

FMP

Maximum pressure 320 bar
Flow rates to 475 l/min



Technical data

Filter housing (Materials)

- Head: Cast iron (chemical heat treatment)
- Housing: Steel (chemical heat treatment)
- Bypass valve: Brass
- Reverse Flow: Steel (only for series FMP 320)
- Check valve: Steel

Pressure

- Working pressure: 320 bar (32 MPa)
- Test pressure: 480 bar (48 MPa)
- Burst pressure: 960 bar (96 MPa)
- Pulse pressure fatigue test: 1.000.000 cycles with pressure from 0 to 320 bar (32 MPa)

Temperature

- From -25 °C to +110 °C

Bypass valve

- Opening pressure 6 bar \pm 10%
- Other opening pressures on request.

Δp Elements type

- Microfibre filter elements series N-R: 20 bar
- Microfibre filter elements series H-S: 210 bar
- Wire mesh filter elements series N: 20 bar
- Fluid flow through the filter element from OUT to IN.

Seals

- Standard NBR series A
- Optional FPM series V

FMP FILTERS ARE PROVIDED FOR VERTICAL MOUNTING

Weights (kg)

Length	1	2	3	4
• FMP065	3.26	3.62	4.83	-
• FMP135	5.61	7.21	8.27	-
• FMP320	10.95	13.08	15.37	17.85

Volumes (dm³)

Length	1	2	3	4
• FMP065	0.36	0.47	0.84	-
• FMP135	0.45	0.78	1.00	-
• FMP320	1.03	1.75	2.52	3.35

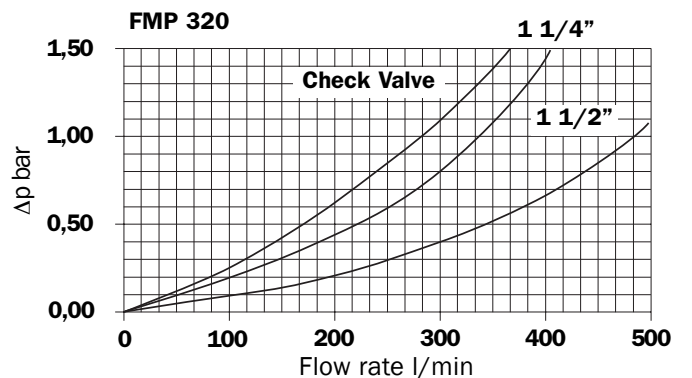
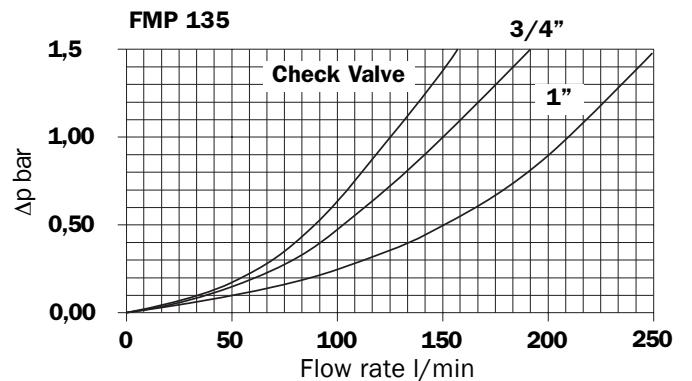
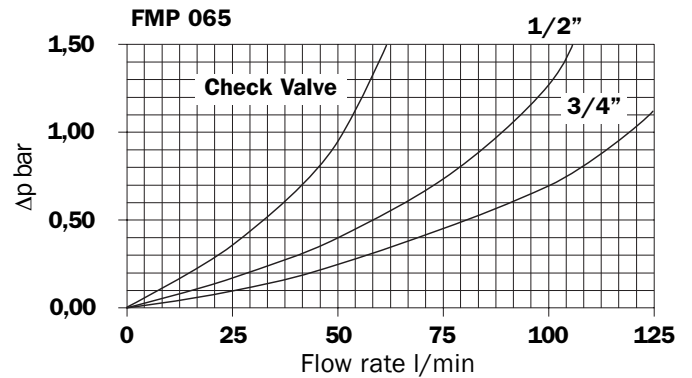
Connections

