



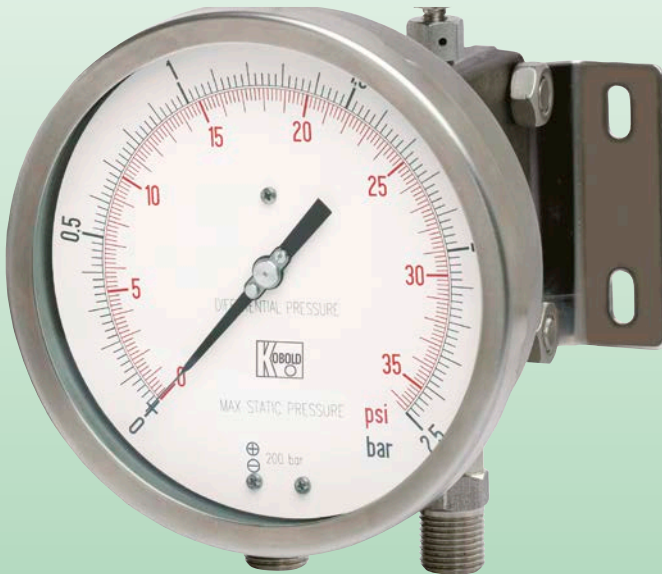
Differential Pressure Gauges

for high static pressures up to 200 bar



measuring
•
monitoring
•
analysing

MAN-U



- Housing: 100 mm, 150 mm
- Material
Housing: stainless steel
Connection: stainless steel
- Movement:
stainless steel
- Measuring range:
0 ... 0.1 bar up to 0 ... 25 bar
- Options:
damping liquid, contacts



P1

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Description

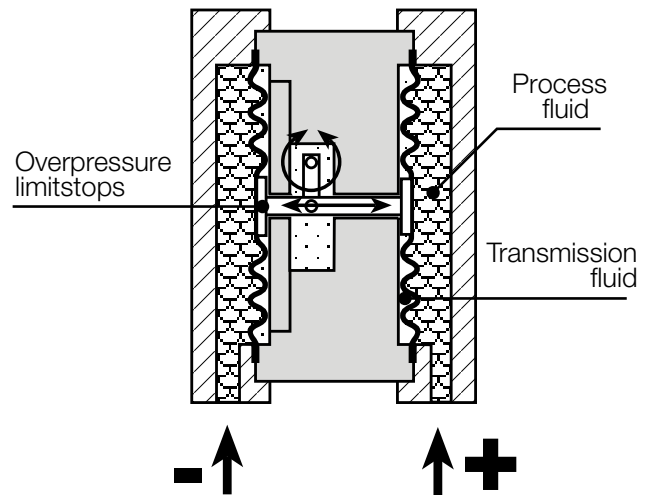
These instruments model MAN-U are used to check filter obstructions, pressure drops, flow rate differences, level, measurements and generally the difference between two pressures of equal or different circuits. The measuring element is formed by two diaphragms, acting on the same movement. In this way the pointer senses only the difference between the two pressures corresponding respectively to upstream and downstream pressure of the circuit.

Technical Details

Accuracy class:	1.6 acc. to EN 837
Scale amplitude:	180°...270°, depending on the scale range
Static pressure:	25...200 bar, depending on the scale range
Ambient temperature:	-40...+65 °C
Process fluid temperature:	max. 150 °C
Thermal drift:	±0.8% every ±10 °C of ambient temperature
Protection:	IP55 acc. to IEC 529
Process connection:	AISI 316L stainless steel
Elastic element:	AISI 316L fluid-damped stainless steel double diaphragm for pressure ranges <250 mbar (AISI 316L stainless steel/Duratherm double diaphragm for pressure ranges ≥250 mbar)
Gasket:	FPM und PTFE
Case:	AISI 304 stainless steel
Ring:	AISI 304 stainless steel polished, bayonet lock
Window:	tempered glass
Movement:	stainless steel
Dial:	aluminium, white with black markings
Pointer:	aluminium, micrometric adjustable, black

Operating Principle

The double diaphragm measuring cell is characterized by a system of limitstops that closes and blocks the passage, obtaining in this way a liquid bed on which the measuring element stops. The linear shifting of the diaphragms is transformed, by leverages, in circular shifting and transmitted by the movement to the pointer.





