

# RD



## MATERIALS

Cover & housing:  
Anodized aluminium alloy

For 61&62 only:  
Cover: anodized aluminium alloy  
Housing: steel

Bypass valve:  
Polyamide

Seals:  
NBR Nitrile  
(FKM - on request fluoroelastomer)

Indicator housing:  
Brass

## PRESSURE (ISO 10771-1:2002)

Max working:  
2 MPa (20 bar)

Test:  
3 MPa (30 bar)

Bursting:  
6 MPa (60 bar)

Collapse, differential  
for the filter element (ISO 2941):  
1 MPa (10 bar)

## BYPASS VALVE

Setting:  
300 kPa (3 bar)  $\pm 10\%$

## WORKING TEMPERATURE

From  $-25^{\circ}$  to  $+110^{\circ}$  C

## 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.

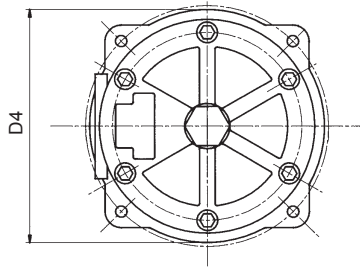
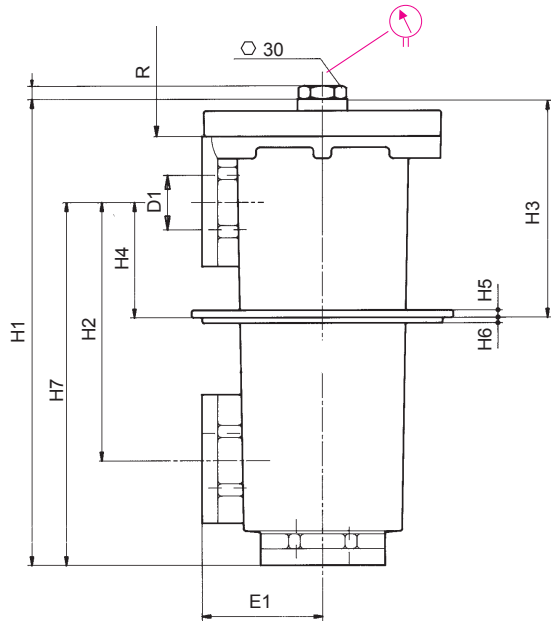
## APPLICATION EXAMPLE



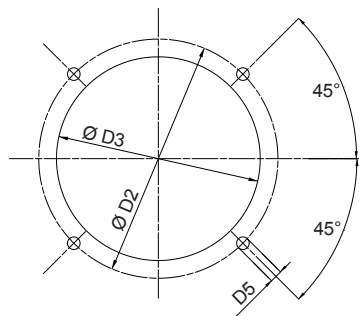
**UFI**  
FILTERS

HYDRAULIC  
DIVISION

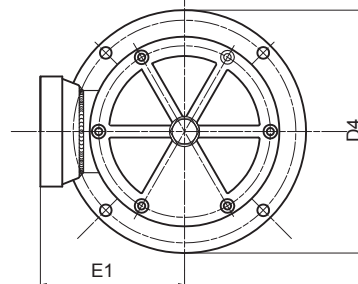
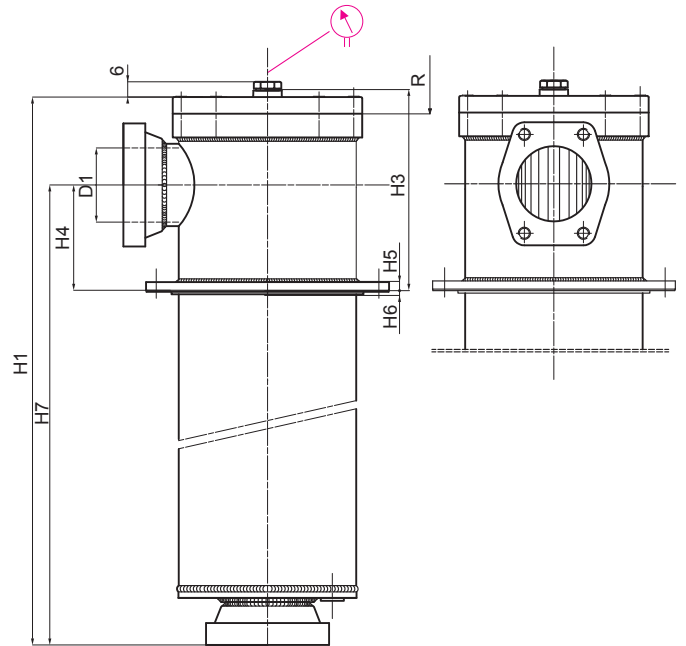
FRD 11-21-31-41-51