- FMP: In-line Inlet/Outlet

Filter housings Δp pressure drop

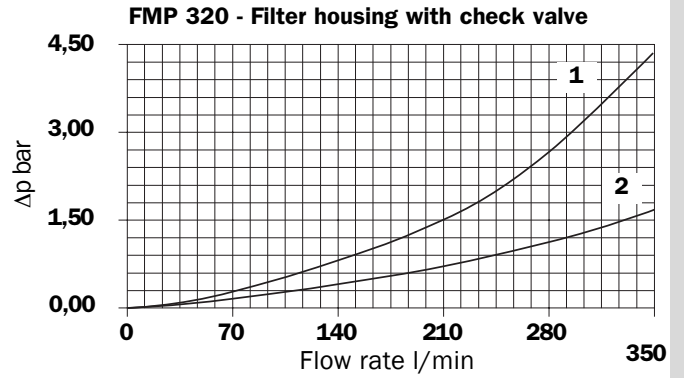
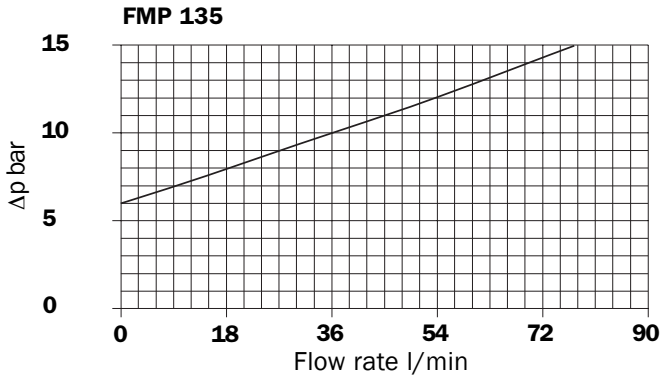
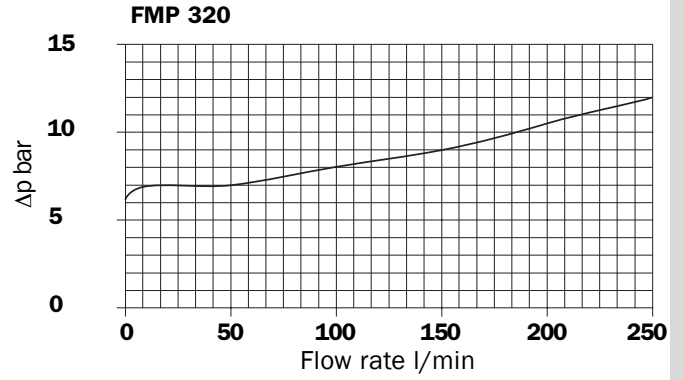
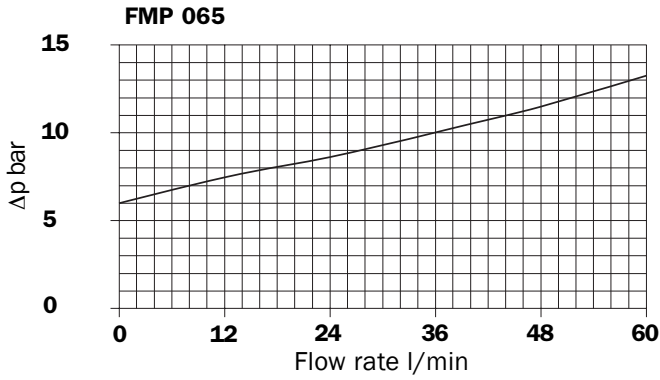
The curves are plotted utilising mineral oil with density of 0.86 kg/dm³ to ISO 3968.

Δp varies proportionally with density.



Valves

Bypass valve pressure drop



1 - Reverse flow
2 - In filter direction

Recommended maximum flow rate

- Pressure drop of filter assembly equal to Δp 1,5 bar.
- Oil kinematic viscosity 30 mm²/s (cSt).
- Density 0,86 kg/dm³.
- Connections of filter under test G 3/4".