Ranges

Code	mbar	mmH ₂ O	bar*	kPa	MPa	Static pressure one side	Static pressure both side	Scale amplitude
F2	0...100	0...1000	0...0.1	0...10		25 bar	100 bar	180°
F3	0...160	0...1600	0...0.16	0...16		25 bar	100 bar	180°
F4	0...250	0...2500	0...0.25	0...25		100 bar	200 bar	180°/270° **
F5	0...400	0...4000	0...0.4	0...40		200 bar	200 bar	180°/270° **
F6	0...600	0...6000	0...0.6	0...60		200 bar	200 bar	270°
FA	0...1000	0...10000	0...1	0...100		200 bar	200 bar	270°
FB	0...1600		0...1.6	0...160		200 bar	200 bar	270°
B4			0...2.5	0...250		200 bar	200 bar	270°
B5			0...4	0...400		200 bar	200 bar	270°
B6			0...6	0...600		200 bar	200 bar	270°
B7			0...10	0...1000	0...1	200 bar	200 bar	270°
B8			0...16	0...1600	0...1.6	200 bar	200 bar	270°
B9			0...25	0...2500	0...2.5	200 bar	200 bar	270°

* Available also M.U.: kg/cm²; bar/psi; bar/kPa; bar/MPa against add-on price

** With DS100

Order Details (Example: **MAN-U FC R F2 000**)

Model	Housing size (DS)/ connection type	Connection	Range	Options
MAN-UFC... = ø100, VA, back flange ...HC... = ø150, VA, back flange ...FE... = ø100, VA, front flange ...HE... = ø150, VA, front flange	...R... = ¼" NPT female, bottom ...S... = ½" NPT male, bottom ...6... = ½" BSP male, bottom	...F2... = 0...100 mbar ...F3... = 0...160 mbar ...F4... = 0...250 mbar ...F5... = 0...400 mbar ...F6... = 0...600 mbar ...FA... = 0...1000 mbar ...FB... = 0...1600 mbar ...B4... = 0...2.5 bar ...B5... = 0...4 bar ...B6... = 0...6 bar ...B7... = 0...10 bar ...B8... = 0...16 bar ...B9... = 0...25 bar ...EY... = single scale as per data sheet without add-on price (see above) ...DY... = dual scale as per data sheet against add-on price (see above)	...000 = no options ...other options = see options table



Options

Description	Code	Housing size [mm]	Notes
Inductive and mechanical electric contacts	-	150	Codes, descriptions and wiring in separate data sheet
AISI 316 stainless steel case and ring	C40	100/150	
MONEL 400 diaphragm and process connections	D10	100/150	Accuracy 2.5 as per EN 837. for pressure ranges < 400 mbar
NACE MR0103/MR0175 (ISO15156) version	E30	100/150	To be ordered with MONEL 400 diaphragm (code M23)
Protection IP 65	E65	100/150	
Maximum pointer IP 65	L22	100/150	To be ordered with Plexiglas window (code T31)
MONEL 400 diaphragms	M23	100/150	Accuracy 2.5 as per EN 837. for pressure ranges < 400 mbar
Oil-free and degreased, oxygen service	P02	100/150	Filling of internal chamber with Fluorolube
Case glycerine filling, IP 67 (ambient temperature +15 ... +65 °C)	R10	100/150	
Case silicone filling, IP 67 (ambient temperature -40 ... +65 °C)	R11	100/150	Window gasket and blow out vent: FPM
2" pipe mounting bracket	S31	100/150	For connection type C only
Tropicalisation	T01	100/150	
Stainless steel label	T25	100/150	
Plexiglas window	T31	100/150	
Safety glass window	T32	100/150	

