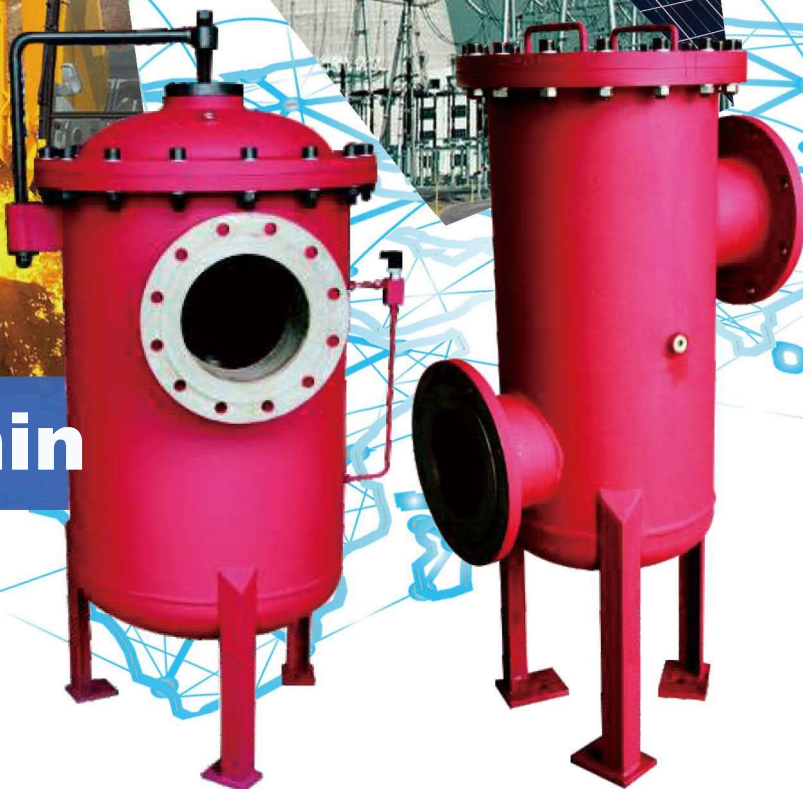


Inline Filter WKRFL

Up to 15000L/min

Up to 16bar



WKRFL

Inline Filter

Welded Version

1. TECHNICAL SPECIFICATIONS

1.1 FILTER HOUSING

Construction

The filter housings are designed in accordance with international regulations. They consist of a two-piece filter housing with a bolt-on cover plate.

Standard equipment:

- stand
- with bypass valve
- inlet and outlet are positioned at different heights on opposite sides
- connections for venting and draining
- connection for a clogging indicator

1.2 FILTER ELEMENTS

WK-Hydraulic filter elements are validated and their quality is constantly monitored according to the following standards:

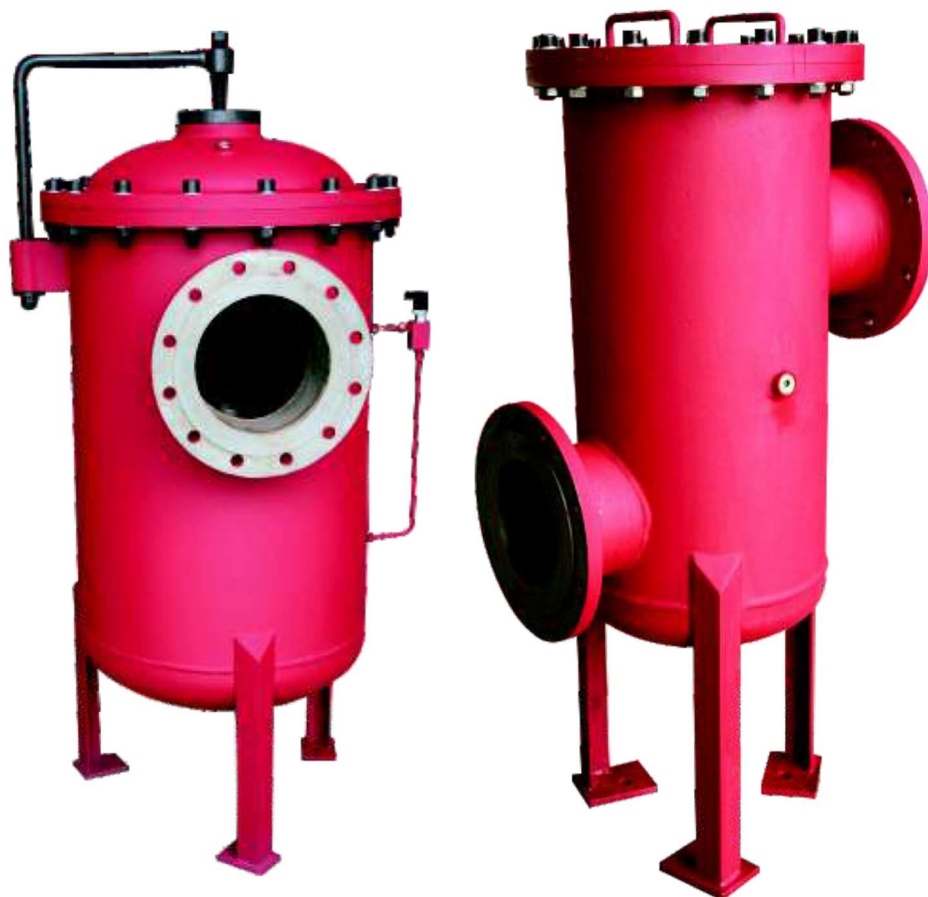
- ISO 2941, ISO 2942, ISO 2943
- ISO 3724, ISO 3968, ISO 11170
- ISO 16889