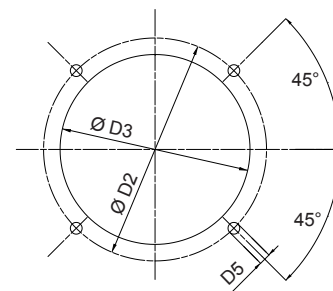
Tank mounting pattern



FRD 61- 62



Tank mounting pattern



(\* Adjustable for RD62 only - loose flange (to be welded))

## FILTER HOUSING

	D1	D2	D3	D4	D5	E1	H1	H2	H3	H4	H5	H6	H7	R	kg
FRD11	1/2"	95	85	90	M5	43	160	62,5	96	31,5	4	3	96	105	1,3
FRD21	3/4"	138	123	128	M6	57	191	105	100	52	6	3	145	110	2,6
FRD31	1"	154	137	147	M6	67	250	140	117	63	8	4	197	155	3,7
FRD41	1" 1/2	180	164	174	M8	82	343	177	155	82	8	4	269	240	6,5
FRD51	2" 1/2	275	239	254	M10	117,5	420	218	192	91	10	8	320	275	14,2
FRD61	3" 1/2	275	239	300	M12	178	673	-	248	130	10	5	-	525	49,0
FRD62	4"	275	239	300	M12	178	1.108	-	423(*)	255	10	5	950	1.020	70,0

<b>TYPE</b>											
F = FILTER COMPLETE		F	F	F	F	F	F	F	<b>ELEMENT</b>		E
B = FILTER HOUSING		B	B	B	B	B	B	B	<b>FAMILY SIZE &amp; LENGTH</b>		R D
<b>R</b>	<b>D</b>										
<b>FAMILY NOMINAL SIZE &amp; LENGTH</b>		11	21	31	41	51	61	62			
<b>PORT TYPE</b>											
B = BSP thread		B	B	B	B	B	-	-			
N = NPT thread		N	N	N	N	N	-	-			
S = SAE thread		S	S	S	S	S	-	-			
F = SAE flange 3000 psi, metric screws		-	-	F	F	F	F	F			
<b>PORT SIZE</b>											
04 = 1/2"		04	-	-	-	-	-	-			
06 = 3/4"		-	06	-	-	-	-	-			
08 = 1"		-	-	08	-	-	-	-			
12 = 1" 1/2		-	-	-	12	-	-	-			
20 = 2" 1/2		-	-	-	-	20	-	-			
28 = 3" 1/2		-	-	-	-	-	28	-			
32 = 4"		-	-	-	-	-	-	32			
<b>BYPASS VALVE</b>											
W = without		W	W	W	W	W	W	W			
D = 300 kPa (3 bar)		D	D	D	D	D	D	D			
<b>SEALS</b>											
N = NBR Nitrile		N	N	N	N	N	N	N	<b>SEALS</b>		N = NBR
F = FKM Fluoroelastomer		F	F	F	F	F	F	F			F = FKM