Options for Remote Mounting, with Diaphragm Seal

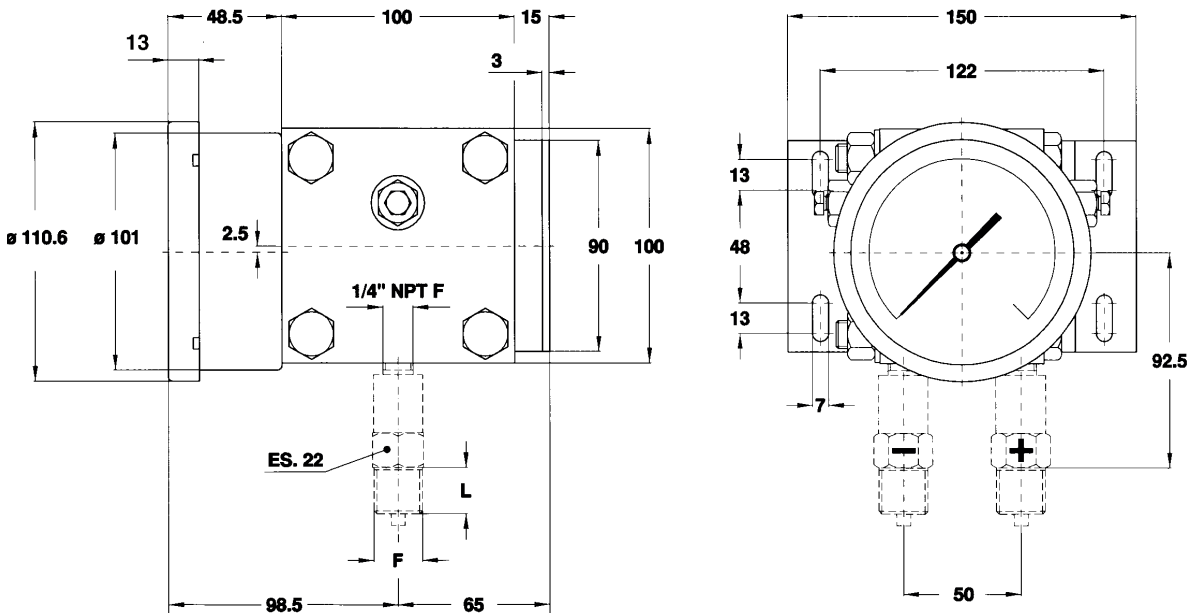
Description	Code	Housing size [mm]	Notes
2 diaphragm seals mounting*	ADD	100/150	With diaphragms > Ø 63 mm only
Stainless steel capillary, covered with st.st. armour 1 m	CP1	100/150	
Stainless steel capillary, covered with st.st. armour 2 m	CP2	100/150	
Stainless steel capillary, covered with st.st. armour 3 m	CP3	100/150	
Stainless steel capillary, covered with st.st. armour 4 m	CP4	100/150	For pressure ranges ≥ 0... 250 mbar
Stainless steel capillary, covered with st.st. armour 5 m	CP5	100/150	For pressure ranges ≥ 0... 250 mbar
Stainless steel capillary, covered with st.st. armour 6 m	CP6	100/150	For pressure ranges ≥ 0... 400 mbar

* For pressure ranges < 250 mbar call our sales team

Dimensions [mm]

