

# INSTALLATION AND SERVICING MANUAL



## GAS FILTERS PN 6

FO 20 F-Z, FO 25 F-Z, FO 32 F-Z, FO 40 F-Z, FO 50 F-Z,  
FO 50 F-K, FO 80 F, FO 100F

## GAS FILTERS PN 4

FO 150 F, FO 200 F

## GAS FILTERS PN 16

FT 50, FT 80



TYPE	DN	L	h	v	Thread RP	D2	D1	a	Stud bolts	n	Weight (kg)	Maximum working pressure
FO 20F-Z	20	125	74	39	3/4	x	x	x	x	x	0,6	0,6 MPa
FO 25F-Z	25	125	74	39	1	x	x	x	x	x	0,6	0,6 MPa
FO 32F-Z	32	180	106	56	1 1/4	x	x	x	x	x	1,6	0,6 MPa
FO 40F-Z	40	180	106	56	1 1/2	x	x	x	x	x	1,6	0,6 MPa
FO 50F-Z	50	190	126	66	2	125	x	x	M16	4	4,2	0,6 MPa
FO 50F-K	50	280	139	68	x	125	165	18	M16	4	6,0	0,6 MPa
FO 80F	80	300	158	83	x	160	x	x	M16	4	8,0	0,6 MPa
FO 100F	100	380	210	110	x	180	x	x	M16	8	17,2	0,6 MPa
FO 150F	150	530	313	163	x	240	280	26	M22	8	31,0	0,4 MPa
FO 200F	200	700	416	216	x	295	335	30	M22	12	48,0	0,4 MPa
FT 50	50	280	139	78	x	125	165	18	M16	4	6,0	1,6 MPa
FT 80	80	380	185	96	x	160	200	18	M16	8	14,0	1,6 MPa

Tab. 1

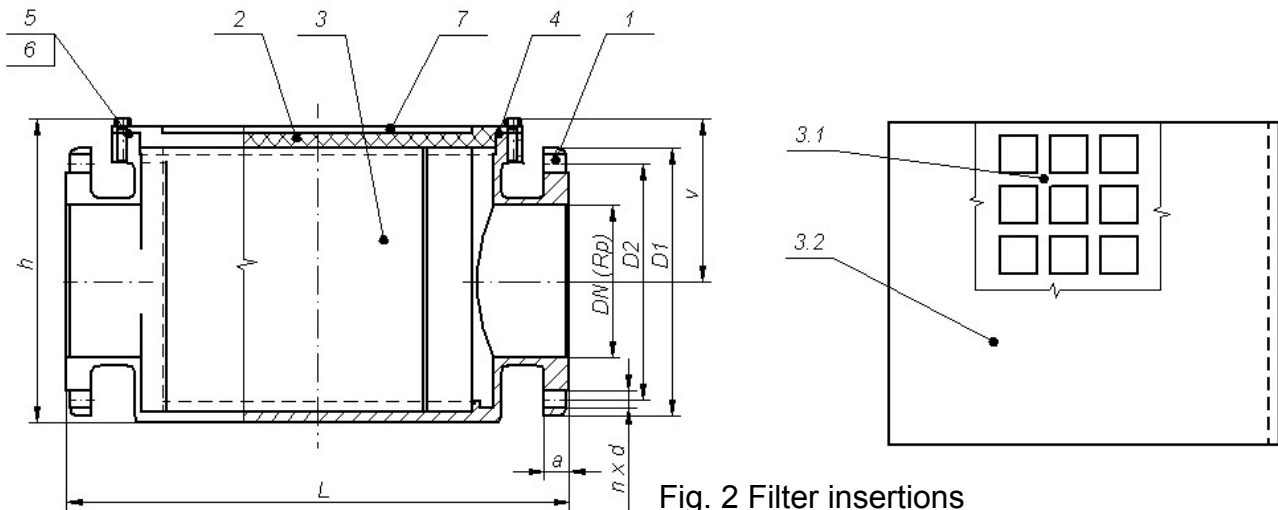


Fig. 1 Filter

Fig. 2 Filter insertions

Pos.	Name
1	Filter body
2	Filter cover
3	Filtrating insertions
3.1	Perforated plate
3.2	Filtration fabric
4	O- ring
5	Screw
6	Washer
7	Rating plate

Tab.2

ALFA IN **FO** and **FT** filters are designed for removing impurities from fluid medium in pipelines. In compliance with Standard EN 437:2004, they are suitable for distribution of heating gases, air and other non-aggressive gases, where lower content of impurities is required. That is why they are being inserted before gas-meters, valve batteries, burners, etc.

The filters can be used according to a model up to maximum working pressure of 0.4; 0.6; 1.6 MPa and working temperature from -20 °C to +80 °C. The maximum speed of medium is 20 m/s-1 at the inlet nozzle.

The filters consist of a body, a cover and a resilient filtration insertion. The body and the cover are die-cast and machined from AlSi10Mg. The filter insertion textile traps particles up to 5 micrometers.

Filter should be mounted into horizontal pipeline prevalently such way that the cover of the filter should lay in vertical position. The inlet of the gas is marked by an arrow. It is not allowed to give additional stress to the filter from the pipeline. There should be enough space around the filter cover for possibility to change the filter insertion, which should be changed or cleaned in case of clogging.

Minimum dimensions are listed in Table 3. We recommend a larger space.