Filtration

	Length	A03	A06	A10	A16	A25	M25
FMP 065	1	23	30	48	53	72	105
	2	31	45	60	64	85	106
	3	53	61	79	84	94	108

Serie N - Flow rate l/min

Filtration

	Length	A03	A06	A10	A16	A25
FMP 065	1	22	23	43	50	68
	2	30	35	57	68	77
	3	52	58	78	83	93

Serie H - Flow rate l/min

Filtration

	Length	A03	A06	A10	A16	A25	M25
FMP 135	1	66	74	112	120	157	180
	2	104	110	138	141	185	205
	3	138	141	170	178	190	208

Serie N - Flow rate l/min

Filtration

	Length	A03	A06	A10	A16	A25
FMP 135	1	48	55	93	96	145
	2	87	104	127	129	160
	3	118	130	155	165	178

Serie H - Flow rate l/min

Filtration

	Length	A03	A06	A10	A16	A25	M25
FMP 320	1	126	137	230	280	300	440
	2	240	250	376	390	400	445
	3	300	330	427	440	450	460
	4	350	370	430	447	467	475

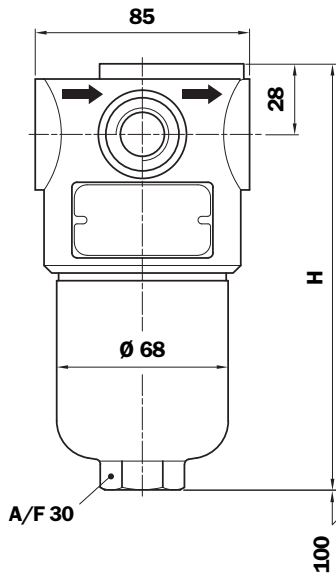
Serie N - Flow rate l/min

Filtration

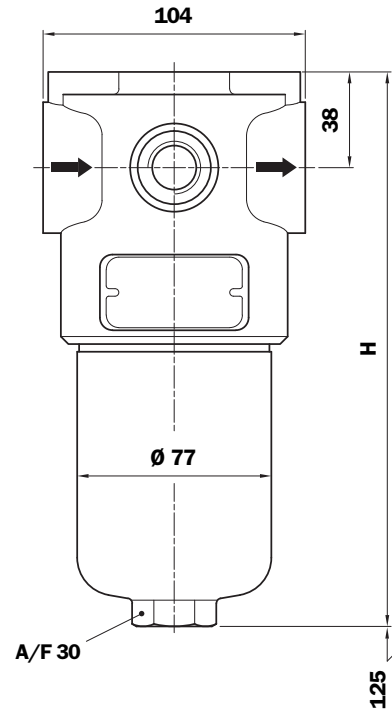
	Length	A03	A06	A10	A16	A25
FMP 320	1	107	112	185	193	250
	2	192	200	300	312	378
	3	255	300	367	375	417
	4	298	320	375	400	450

Serie H - Flow rate l/min

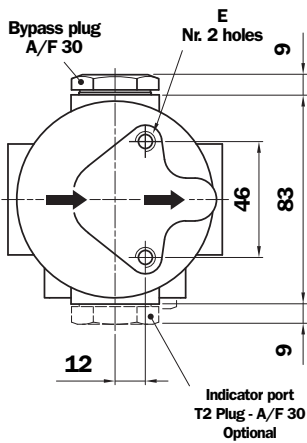
FMP 065



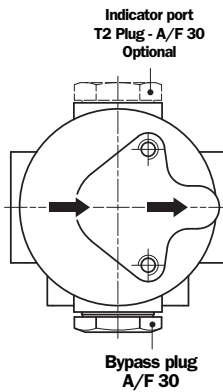
FMP 135



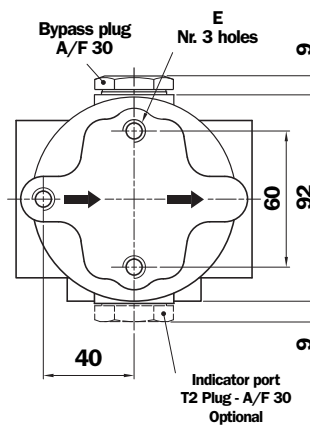
**Standard
Bypass side B**



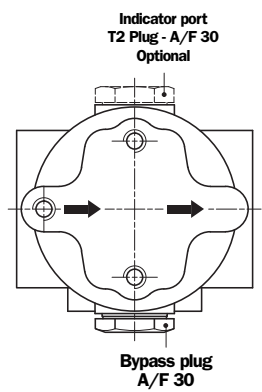
**Optional
Bypass side C**



**Standard
Indicator port side B**



**Optional
Indicator port side C**



FMP 065

Length Filter	H mm
1	169
2	200
3	302

FMP 135

Length Filter	H mm
1	221
2	334
3	409

FMP 065 - 135:

Indicator and bypass valve positions can be inverted.