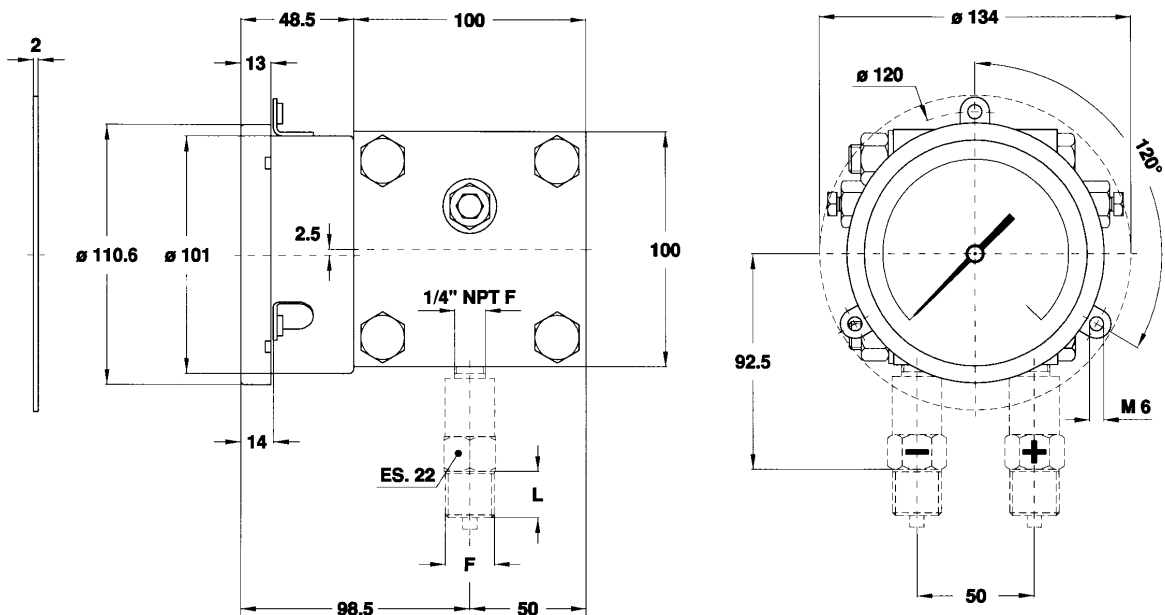
Model MAN-UFC

Surface mounting, back flange, lower connections



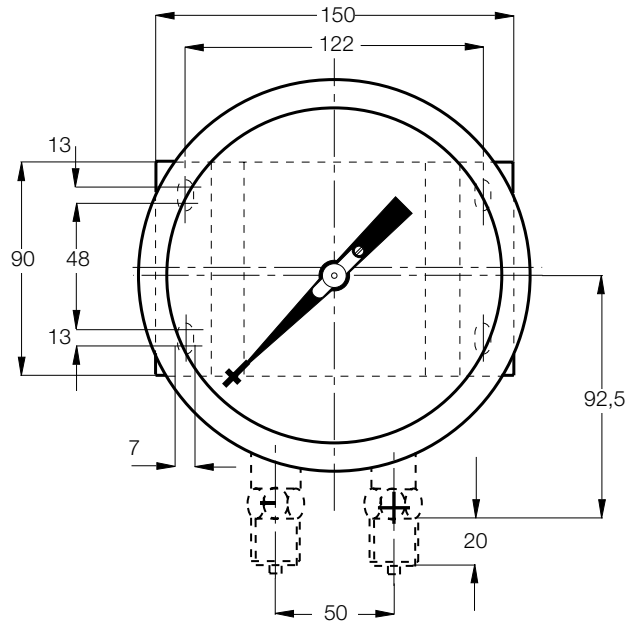
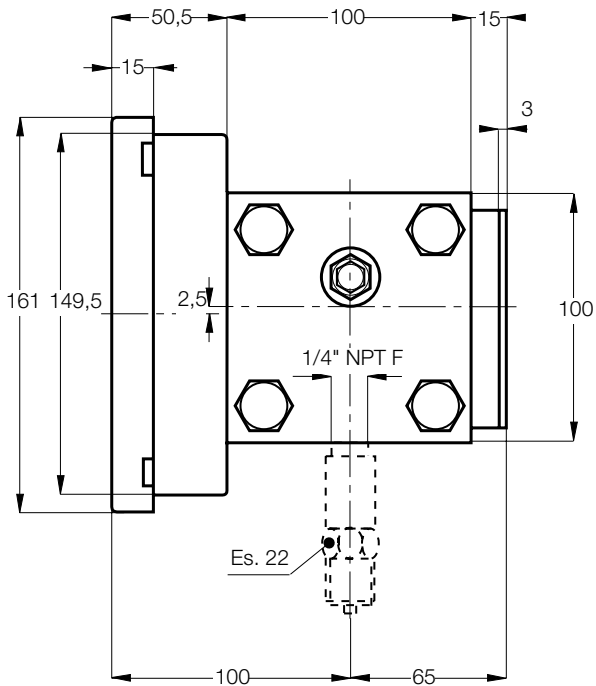
Model MAN-UFE

Panel mounting, front flange, lower connections



Model MAN-UHC

Surface mounting, back flange, lower connections



Model MAN-UHE

Panel mounting, front flange, lower connections

