COMBINED RETURN SUCTION FILTER - TA & TB

Pressure (ISO 10771-1:2002)
Max working: 1 MPa (10 bar)
Test: 1,5 MPa (15 bar)
Bursting: 3 MPa (30 bar)
Collapse, differential for the filter element: 1 MPa (10 bar)

Bypass Valve
Setting: 250 kPa (2,5 bar) ± 10%

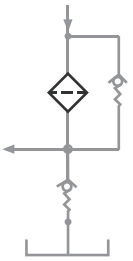
Working Temperature
From -25° to + 110° C

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.

Materials

Head:	Aluminium alloy
Cover:	Polyammide TA-TB23
	Aluminium alloy TA-TB31-32-33
Bowl:	Steel
Seals:	NBR Nitrile
Indicator housing:	Brass

Prices on Request



COMBINED RETURN-SUCTION FILTER

Application Example

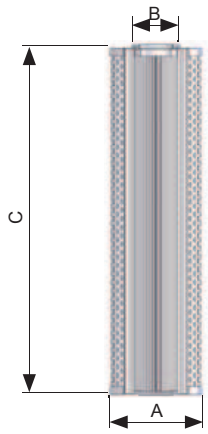
Ordering Codes - Filter

				Type					
				F = Filter Complete	**F**	**F**	**F**	**F**
				B = Filter Housing	**B**	**B**	**B**	**B**
T				**Family, Nominal Size, Length**					
				TA = with internal bypass	**23**	**31**	**32**	**33**
				TB = with external bypass	**23**	**31**	**32**	**33**
			B	**Port Type B** = BSP thread					
				Port Size					
				D3 = 3/4" suction + 3/4" return	**D3**	-	-	-
				D4 = 3/4" suction + 1" return	**D4**	-	-	-
				T1 = 1 1/4" reurn + 2x1" suction	-	**T1**	**T1**	**T1**
			B	**Bypass Valve B** = 250 kPa (2.5 bar) return					
			N	**Seals N** = NBR Nitrile					
				Filter Media					
				FC = fibre 12µm$_{(c)}$ ß>1.000	**FC**	**FC**	**FC**	**FC**
				FS = fibre 16µm$_{(c)}$ ß>1.000	**FS**	**FS**	**FS**	**FS**
				Clogging Indicator					
				05 = nr. 2x1/8" port, plugged	**05**	**05**	**05**	**05**
				30 = Pressure gauge, rear connection	**30**	**30**	**30**	**30**
				P6 = SPDT, pressure switch	**P6**	**P6**	**P6**	**P6**
				Accessories					
				A = Pressurisation valve	**A**	**W**	**W**	**W**
				B = Pressurisation valve + drain hole	**B**	**B**	**B**	**B**
				C = Pressurisation valve + suction bypass	**C**	**B**	**B**	**B**
				D = Pressurisation valve + drain hole + suction bypass	**D**	**B**	**B**	**B**
			X	**Accessories X** = no access available	**X**	**X**	**X**	**X**

COMBINED RETURN – SUCTION FILTER – TA & TB

Ordering Codes - Element

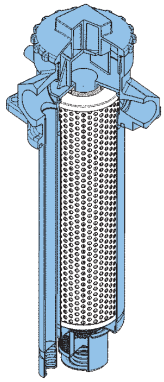
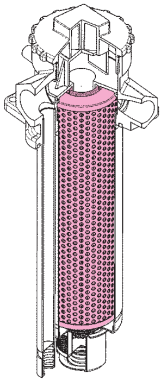
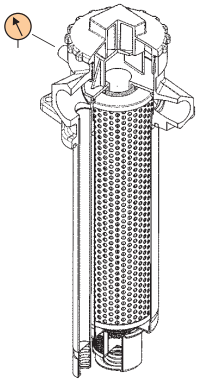
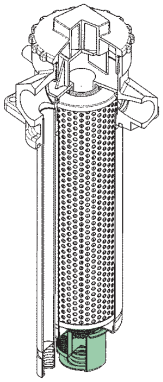
			E	**Element**				
T				**Family, Nominal Size, Length**				
				TA = with internal bypass	**23**	**31**	**32**	**33**
				TB = with external bypass	**23**	**31**	**32**	**33**
			N	**Seals N** = NBR Nitrile				
				Filter Media				
				FC = fibre 12µm$_{(c)}$ ß>1.000	**FC**	**FC**	**FC**	**FC**
				FS = fibre 16µm$_{(c)}$ ß>1.000	**FS**	**FS**	**FS**	**FS**



