

## SPP

**31,5 MPa (315 bar)**

Port sizes: 15 ÷ 32 mm

Flow rates: 10 ÷ 420 l/min

### TECHNICAL DATA

Max. working pressure: 31,5 MPa (315 bar)

Max. testing pressure: 47 MPa (470 bar)

Min. bursting pressure: 95 MPa (950 bar)

Fatigue test: 0 ÷ 28 MPa (280 bar)

Bypass valve: standard  $\Delta p$  600 kPa (6 bar)  $\pm$  10%

Filter element collapse pressure:

$\Delta p$  2,1 MPa (21 bar) all types

$\Delta p$  21 MPa (210 bar) 2T - 2C - 2D - 2V - TD - TV

Working temperature: -25°C ÷ +110°C

### MATERIALS

Head: cast iron

Bowl: forged steel

Seals: standard NBR

on request FKM

### COMPATIBILITY (ISO 2943:1999)

Full with fluids: HH-HL-HM-HV-HTG

(according to ISO 6743/4).

For fluids different than the above mentioned, please contact our Sales Department.

All tests performed according to the following standards:

ISO 2941: Element collapse resistance test

ISO 2942: Production integrity test

ISO 2943: Fluids compatibility

ISO 3723: End load test method

ISO 3724: Flow fatigue resistance method

ISO 3968: Pressure drop versus flow rate

ISO 16889: Multipass test.

For further information contact our Technical Dept.

SPP	Type				Type	CCH
		151	301	801		
		152	302	802		
		153	-	803		
		-	-	804		

Filter media				Filter media
FT = 5 $\mu$ m <sub>(c)</sub>	FT	FT	FT	FT = 5 $\mu$ m <sub>(c)</sub>
FC = 7 $\mu$ m <sub>(c)</sub>	FC	FC	FC	FC = 7 $\mu$ m <sub>(c)</sub>
FD = 12 $\mu$ m <sub>(c)</sub>	FD	FD	FD	FD = 12 $\mu$ m <sub>(c)</sub>
FV = 21 $\mu$ m <sub>(c)</sub>	FV	FV	FV	FV = 21 $\mu$ m <sub>(c)</sub>
CD = 10 $\mu$	CD	CD	CD	CD = 10 $\mu$
CV = 25 $\mu$	CV	CV	CV	CV = 25 $\mu$
RD = 10 $\mu$	RD	RD	RD	RD = 10 $\mu$
MV = 25 $\mu$	MV	MV	MV	MV = 25 $\mu$
2T = 3 $\mu$	2T	2T	2T	2T = 3 $\mu$
2C = 6 $\mu$	2C	2C	2C	2C = 6 $\mu$
2D = 12 $\mu$	2D	2D	2D	2D = 12 $\mu$
2V = 21 $\mu$	2V	2V	2V	2V = 21 $\mu$
TD = 10 $\mu$	TD	TD	TD	TD = 10 $\mu$
TV = 25 $\mu$	TV	TV	TV	TV = 25 $\mu$

Seals				Seals
1 = NBR Nitrile	1	1	1	1 = NBR Nitrile
2 = FKM Fluoroelastomer	2	2	2	2 = FKM Fluoroelastomer

Bypass type			
S = Whitout	S	S	S
C = 600 kPa (6 bar)	C	C	C

Ports			
P = Manifold type mounting	P	P	P

Port size			
A = $\varnothing$ 15	A	-	-
B = $\varnothing$ 20	-	B	-
C = $\varnothing$ 32	-	-	C

Indicators			
03 =Port, plugged	03	03	03
5E =Visual differential 500 kPa (5 bar)	5E	5E	5E
5F =Visual differential 800 kPa (8 bar)	5F	5F	5F
6E =Electrical differential 500 kPa (5 bar)	6E	6E	6E
6F =Electrical differential 800 kPa (8 bar)	6F	6F	6F
7E =6E with LED	7E	7E	7E
7F =6F with LED	7F	7F	7F
T2 =Electrical 500 kPa (5 bar) with thermostat 30°C	T2	T2	T2
T3 =Electrical 800 kPa (8 bar) with thermostat 30°C	T3	T3	T3