FMP 065 - Thread connections

Type	Size	E Depth 15 mm
G1	G 1/2"	M8
G2	G 3/4"	M8
G3	1/2" NPT	5/16" UNC
G4	3/4" NPT	5/16" UNC
G5	SAE 8 - 3/4" - 16 UNF	5/16" UNC
G6	SAE 12 - 1 1/16" - 12 UN	5/16" UNC

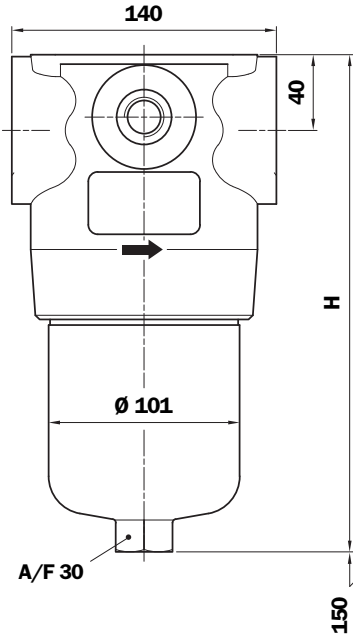
FMP 135 - Thread connections

Type	Size	E Depth 10 mm
G1	G 3/4"	M10
G2	G 1"	M10
G3	3/4" NPT	3/8" UNC
G4	1" NPT	3/8" UNC
G5	SAE 12 - 1 1/16" - 12 UN	3/8" UNC
G6	SAE 16 - 1 5/16" - 12 UN	3/8" UNC

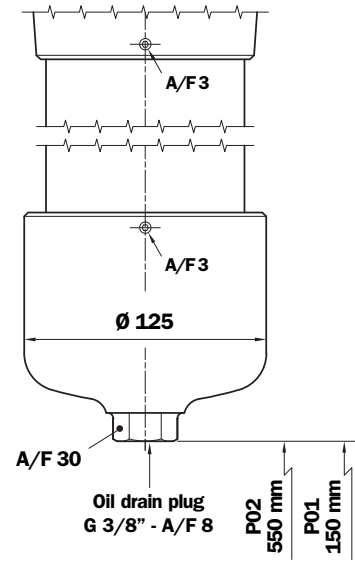
FMP 135 - Flange connections

Type	Size	E Depth 10 mm
F1	3/4" SAE 3000 psi/M	M10
F2	1" SAE 3000 psi/M	M10
F3	3/4" SAE 3000 psi/UNC	3/8" UNC
F4	1" SAE 3000 psi/UNC	3/8" UNC

FMP 320



FMP 320 length 4



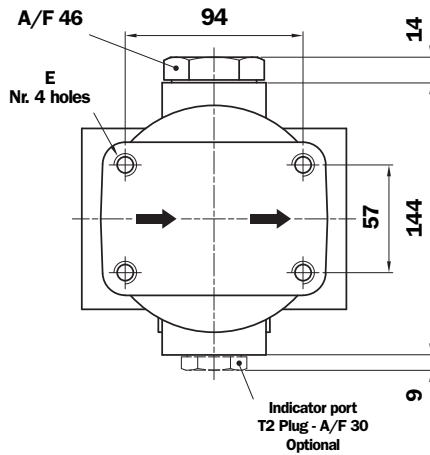
Style P01

Standard maintenance from head.

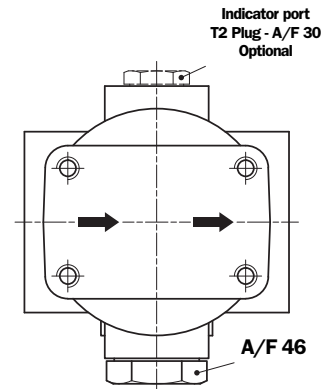
Style P02

Maintenance option from housing base.