Dimensions (mm) - FILTER ELEMENT

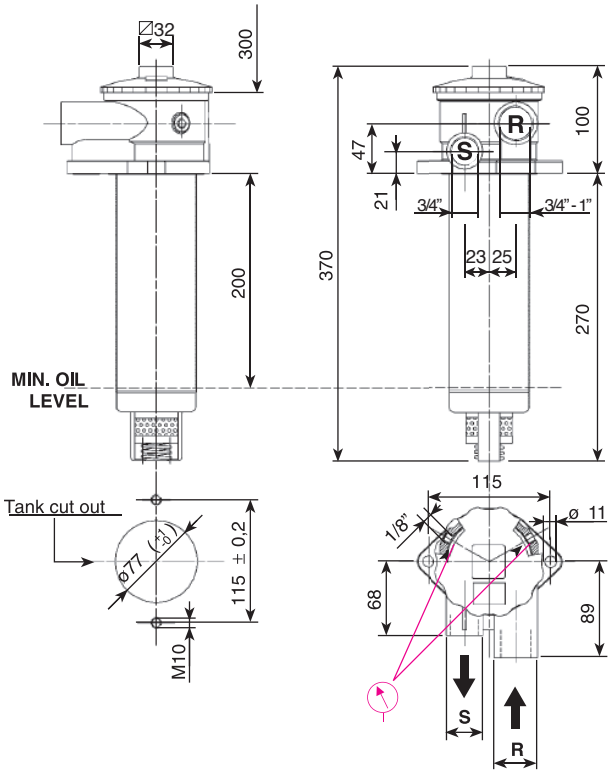
	A	B	C	Area (cm²) media M+	Area (cm²) media C+
EMA11	70	29.5	88	480	1180
EMA21	70	29.5	134	750	1800
EMA22	95	41	175	1650	2400
EMA31	140	65.5	145	1740	4440
EMA32	140	65.5	205	2490	6390

SPARE PARTS ELEMENTS (For filling up see table “Ordering and option chart”)

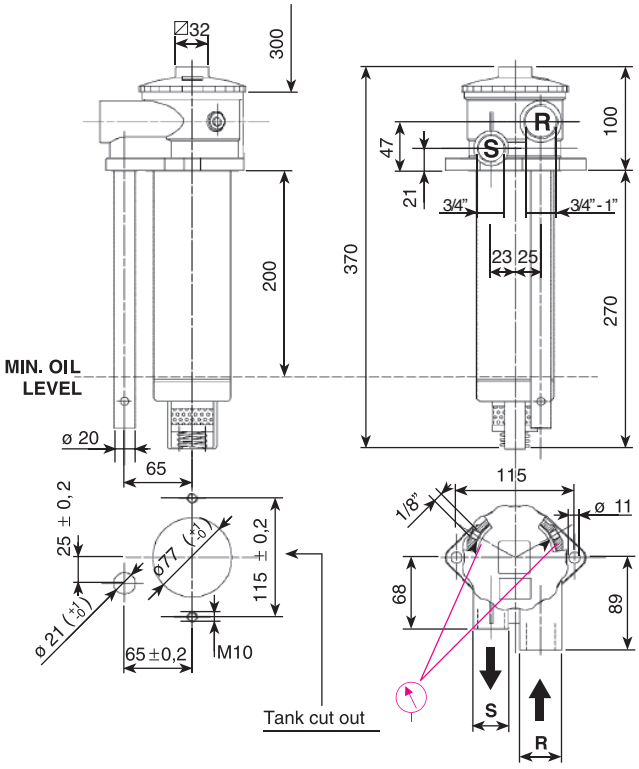
FILTER HOUSING	FILTER ELEMENT	CLOGGING INDICATOR	ACCESSORY
			