<b>FILTER MEDIA</b>								<b>FILTER MEDIA</b>	
FA = fiber 5 μm <sub>(c)</sub> β>1.000	FA	FA	FA	FA	FA	FA	FA	FA = fiber 5 μm <sub>(c)</sub>	
FB = fiber 7 μm <sub>(c)</sub> β>1.000	FB	FB	FB	FB	FB	FB	FB	FB = fiber 7 μm <sub>(c)</sub>	
FC = fiber 12 μm <sub>(c)</sub> β>1.000	FC	FC	FC	FC	FC	FC	FC	FC = fiber 12 μm <sub>(c)</sub>	
FD = fiber 21 μm <sub>(c)</sub> β>1.000	FD	FD	FD	FD	FD	FD	FD	FD = fiber 21 μm <sub>(c)</sub>	
CC = cellulose 10 μm β>2	CC	CC	CC	CC	CC	CC	CC	CC = cellulose 10 μm	
CD = cellulose 25 μm β>2	CD	CD	CD	CD	CD	CD	CD	CD = cellulose 25 μm	
MD = wire mesh 25 μm	MD	MD	MD	MD	MD	MD	MD	MD = wire mesh 25 μm	
ME = wire mesh 60 μm	ME	ME	ME	ME	ME	ME	ME	ME = wire mesh 60 μm	
WR = water removal (*)	-	-	WR	WR	WR	WR	WR	WR = water removal	

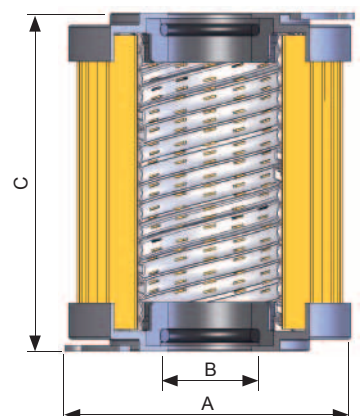
(\*) water removal media - see "hydro dry" brochure

<b>CLOGGING INDICATOR</b>								When the filter is ordered with FKM seals, the first digit of the indicator code is a letter (please see page 184 - 185).  N.B. Indicator series 71 only on request
03 = port, plugged	03	03	03	03	03	03	03	
5C = visual differential 200 kPa (2 bar)	5C	5C	5C	5C	5C	5C	5C	
6C = electrical differential 200kPa (2 bar)	6C	6C	6C	6C	6C	6C	6C	
7C = indicator 6C with LED	7C	7C	7C	7C	7C	7C	7C	
T1 = elect. diff. 200 kPa (2 bar) with thermostat 30°C	T1	T1	T1	T1	T1	T1	T1	

<b>X</b>	<b>X</b>	<b>ACCESSORIES</b>						
		XX = no accessory available	XX	XX	XX	XX	XX	XX