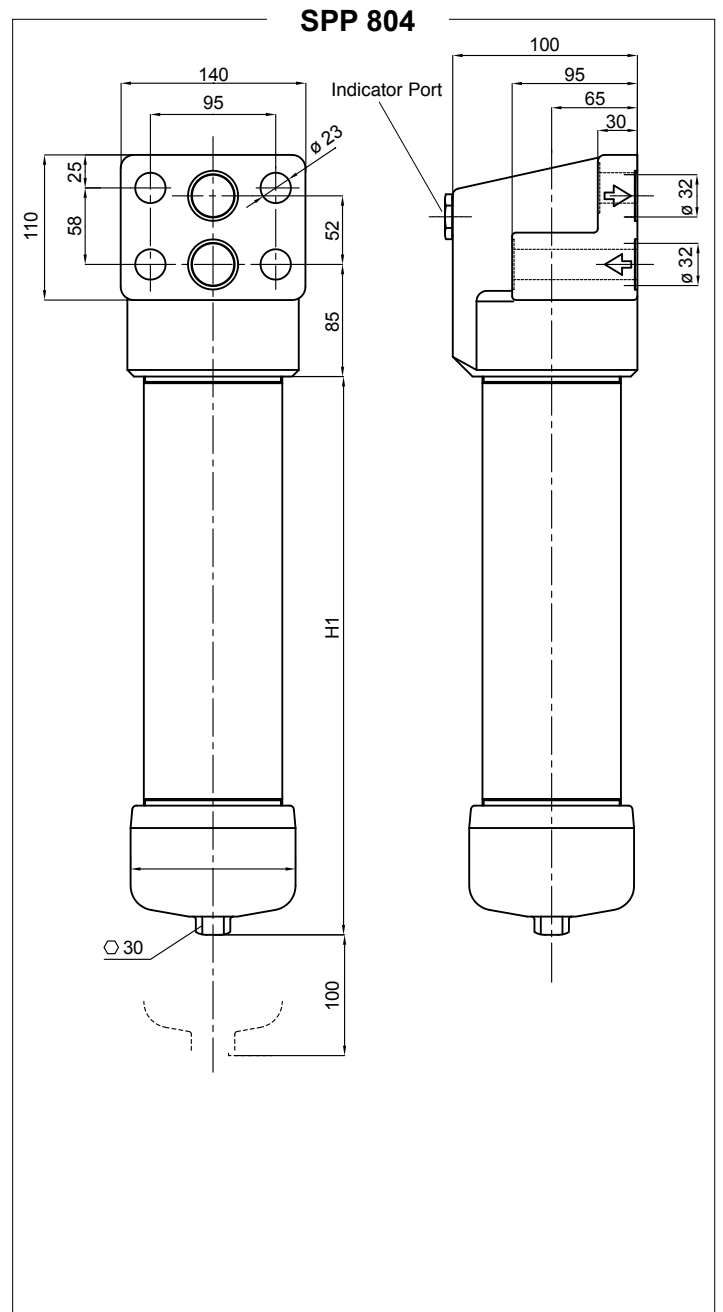
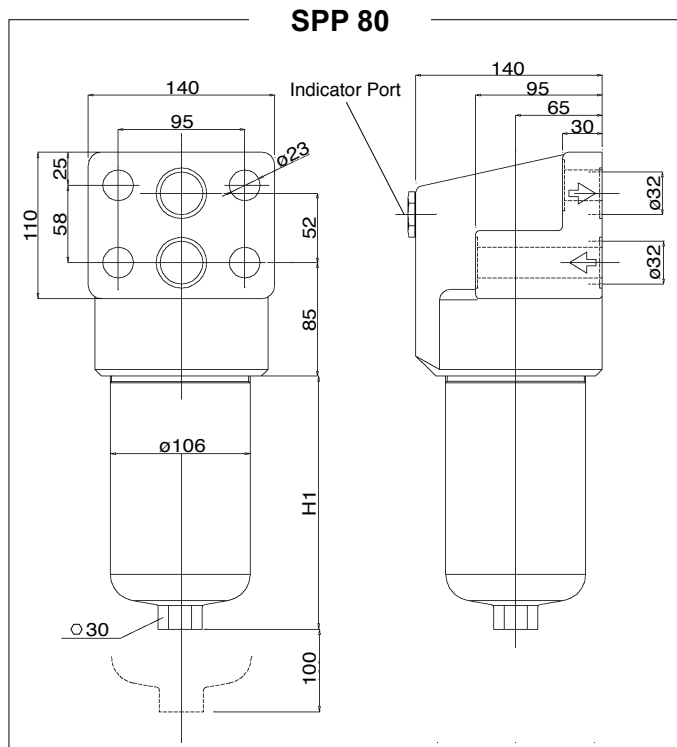