B T B N X	E T A N		

COMBINED RETURN – SUCTION FILTER – TA & TB

TA 23
WITH INTERNAL BYPASS



TB 23
WITH EXTERNAL BYPASS

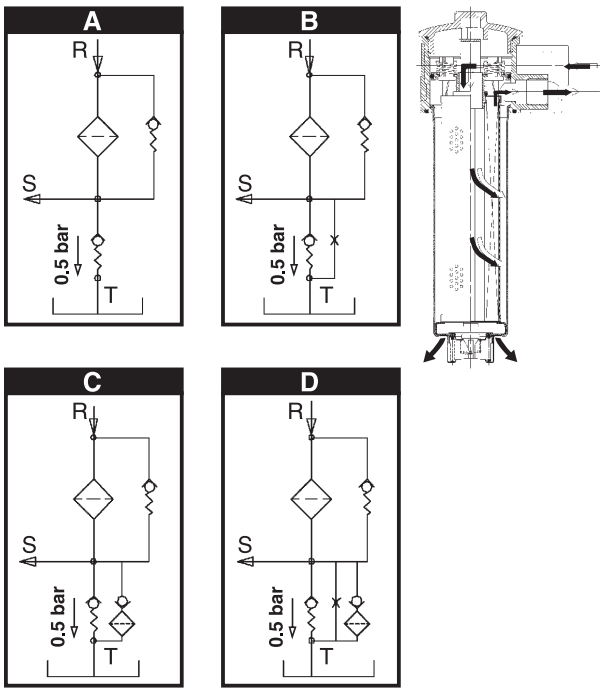


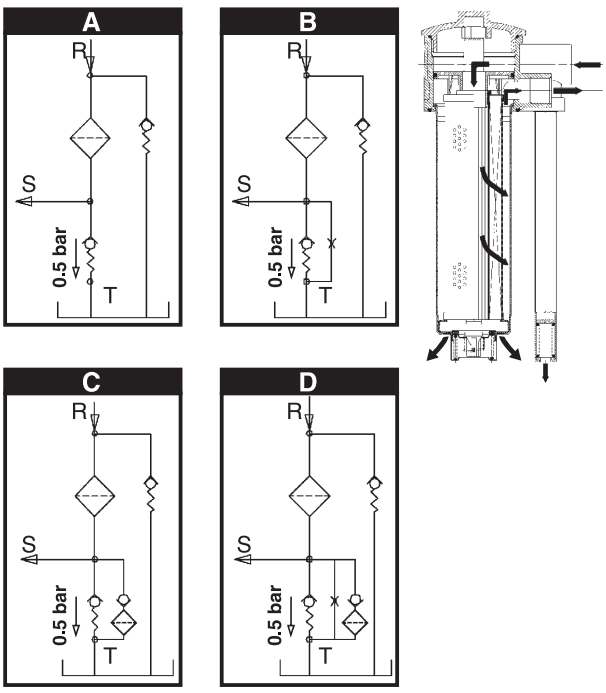
WORKING SCHEME

Options A and C
are recommended
for horizontal filter mounting.

Options B and D
are recommended
for vertical filter mounting
(drain hole).