Number of filter elements

RFL	Elements
130x	1x1300 R
132x	1x2600 R
250x	3x0850 R
252x	3x1700 R
400x	5x0850 R
402x	5x1700 R
520x	4x1300 R
522x	4x2600 R
650x	5x1300 R
652x	5x2600 R
780x	6x1300 R
782x	6x2600 R
1500x	10x1300 R
1502x	10x2600 R

Filter elements are available with the following pressure stability values:

Glass fiber (ON):	20 bar
Paper (P/HC):	10 bar
Stainl. st. wire mesh (W/HC):	20 bar
Stainless steel fibre (V):	30 bar
AM:	10 bar



1.3 FILTER SPECIFICATIONS

Nominal pressure	16 bar
Temperature range	-10 °C to +100 °C
Material of filter housing and cover plate	WKRFL 1300 to 15020: Welded steel WKRFL 1303 to 15023: Stainl.
Type of clogging indicator	VM (differential pressure measurement up to 210 bar operating pressure)
Pressure setting of the clogging indicator	2 bar (others on request)
Bypass cracking pressure	3 bar (others on request)

1.4 SEALS

NBR (=Perbunan)

1.5 INSTALLATION

Inline filter

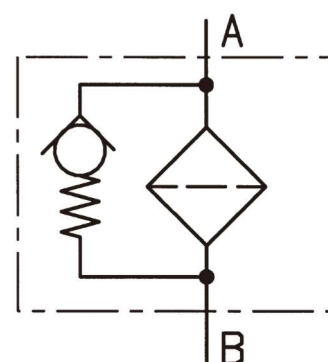
1.6 SPECIAL MODELS AND ACCESSORIES

- Without bypass valve
- Drain and vent ports with ball valves or other shut-off valves
- Inlet and outlet positioned one above the other
- Counter flanges available for all sizes
- Venting line with sight gauges
- Cover plate lifting device

1.7 SPARE PARTS

See Original Spare Parts List

Symbol for hydraulic systems



2. MODEL CODE (also order example)**WKRFL ON 1300 C K 10 D 1 . X /-L24****2.1 COMPLETE FILTER****Filter type**

WKRFL

Filter material

ON Glass fiber P/HC Paper
 AM Absorbent glass fiber W/HC Stainl. st. wire mesh
 V Stainless steel fibre

Size of filter or element

WKRFL:1300, 1303, 1320, 1323, 2500, 2503, 2520, 2523, 4000, 4003, 4020, 4023, 5200, 5203,
 5220, 5223, 6500, 6503, 6520, 6523, 7800, 7803, 7820, 7823, 15000, 15003, 15020, 15023

Operating pressure

C = 16 bar

Type and size of connection

Type	Port	Filter size							
		1300	1320	2500	4000	5200	6500	7800	15000
		1303	1323	2503	4003	5203	6503	7803	15003
				2520	4020	5220	6520	7820	15020
				2523	4023	5223	6523	7823	15023
K	DIN DN 40	•	•						
L	DIN DN 50	•	•	•					
M	DIN DN 65	•	•	•					
Q	DIN DN 80	•	•	•	•	•			
R	DIN DN 100	•	•	•	•	•	•	•	
U	DIN DN 125		•	•	•	•	•	•	
V	DIN DN 150			•	•	•	•	•	
W	DIN DN 200				•	•	•	•	•
X	DIN DN 250					•	•	•	•
Y	DIN DN 300								•