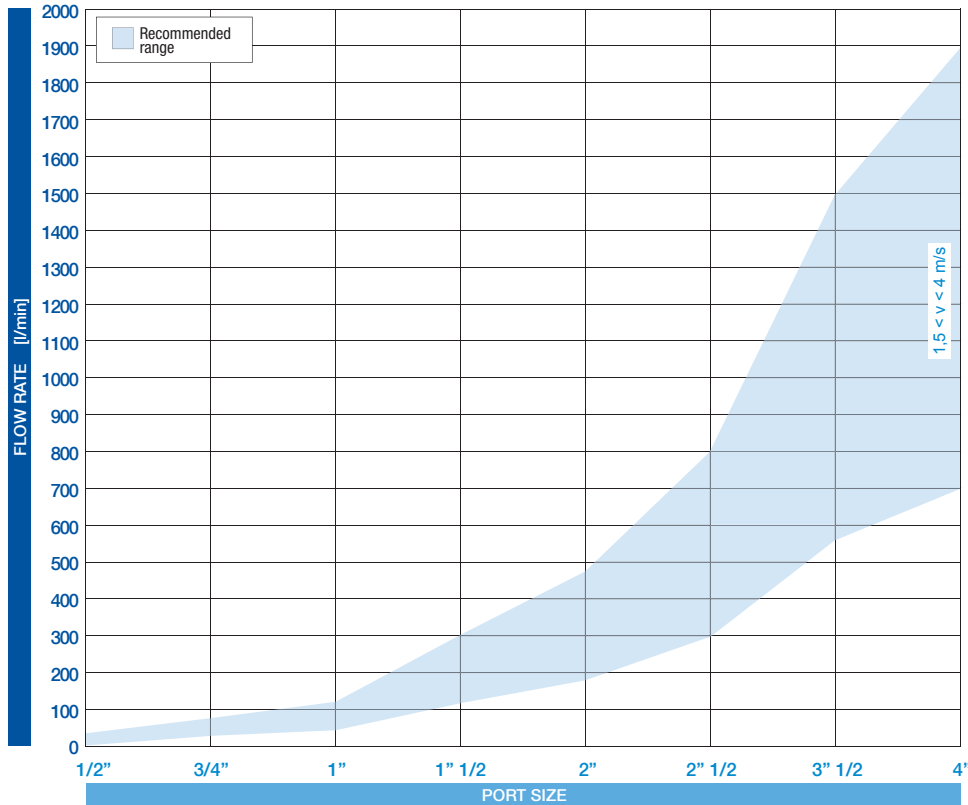
**FILTER ELEMENT**

	A	B	C	kg	Area (cm <sup>2</sup> )		
					Media F+	Media C+	Media M+
ERD11	52	28/24	70	0,10	310	380	245
ERD21	70	34	85	0,20	620	990	460
ERD31	70	34	130	0,25	1.000	1.600	740
ERD41	99	51	211	0,70	3.800	4.280	2.330
ERD51	130	74	251	1,50	7.930	8.350	3.340
ERD61	130	74/85	500	2,00	16.720	17.600	9.860
ERD62	143	96,3	896	3,80	40.000	40.000	22.000



**FLUID SPEED**

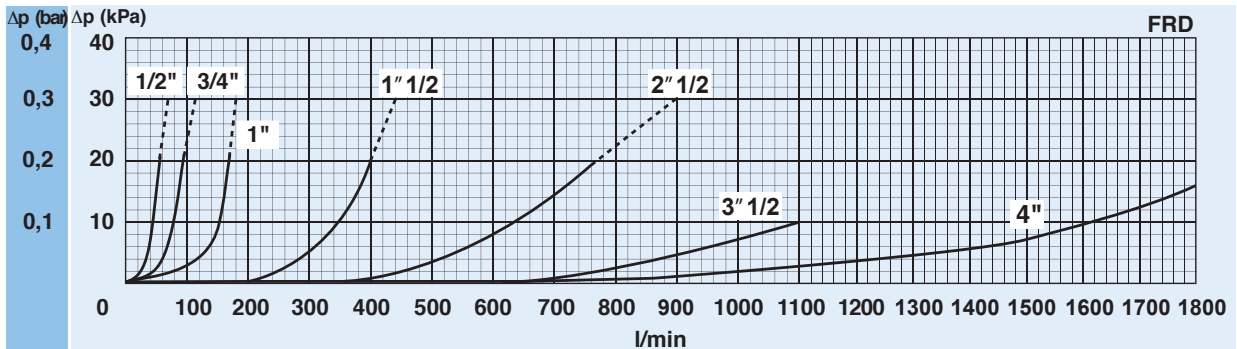
when selecting the filter size, we suggest to consider also the max recommended fluid speed (in return lines normally  $1,5 < v < 4$  m/s)



**PRESSURE DROP CURVES ( $\Delta p$ )**

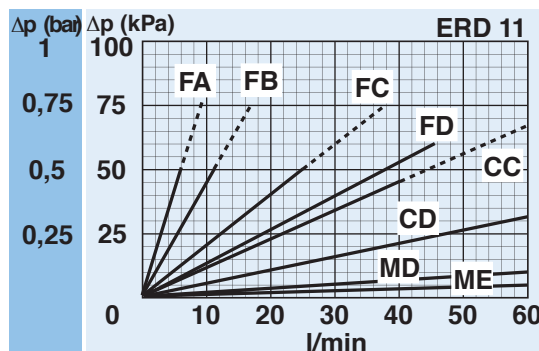
The "Assembly Pressure Drop ( $\Delta p$ )" is obtained by adding the pressure drop values of the Filter Housing and of the Clean Filter Element corresponding to the considered Flow Rate and it must be lower than 50 kPa (0,5 bar).