TYPE	H
FO 20,25F-Z	78
FO 32,40F-Z	107
FO 50F-Z	134
FO 50F-K, FT 50	122
FO 80F, FT 80	150
FO 100F	192
FO 150F	290
FO 200F	388

Tab. 3

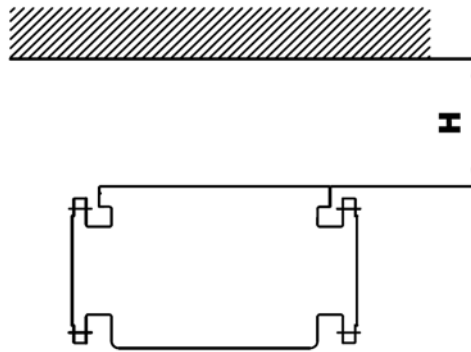


Fig. 3

It is possible to perform any kind of dismounting only if the filter is not under pressure. It is necessary to check tightness of the filter cover after filter mounting.

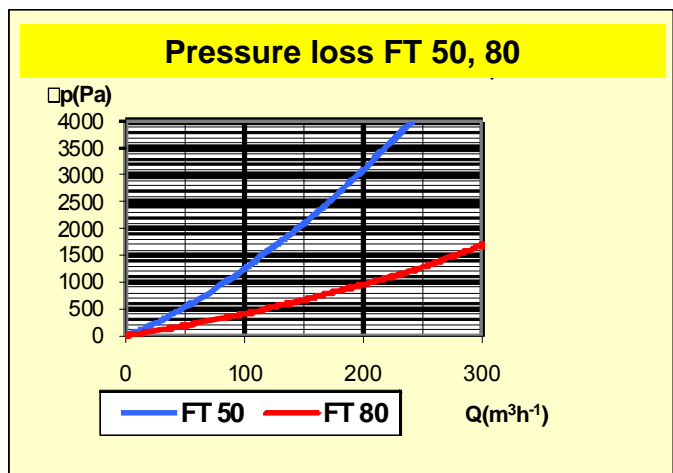
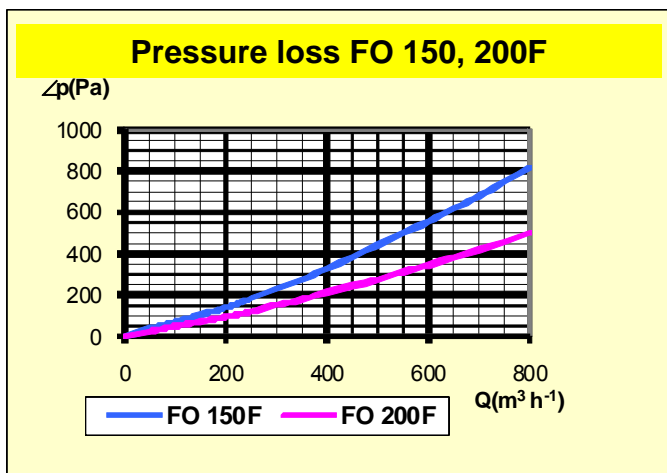
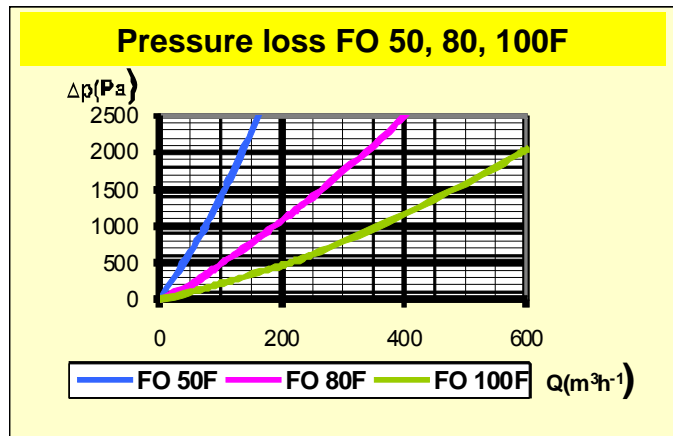
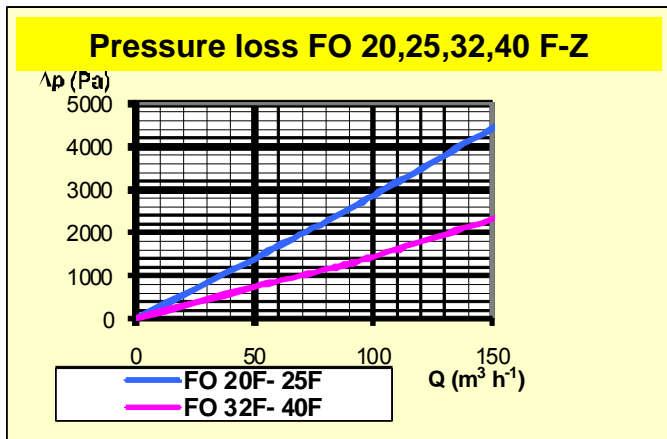
#### Connection of filters FO to the pipelines

FO 20,25,32,40 F	internal thread
FO 50 F-Z	internal thread or stud bolts and flanges PN 16
FO 50F-K, 80F, 100F, 150F, 200F	stud bolts and flanges PN 16

Gas filters are packaged in cardboard boxes, accompanied by a certificate and appropriate documentation.

ALFA IN provides warranty for 24 months on the filter body and the filter cover.

**Pressure loss of clean filters with standard fabric insertions of permeability  $5\mu\text{m}$ :**



The specified pressure loss apply to natural gas at a temperature  $0^\circ\text{C}$  a  $p_n=0,78 \text{ kg/m}^3$

Pressure loss for coal gas -  $\Delta p' = 0,641 \cdot \Delta p$

Pressure loss for air -  $\Delta p' = 1,657 \cdot \Delta p$

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