Filtration rating in μm

ON: 1, 3, 5, 10, 15, 20 P/HC: 10, 20
 V: 3, 5, 10, 20 W/HC: 25, 50, 100, 200 AM: 40

Type of clogging indicator

Y plastic blanking plug in indicator port
 A stainless steel blanking plug in indicator port
 B visual
 C electrical
 D visual and electrical
 for other clogging indicators,
 see brochure no. 7.050../..

Type code

1

Modification number

X the latest version is always supplied

Supplementary details

B. special cracking pressure of bypass (e.g. B1 = 1 bar)
 DH cover plate lifting device
 KB without bypass valve
 L... light with appropriate voltage (24V, 48V, 110V, 220V)
 LED 2 light emitting diodes up to 24 Volt
 OR O-ring groove on the DIN flange (inlet and outlet) to Rexroth standard AB 22-04
 RE sealing strip E on the flange (inlet and outlet): surface finish 3.6 μm
 V FPM seals
 33 inlet and outlet positioned one above the other

2.2 REPLACEMENT ELEMENT**1300 R 010 ON /-V****Size**

0850, 1300, 1700, 2600

Type

R

Filtration rating in μm

ON: 001, 003, 005, 010, 015, 020 W/HC: 025, 050, 100, 200
 V: 003, 005, 010, 020 P/HC: 010, 020 AM: 040

Filter material

ON, V, W/HC, P/HC, AM

Supplementary details

V (for descriptions, see point 2.1)

3. FILTER CALCULATION / SIZING

The total pressure drop of a filter at a certain flow rate Q is the sum of the housing Δp and the element Δp and is calculated as follows:

$$\Delta p_{\text{total}} = \Delta p_{\text{housing}} + \Delta p_{\text{element}}$$

$$\Delta p_{\text{housing}} = (\text{see Point 3.1})$$

$$\Delta p_{\text{element}} = Q \cdot \frac{SK^*}{1000} \cdot \frac{\text{viscosity}}{30}$$

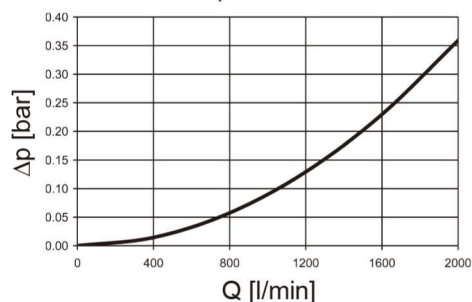
(*see point 3.2)

For ease of calculation, our Filter Sizing Program is available on request free of charge.

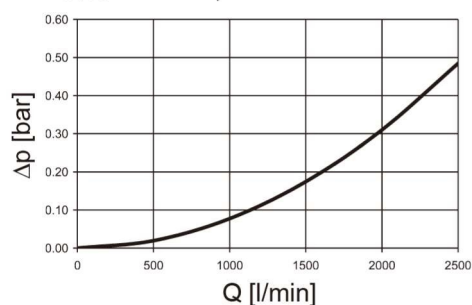
3.1 Δp -Q HOUSING CURVES BASED ON ISO 3968

The housing curves apply to mineral oil with a density of 0.86 kg/dm^3 and a kinematic viscosity of $30 \text{ mm}^2/\text{s}$. In this case, the differential pressure changes proportionally to the density.