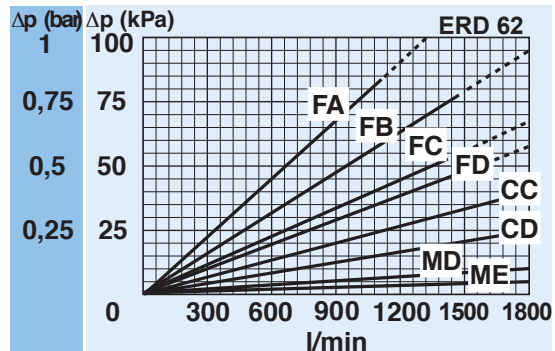
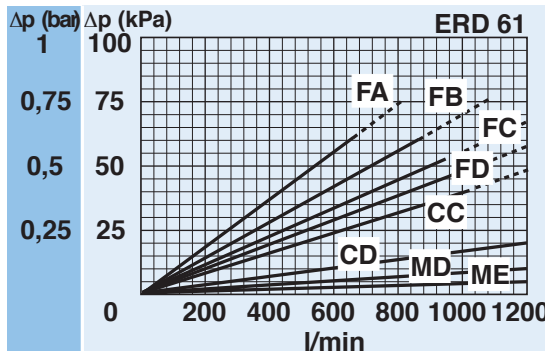
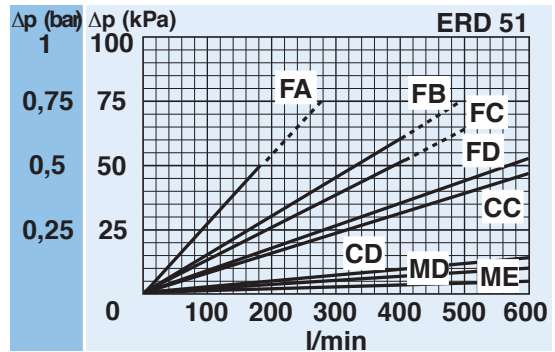
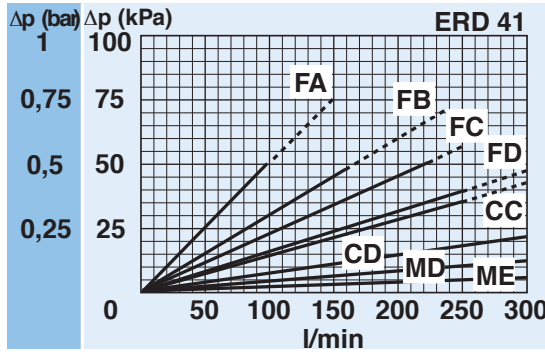
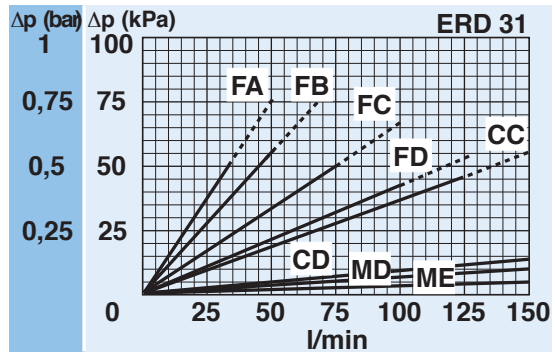
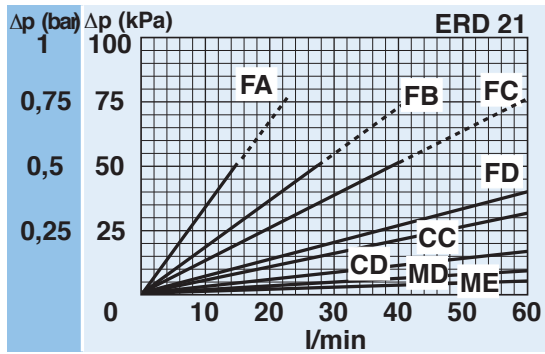
**FILTER HOUSING PRESSURE DROP**  
(mainly depending on the port size)