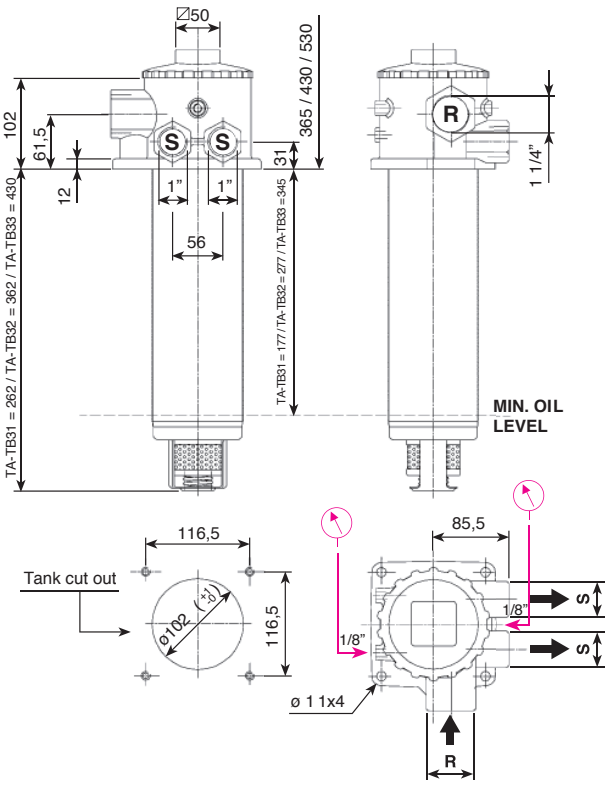
Options C and D
a 125 µm strainer protects the emergency valve in case of brief lack of oil in the suction of the boost pump (situation to be anyway avoided)