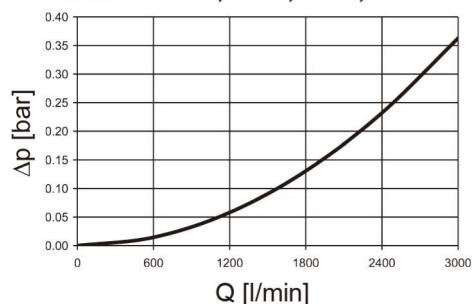
WKRFL 1300, 1303



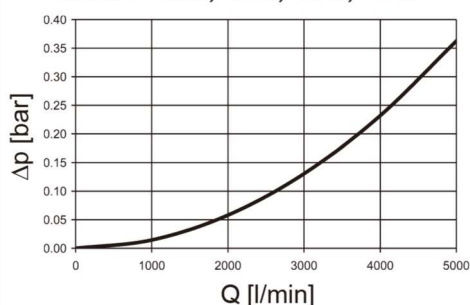
WKRFL 1320, 1323



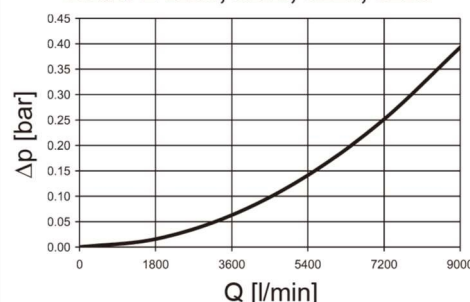
WKRFL 2500, 2503, 2520, 2523



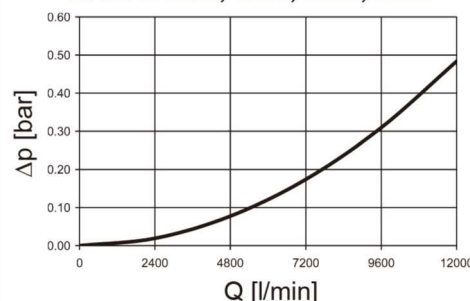
WKRFL 4000, 4003, 4020, 4023



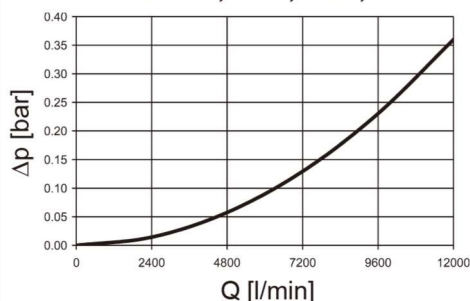
WKRFL 5200, 5203, 5220, 5223



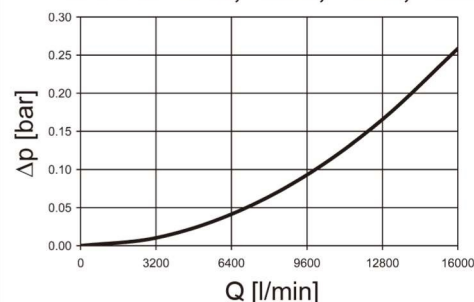
WKRFL 6500, 6503, 6520, 6523



WKRFL 7800, 7803, 7820, 7823

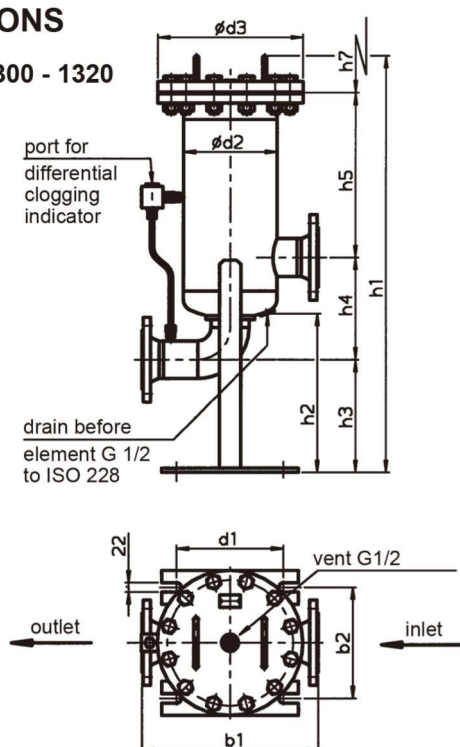


WKRFL 15000, 15003, 15020, 15023

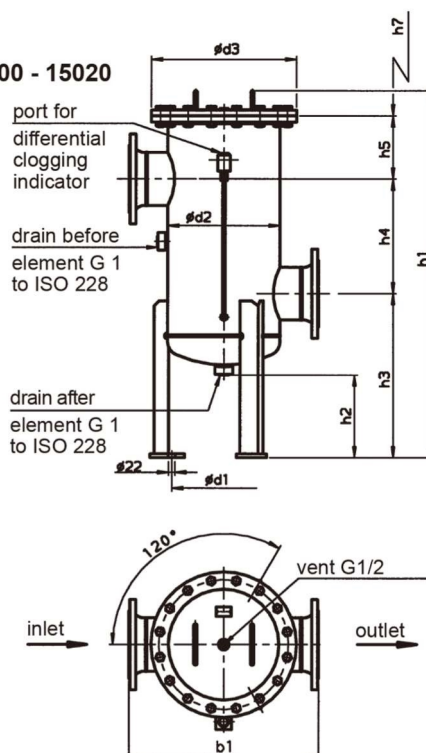


4. DIMENSIONS

WKRF 1300 - 1320



WKRF 2500 - 15020



WKRF	Flange port	b1	b2	d1	d2	d3	h1	h2	h3	h4	h5	h7 including	Weight pressure element [kg]	Volume of chamber [l]
130x/132x	DIN DN 40	412	260	250	219.1	340	972/1416	370	294	212	384/824	500/940	64.1/78.1	18/33
	DIN DN 50								266	240	384/824		64.1/78.1	18/33
	DIN DN 65								279	227	384/824		65.1/79.1	18/33
	DIN DN 80								266	240	384/824		67.1/81.1	19/34
	DIN DN 100								253	275	362/802		69.1/83.1	19/34
132x	DIN DN 125	480	260	250	219.1	340	/1416	370	215	291	/824	/940	87.1	/36
250x/252x	DIN DN 50	466	312	250	273	360	942/1332 990/1380 990/1380 1050/1440 1050/1440 1050/1440	220	378	270	222/612	420/810 420/810 420/810 420/810 420/810 420/810	73.9/82.4	34/54
	DIN DN 65								408	350	160/550		70.9/85.4	36/56
	DIN DN 80								388	410	120/510		72.9/87.4	36/56
	DIN DN 100								438	304	236/626		75.9/90.4	40/60
	DIN DN 125								438	380	160/550		79.9/94.4	40/60
	DIN DN 150								438	365	175/565		83.9/98.4	45/65
400x/402x	DIN DN 80	600	-	330	355.6	460	1079/1469 1079/1469 1169/1459 1169/1559 1204/1594	266	475	410	115/505	420/810 420/810 420/810 420/810 420/810	119.5/145.0	64/99
	DIN DN 100								475	304	221/661		121.5/147.0	65/100