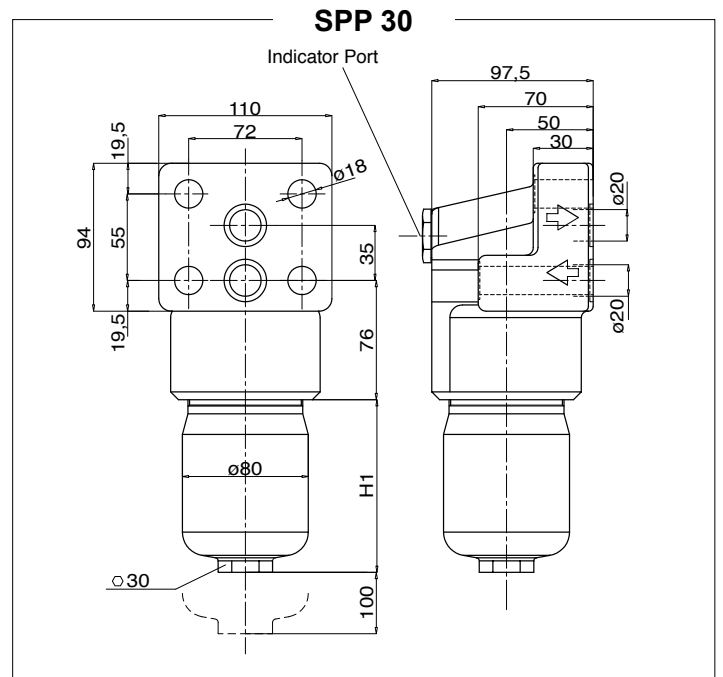
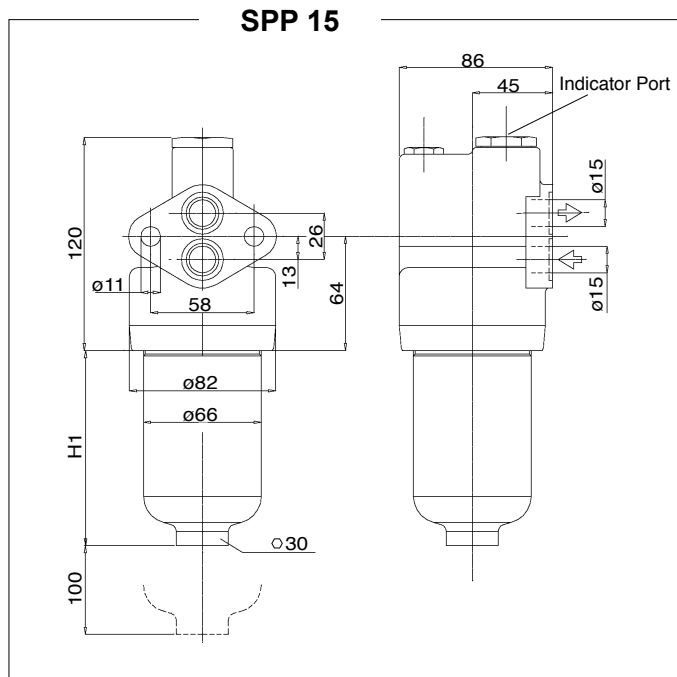
Indicator 72 - 73  
on request only