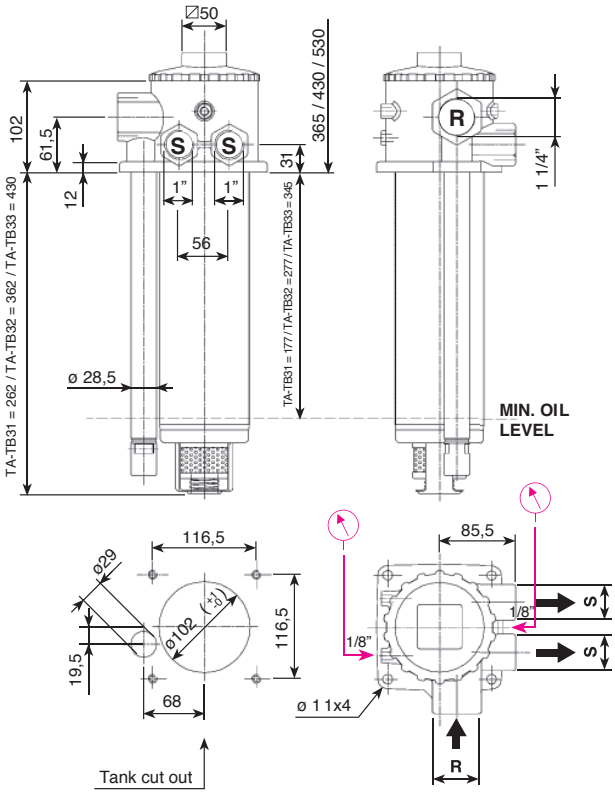


COMBINED RETURN – SUCTION FILTER TA & TB

TA 31-32-33
WITH INTERNAL BYPASS



TB 31-32-33
WITH EXTERNAL BYPASS

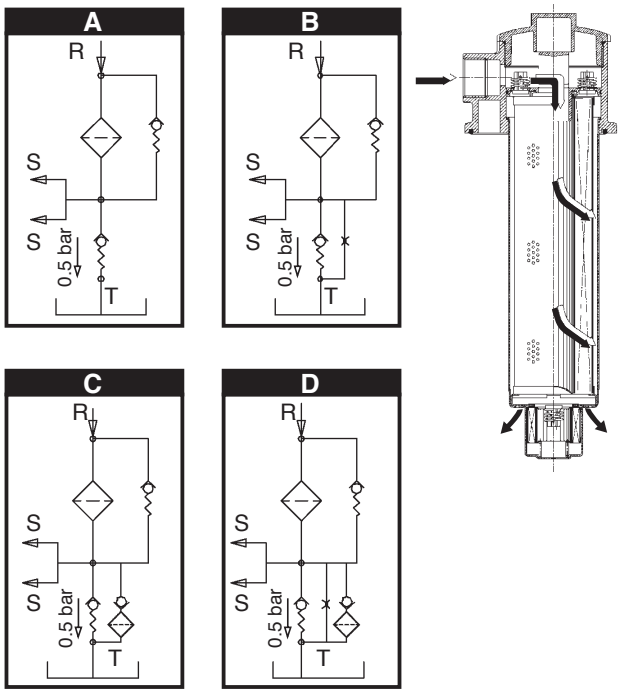


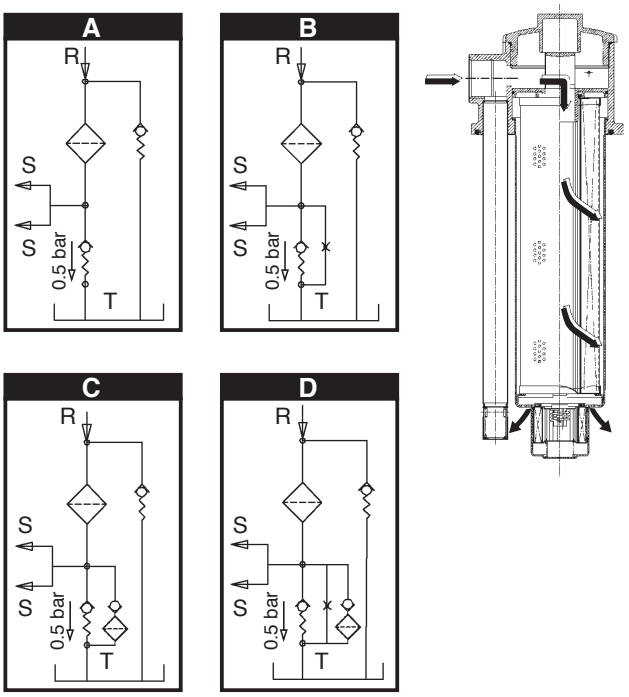
WORKING SCHEME

Options A and C
are recommended
for horizontal filter mounting.

Options B and D
are recommended
for vertical filter mounting
(drain hole).

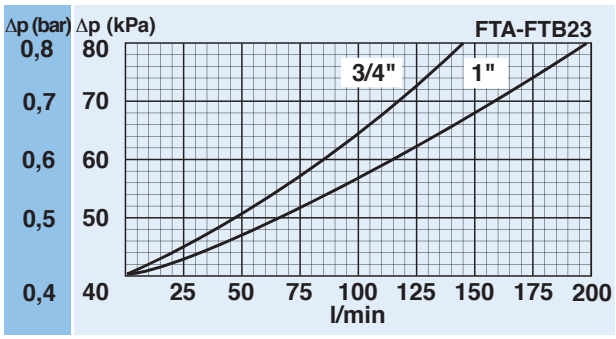
Options C and D
a 125 µm strainer protects the emergency valve in case of brief lack of oil in the suction of the boost pump (situation to be anyway avoided)

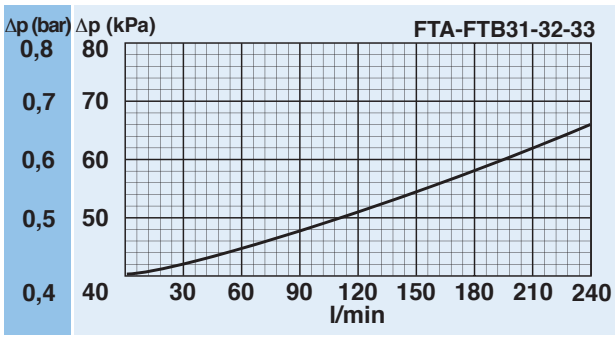




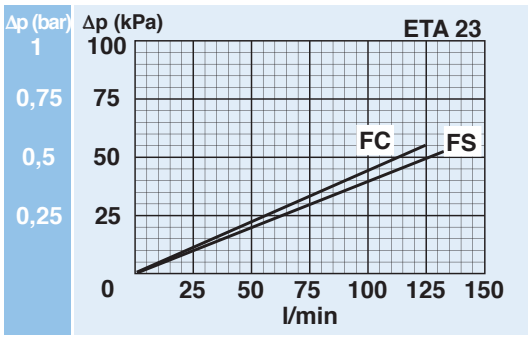
COMBINED RETURN – SUCTION FILTER TA & TB