	DIN DN 125								525	380	185/575		127.5/153.0	75/110
	DIN DN 150								525	365	200/590		133.5/159.0	75/110
	DIN DN 200								525	365	235/625		140.5/166.0	83/118
520x/522x	DIN DN 80	600	-	380	406.4	510	1144/1584 1144/1584 1256/1696 1256/1696 1256/1696 1324/1764	244	465	410	191/631	500/940	158.4/202.4	89/142
	DIN DN 100	600							465	304	297/737		160.4/204.4	90/143
	DIN DN 125	600							525	380	271/711		170.4/214.4	104/157
	DIN DN 150	600							525	365	286/726		175.4/219.4	106/159
	DIN DN 200	640							525	365	286/726		179.4/223.4	110/162
	DIN DN 250	660							560	450	236/676		194.4/238.4	125/178
400x/402x	DIN DN 80	600	-	330	355.6	460	1079/1469 1079/1469 1169/1459 1169/1559 1204/1594	266	475	410	115/505	420/810 420/810 420/810 420/810 420/810	119.5/145.0	64/99
	DIN DN 100								475	304	221/661		121.5/147.0	65/100
	DIN DN 125								525	380	185/575		127.5/153.0	75/110
	DIN DN 150								525	365	200/590		133.5/159.0	75/110
	DIN DN 200								525	365	235/625		140.5/166.0	83/118
780x/782x	DIN DN 100	740	-	480	508	620	1260/1700 1260/1700 1260/1700 1380/1820 1380/1820	255	540	304	336/776	500/940	225.6/282.6	161/246
	DIN DN 125	740							540	380	260/700		229.6/286.6	162/247
	DIN DN 150	740							540	365	275/715		234.6/291.6	163/248
	DIN DN 200	740							600	460	240/680		249.6/306.6	190/275
	DIN DN 250	780							600	450	250/690		259.6/316.6	194/279
1500x/1502x	DIN DN 200	1000	-	690	711	830	1425/1865 1425/1865 1495/1935	263	655	365	330/770	500/940	476.0/570.0	391/558
	DIN DN 250								655	450	245/685		488.0/582.0	397/564
	DIN DN 300								670	515	235/675		513.0/607.0	426/593

DIN flange connection to DIN EN ISO 1092-1, PN 16 (with sealing strip, flange shape B1)

NOTE

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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