Standard - Bypass side B



Optional - Bypass side C



FMP 320

Length Filter	H mm
1	263
2	386
3	518
4	671

Thread connections

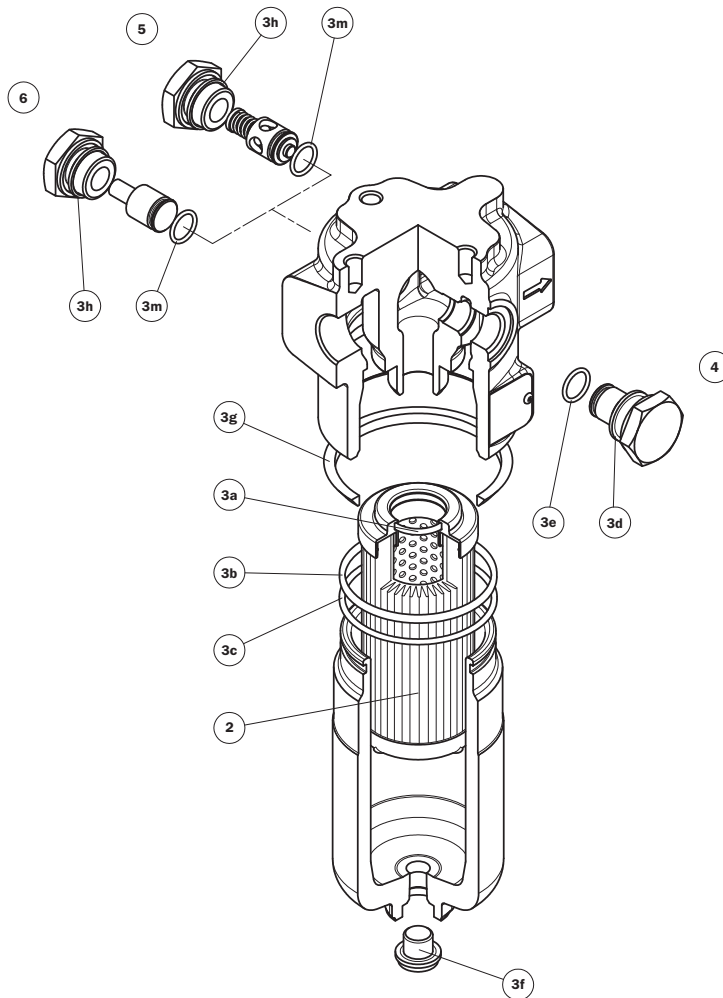
Type	Size	E Depth 15 mm
G1	G 1 1/4"	M12
G2	G 1 1/2"	M12
G3	1 1/4" NPT	1/2" UNC
G4	1 1/2" NPT	1/2" UNC
G5	SAE 20 - 1 5/8" - 12 UN	1/2" UNC
G6	SAE 24 - 1 7/8" - 12 UN	1/2" UNC

Flange connections

Type	Size	E Depth 15 mm
F1	1 1/4" SAE 3000 psi/M	M12
F2	1 1/2" SAE 3000 psi/M	M12
F3	1 1/4" SAE 3000 psi/UNC	1/2" UNC
F4	1 1/2" SAE 3000 psi/UNC	1/2" UNC