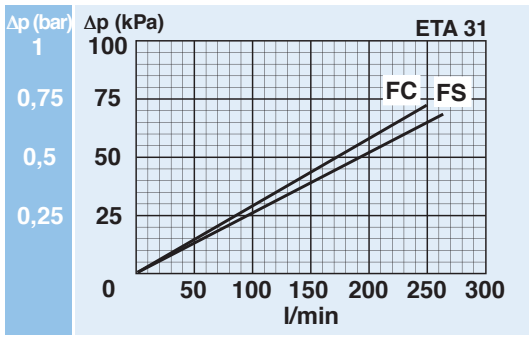
FILTER HOUSING PRESSURE DROP

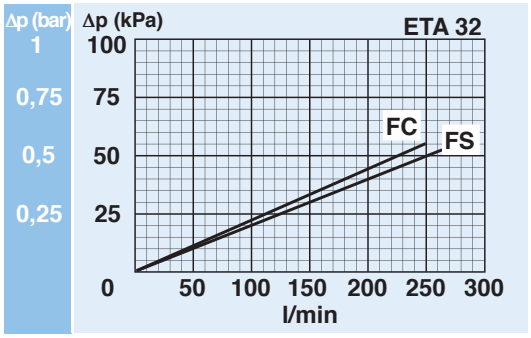


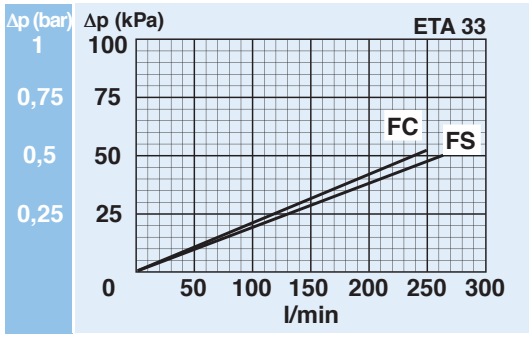


CLEAN FILTER ELEMENT PRESSURE DROP

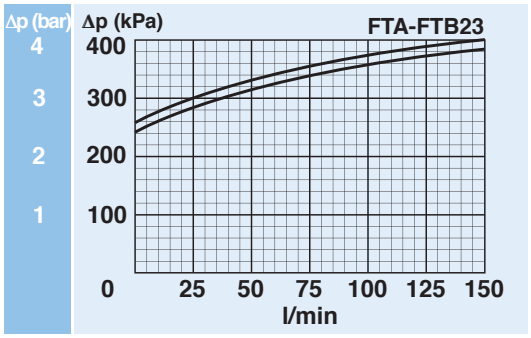


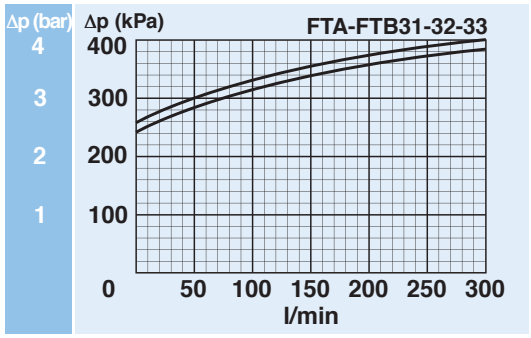






BYPASS VALVE PRESSURE DROP



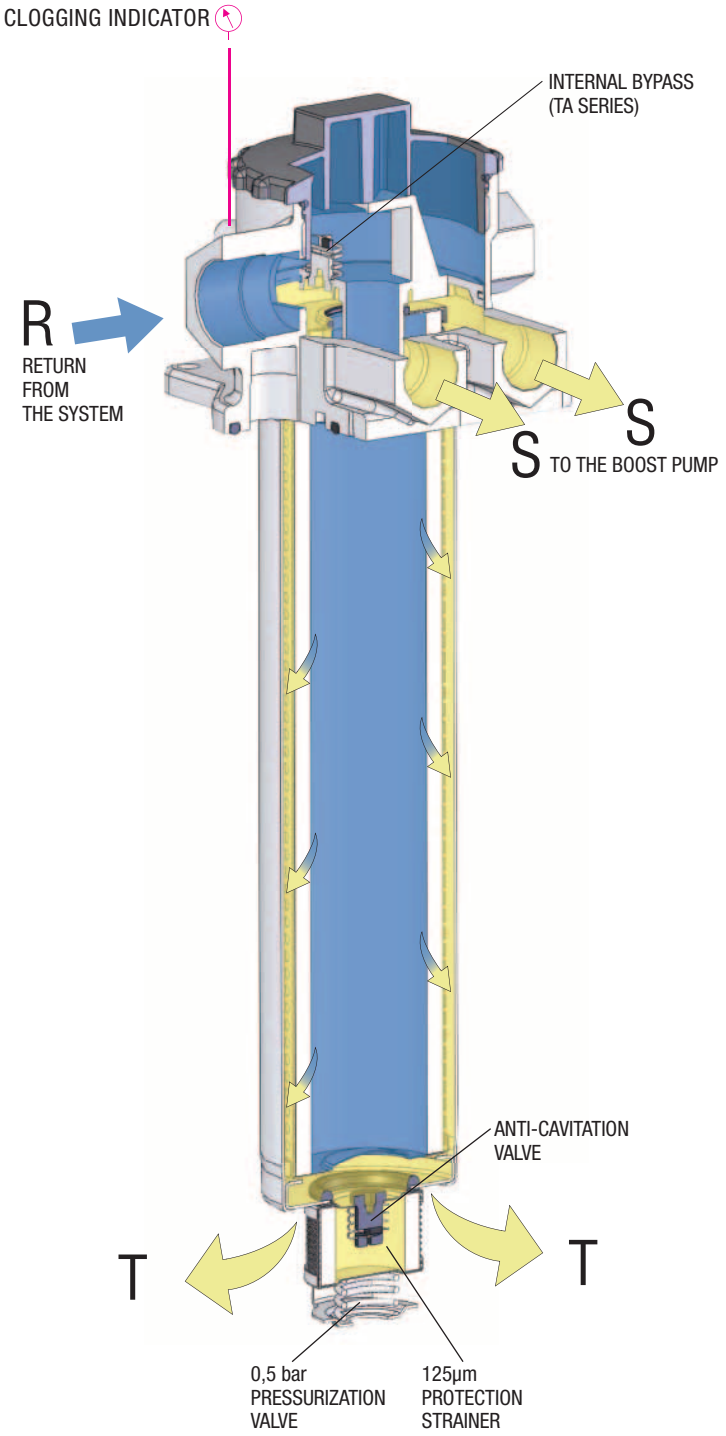


N.B. All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,9 kg/dm3; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves are obtained from test done at the UFI HYDRAULIC DIVISION 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.

COMBINED RETURN – SUCTION FILTER TA & TB

CLOGGING INDICATOR

A visual or electrical indicator is available as an option and allows to monitor the element condition. The port for the indicator is a standard feature.



The TA-TB filters are designed to work in hydraulic systems combined with hydrostatic transmission, when the return flow is higher than the flow of the boost pump in any operating condition.

The oil from the return line of the system is filtered from the inside to the outside of the filter element and goes to the suction of the boost pump with a 0,5 bar pressurization.
The exceeding flow rate goes into the reservoir.

A flow rate 50% higher that the flow required by the boost pump is recommended in normal operating conditions.

TA have an internal bypass system.
TB have external bypass to the reservoir.

ADVANTAGES

- One filter for two functions: filtering the oil returning from the hydraulic system and feeding the boost pump with cleanest oil
- Pressurization allows absolute filtration on the suction of the boost pump
- No cavitation risk
- Filter element working from inside to outside allows retained contamination to be completely removed when replacing the element

FILTER ELEMENT

The filter element is manufactured with filter medias selected in the UFI laboratory and mechanically supported to maintain the highest performance even at high differential pressures.