When the filter is ordered with FKM seals, the first digit of the indicator code is a letter (please see page 188-189).

XX	Accessories			
	XX = Not available	XX	XX	XX

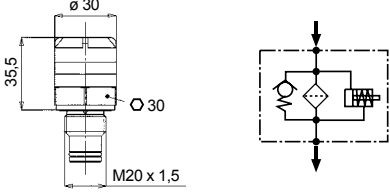
**DIMENSIONAL LAYOUT**

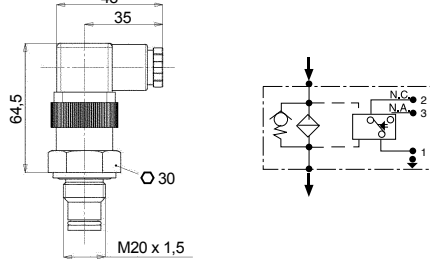
(mm)



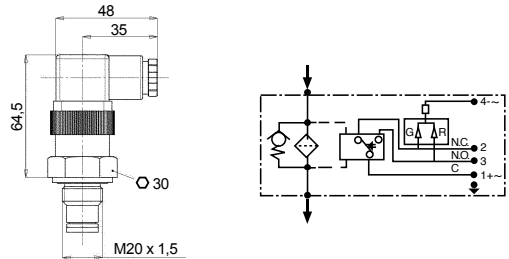
Type	H1	Weight Kg
SPP 151	79	4,4
SPP 152	109	4,6
SPP 153	209	5,2
SPP 301	116	6,6
SPP 302	207	8,2
SPP 801	107	11,0
SPP 802	199	13,9
SPP 803	319	17,2
SPP 804	420	22,0

## CLOGGING INDICATORS

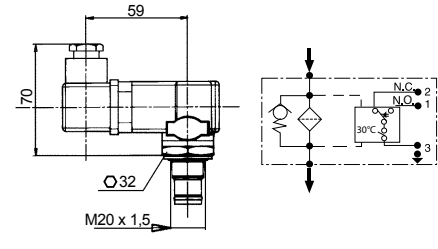
NBR	FKM	Differential VISUAL indicators	Recommended tightening torque 90 Nm 
5E	AE	Setting 500 kPa (5 bar)	
5F	AF	Setting 800 kPa (8 bar)	

NBR	FKM	Differential ELECTRICAL indicators	Recommended tightening torque 90 Nm 
6E	CE	Setting 500 kPa (5 bar)	
6F	CF	Setting 800 kPa (8 bar)	

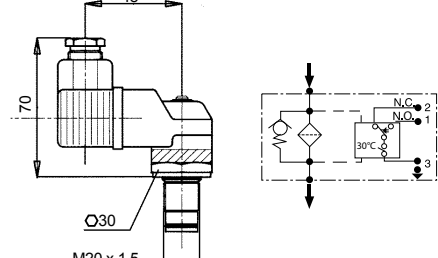
SPDT differential switch. C.C. 14 - 30 V: > max resistive or inductive load 4 - 3 A respectively  
C.A. 125-250 V: > max resistive or inductive load 1 A - Protection IP65 - Connector DIN 43650

NBR	FKM	Differential ELECTRICAL indicators with LED (24 V) for visual indication	Recommended tightening torque 90 Nm 
7E	EE	Setting 500 kPa (5 bar)	
7F	EF	Setting 800 kPa (8 bar)	

SPDT differential switch. C.C. 14 - 30 V: > max resistive or inductive load 4 - 3 A respectively  
C.A. 125-250 V: > max resistive or inductive load 1 A - Protection IP65 - Connector DIN 43650

NBR	FKM	Differential ELECTRICAL indicators with THERMOSTAT 30°C	Recommended tightening torque 90 Nm 
T2	DE	Setting 500 kPa (5 bar)	
T3	DF	Setting 800 kPa (8 bar)	

SPDT differential switch. C.C. 14 - 30 V: > max resistive or inductive load 4 - 3 A respectively  
C.A. 125-250 V: > max resistive or inductive load 1 A - Protection IP65 - Connector DIN 43650

NBR	FKM	Differential VISUAL ELECTRICAL indicators	Recommended tightening torque 90 Nm 
72	E2	Setting 500 kPa (5 bar)	
73	E3	Setting 800 kPa (8 bar)	

SPDT differential switch. C.C. 14 - 30 V: > max resistive or inductive load 4 - 3 A respectively  
C.A. 125-250 V: > max resistive or inductive load 1 A - Protection IP65 - Connector DIN 43650

## FLOW RATES

(l/min)

Type	Filter Media	Δ p		
		50 kPa (0,5 bar)	100 kPa (1 bar)	150 kPa (1,5 bar)
SPP 151	FT	11	21	28
	FC	14	26	40
	FD	19	38	57
	FV	31	60	85
	CD	45	75	90
	CV	75	90	90
	RD	70	90	90
	MV	80	90	90
	TD	68	90	90
	TV	78	90	90
	2T	9	19	25
	2C	12	23	35
	2D	16	33	52
	2V	27	50	77
SPP 152	FT	15	30	45
	FC	18	35	50
	FD	25	50	75
	FV	40	68	90
	CD	50	80	90
	CV	80	90	90
	RD	75	90	90
	MV	85	90	90
	TD	73	90	90
	TV	83	90	90
	2T	13	26	41
	2C	15	30	47
	2D	22	46	70
	2V	35	60	85
SPP 153	FT	22	35	50
	FC	24	41	56
	FD	35	55	85
	FV	55	83	90
	CD	72	90	90
	CV	85	90	90
	RD	80	90	90
	MV	90	90	90
	TD	78	90	90
	TV	90	90	90
	2T	20	33	48
	2C	22	38	52
	2D	31	50	81
	2V	50	78	90

