity ____ m/s	
<input type="checkbox"/> abrasive	<input type="checkbox"/> Paricle ____ mm	<input type="checkbox"/> Visc. ____ cp	<input type="checkbox"/> Flow Rate ____ m <sup>3</sup> /h	

**Pressure**

max. \_\_\_\_ bar  
min. \_\_\_\_ bar

**Temperature**

max. \_\_\_\_ °C  
min. \_\_\_\_ °C

**Mode**

On/Off  
 Flow Control  
\_\_\_\_ cycles/ \_\_\_\_

**Installation / Environment**

horizontal  Room dry  
 vertical  Room humid  
 \_\_\_\_\_  outdoor

Remarks: \_\_\_\_\_

**Specification of a complete Cylindrical Valve SCP Series**