N.B.: 2" SAE 3000 see page 33 filter assembly FHP 500

Spare parts



Item	Description	Q.ty	FILTER Series					
			FMP 065		FMP 135		FMP 320	
1	Filter assembly	1	See order table					
2	Filter element	1	See order table					
3	Seal Kit	1	NBR 02050267	FPM 02050278	NBR 02050293	FPM 02050294	NBR 02050274	FPM 02050285
3a	Filter element seal	1	O-R 4100 Ø 24,99 x 3,53		O-R 3106 Ø 26,65 x 2,62		O-R 144 Ø 39,69 x 3,53	
3b	Bowl seal	1	O-R 159 Ø 55,56 x 3,53		O-R 3256 Ø 64,77 x 2,62		2 pcs	O-R 3350 Ø 88,57 x 2,62
3c	Bowl anti-extrusion ring	1	Parbak 227 Ø 54,53 x 3		Parbak 144 Ø 63,96 x 2,18		2 pcs	Parbak 153 Ø 89,36 x 2,18
3d	Gasket	1	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)	01030058 (HNBR)	01030046 (FPM)
3e	O-Ring indicator	1	O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78	
3f	Drain plug	2	-		-		G 3/8" with bonded seal	
3g	Protective seal	1	01026521		01026509		01026510	
3h	Bp or Non-Bp seal	1	Bonded seal G 1/2"		Bonded seal G 1/2"		O-R 3143 (90 Sh A) Ø 36,14 x 2,62	
3m	Bp or Non-Bp seal	1	O-R 2050 Ø 12,42 x 1,78		O-R 2050 Ø 12,42 x 1,78		O-R 3106 Ø 26,65 x 2,62	
4	Indicator connection plug	1	T2H	T2V	T2H	T2V	T2H	T2V
5	Bypass assembly	1	02001312	02001385	02001312	02001385	02001396	02001397
6	Non-bypass assmby	1	02001314	02001386	02001314	02001386	02001398	02001399

Ordering information FMP

Filter assembly FMP

	1	2	3	4	5	6	7	8a
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example: FMP	065	2	B	A	G1	A03	N	P01

Filter element HP

	1	2	6	4	7	8b
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Example: HP	065	2	A03	A	N	P01

1 - Style

Filter	Filter element
065	065
135	135
320	320

2 - Filter length

065	1	2	3	
135	1	2	3	
320	1	2	3	4

3 - Valves

S	Without bypass side B - Optional
B	With bypass side B - Standard
C	With bypass side C - Optional
E	Without bypass side C - Optional
T	Without bypass + check valve*
D	With bypass side B + check valve*

*Reduced cross-section oilways

4 - Filter seals

A	NBR
V	FPM
<input type="checkbox"/>	On request

5 - Connections

Threaded

FMP 065

Type	Size
G1	G 1/2"
G2	G 3/4"
G3	1/2" NPT
G4	3/4" NPT
G5	SAE 8 - 3/4" - 16 UNF
G6	SAE 12 - 1 1/16" - 12 UN

FMP 135

Type	Size
G1	G 3/4"
G2	G 1"
G3	3/4" NPT
G4	1" NPT
G5	SAE 12 - 1 1/16" - 12 UN
G6	SAE 16 - 1.5/16" - 12 UN

FMP 320

Type	Size
G1	G 1 1/4"
G2	G 1 1/2"
G3	1 1/4" NPT
G4	1 1/2" NPT
G5	SAE 20 - 1.5/8" - 12 UN
G6	SAE 24 - 1 7/8" - 12 UN

Flanged

FMP 135

Type	Size
F1	3/4" SAE 3000 psi/M
F2	1" SAE 3000 psi/M
F3	3/4" SAE 3000 psi/UNC
F4	1" SAE 3000 psi/UNC

FMP 320

Type	Size
F1	1 1/4" SAE 3000 psi/M
F2	1 1/2" SAE 3000 psi/M
F3	1 1/4" SAE 3000 psi/UNC
F4	1 1/2" SAE 3000 psi/UNC

N.B.: 2" SAE 3000 see page 33 filter assembly FHP 500

6 - Filter element

A03	Inorganic microfibre 3 μ	Absolute filtration Inorganic Microfibre βx (c) ≥ 1000
A06	Inorganic microfibre 6 μ	
A10	Inorganic microfibre 10 μ	
A16	Inorganic microfibre 16 μ	
A25	Inorganic microfibre 25 μ	
M25	Wire mesh 25 μ	Nominal Filtration Metal mesh

7 - Max filter element differential pressure

N	Δp 20 bar
R	Δp 20 bar (filter with reverse flow + bypass)
H	Δp 210 bar
S	Δp 210 bar (filter with reverse flow)

8 - Option

a - Filter

P01	MP Filtri standard
P02	Maintenance from housing base (only for FMP 320 - 4)
Pxx	Customer request

b - Filter element

P01	MP Filtri standard
Pxx	Customer request

* Indicator plug:

Steel plug T2 has to be ordered separately.

Code

T2H	Seal NBR
T2V	Seal FPM

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