Type	Filter Media	Δ p		
		50 kPa (0,5 bar)	100 kPa (1 bar)	150 kPa (1,5 bar)
SPP 301	FT	25	55	70
	FC	27	62	81
	FD	39	73	95
	FV	62	110	150
	CD	80	130	150
	CV	110	150	150
	RD	100	150	150
	MV	120	150	150
	TD	97	150	150
	TV	117	150	150
	2T	23	51	67
	2C	24	58	76
	2D	36	67	90
	2V	57	100	145
SPP 302	FT	34	63	79
	FC	38	73	90
	FD	50	84	104
	FV	75	119	150
	CD	122	150	150
	CV	135	150	150
	RD	130	150	150
	MV	148	150	150
	TD	127	150	150
	TV	144	150	150
	2T	30	60	74
	2C	34	68	86
	2D	47	78	100
	2V	70	109	150
SPP 801	FT	39	73	124
	FC	46	91	142
	FD	79	154	193
	FV	105	194	240
	CD	159	240	240
	CV	219	240	240
	RD	178	240	240
	MV	186	240	240
	TD	150	240	240
	TV	155	240	240
	2T	27	48	74
	2C	36	62	87
	2D	50	98	131
	2V	73	130	184

Type	Filter Media	Δ p		
		50 kPa (0,5 bar)	100 kPa (1 bar)	150 kPa (1,5 bar)
SPP 802	FT	93	198	250
	FC	128	218	281
	FD	163	286	300
	FV	201	300	300
	CD	239	300	300
	CV	279	300	300
	RD	261	300	300
	MV	291	300	300
	TD	217	300	300
	TV	242	152	300
	2T	71	152	190
	2C	125	167	216
	2D	125	230	280
	2V	153	280	300
SPP 803	FT	131	270	340
	FC	140	287	350
	FD	170	325	420
	FV	225	380	420
	CD	290	420	420
	CV	320	420	420
	RD	311	420	420
	MV	335	420	420
	TD	260	420	420
	TV	280	420	420
	2T	109	225	283
	2C	116	239	291
	2D	141	270	408
	2V	187	316	420
SPP 804	FT	173	351	420
	FC	188	363	420
	FD	237	410	420
	FV	312	420	420
	CD	330	420	420
	CV	340	420	420
	RD	331	420	420
	MV	355	420	420
	TD	277	420	420
	TV	295	420	420
	2T	144	292	310
	2C	156	302	362
	2D	197	341	420
	2V	260	390	420

The reference fluid has a kinematic viscosity of 30 cSt and a density of 0,86 Kg/dm<sup>3</sup>.  
For different oil viscosity please contact our Sales Department for further information.

## DIRT HOLDING CAPACITY

(g) ISO MTD  $\Delta p = 500$  kPa (5 bar)

Type	Filter Media							
	FT	2T	FC	2C	FD	2D	FV	2V
CCH 151	2,0	2,0	2,6	2,6	3,0	3,0	4,3	4,3
CCH 152	3,0	3,0	3,8	3,8	3,9	3,9	6,2	6,2
CCH 153	5,5	5,5	7,2	7,2	7,8	7,8	11,5	11,5
CCH 301	5,7	5,7	7,5	7,5	8,2	8,2	12,1	12,1
CCH 302	10,9	10,9	14,1	14,1	15,6	15,6	21,8	21,8
CCH 801	11,9	11,9	15,5	11,3	17,2	12,6	25,3	18,4
CCH 802	22,0	16,1	27,6	20,7	31,0	23,0	46,0	33,3
CCH 803	28,0	25,3	37,9	32,2	42,5	36,8	62,1	52,9
CCH 804	39,1	33,3	49,4	42,5	56,3	48,3	80,5	70,1

## FILTER AREA

(cm<sup>2</sup>)

Type	Filter Media					
	RD	TD	MV	TV	CD	CV
CCH 151	300	300	300	300	310	310
CCH 152	430	430	430	430	475	475
CCH 153	805	805	805	805	915	915
CCH 301	770	770	770	770	975	975
CCH 302	1455	1455	1455	1455	1785	1785
CCH 801	1710	1430	1710	1430	1720	1720
CCH 802	3160	2210	3160	2210	2695	2695
CCH 803	5020	3560	5020	3560	4325	4325
CCH 804	6580	4700	6580	4700	5685	5685