**CLEAN FILTER ELEMENT PRESSURE DROP WITH F+ AND C+ MEDIA**

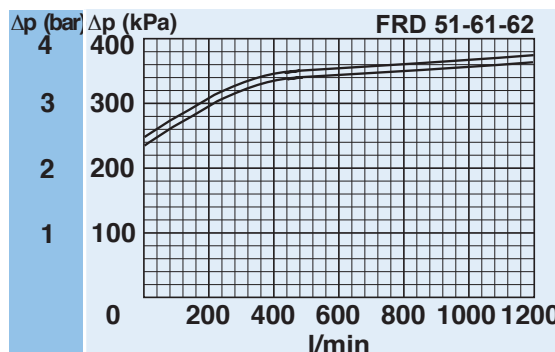
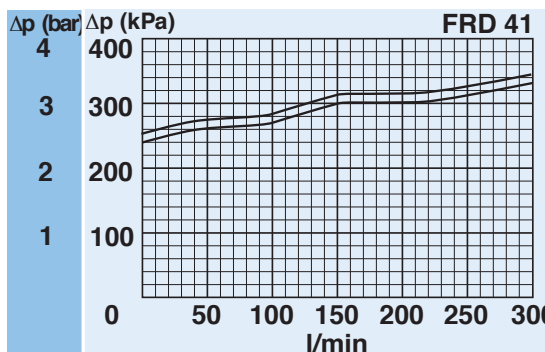
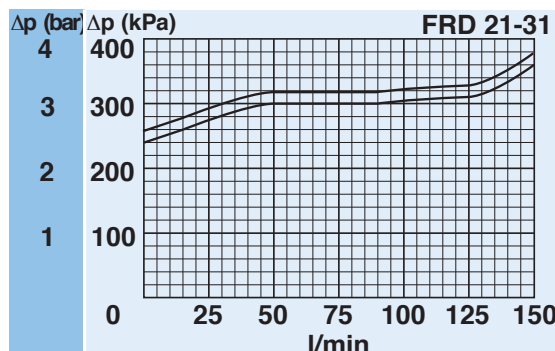
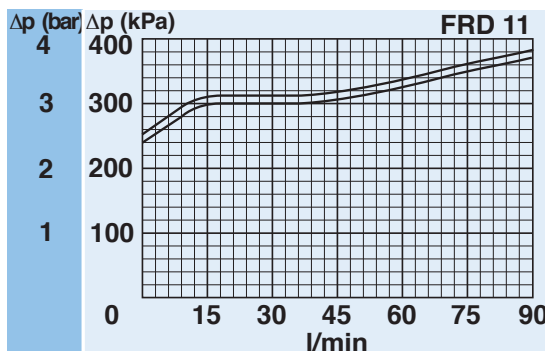
(depending both on the internal diameter of the element and on the filter media)





**BYPASS VALVE PRESSURE DROP**

When selecting the filter size, these curves must be taken into account if it is foreseen that any flow peak is to be absorbed by the bypass valve, it also must be of proper configuration to avoid pressure peaks. The valve pressure drop is directly proportional to fluid specific gravity.



N.B. All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,9 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves are obtained from test done at the UFI HYDRAULIC DIVISION Laboratory, according to the specification ISO 3968:2005. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.

