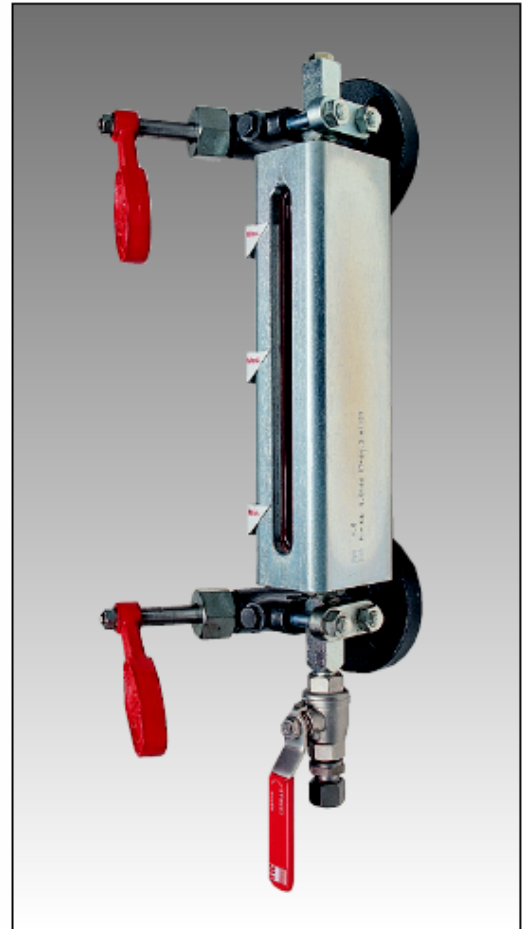


Level gauges Model 466
Level indicator box Model 166-EC



For use in boilers, receivers, cisterns, reservoirs, ...etc., to control the level of liquids, gases and steam.

A multiple-slot polyprismatic viewer allows the level to be optically read, clearly differentiating liquid and gas phases from liquid ones.

Specifications

- Level gauges with replaceable floating or mobile needle seal and safety ball. Should the viewer break a pressure imbalance is caused which moves the ball onto the seating preventing the fluid from flowing out.
- Gauge activation by means of a fast control lever.
- Indiscriminate gauge assembly with lever on the right or on the left.
- Seals are highly tightness, exceeding the requirements of the DIN-3230 norms. Page 3.
- Gauges and level indicator box with draining plugs allowing crystals and sediments to be thoroughly cleaned out by inserting a $\varnothing 7$ mm. rod.
- Box easily attached with flanges, facilitating maintenance without needing to take gauges apart even when operational. Has no glands avoiding irrecoverable losses of fluid in these areas. Can be positioned at 360° .
- Maximum, medium and minimum level optical mobile indicators.
- Boron silicate viewer with the special feature that if accidentally broken it is not shed out in pieces.
- Greater reading area than in the round-dowel system, at the same distance between flange centre.

IMPORTANT

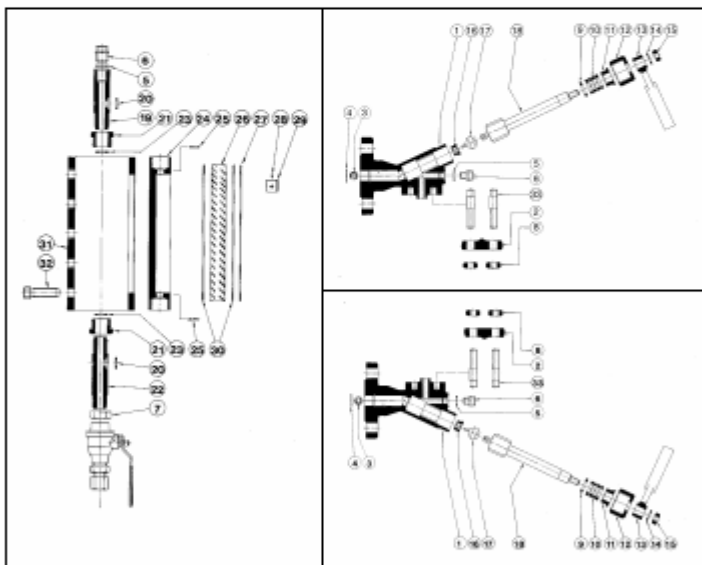
We advise you to perfect the system with a cleaning valve, 3/8" Mod. 999 connected to the draining tube, in order to check the level indicator and its state of cleanliness periodically.

In steam boilers and other receivers with fluids that precipitate carry out at least one 2+3 second cleaning session at 8 hour intervals.

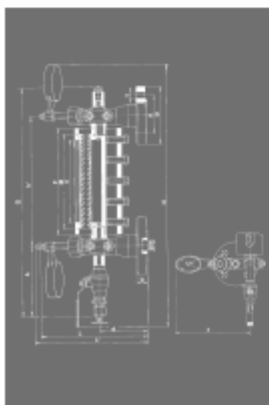
Depending on demand:

- Possibility of manufacture in other types of material, for use in special working conditions (high temperatures, fluids, etc.).
- Special gaskets.
- Transparent viewers with mica plates, recommendable for temperatures exceeding 250° C.
- Boxes with special dowels for other distances between flange centres.
- Link boxes for viewing long levels.

N°. PIECE	PIECE	MATERIAL																		
		CAST IRON	NODULAR IRON	CAST STEEL	STAINLESS STEEL															
1	Body	Cast iron (DIN-0.6025 GG-25)	Nodular iron (DIN-0.7040 GGG-40)	Cast steel (DIN-1.0619 GS-C 25)	S. steel (DIN-1.4408) (ASTMA351 CF8M)															
2	Flange	Cast steel (DIN-1.0619 GS-C 25)	Cast steel (DIN-1.0619 GS-C 25)	Cast steel (DIN-1.0619 GS-C 25)	S. steel (DIN-1.4408) (ASTMA351 CF8M)															
3	Safety ball	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)															
4	Safety ring	S. steel (DIN-1.4300) (AISI-302)	S. steel (DIN-1.4300) (AISI-302)	S. steel (DIN-1.4300) (AISI-302)	S. steel (DIN-1.4300) (AISI-302)															
5/23	Coupling	Aluminium / Copper	Aluminium / Copper	Aluminium / Copper	PTFE (Teflon)															
6	Screw	Carbon steel (DIN-1.1151 Ck-22)	Carbon steel (DIN-1.1151 Ck-22)	Carbon steel (DIN-1.1151 Ck-22)	S. steel (DIN-1.4401) (AISI-316)															
7	Cap	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	S. steel (DIN-1.4401) (AISI-316)															
8/15	Nut	Carbon steel (DIN-1.1141 Ck-15)	Carbon steel (DIN-1.1141 Ck-15)	Carbon steel (DIN-1.1141 Ck-15)	S. steel (DIN-1.4401) (AISI-316)															
9	Ring	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)															
10	Seal	Graphite	Graphite	Graphite	PTFE (Teflon)															
11	Gland	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	S. steel (DIN-1.4401) (AISI-316)															
12	Gland nut	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	S. steel (DIN-1.4401) (AISI-316)															
13	Lever	Nodular iron (DIN-0.7040 GGG-40)	Nodular iron (DIN-0.7040 GGG-40)	Nodular iron (DIN-0.7040 GGG-40)	Nodular iron (DIN-0.7040 GGG-40)															
14	Washer	Carbon steel (DIN-1.1141 Ck-15)	Carbon steel (DIN-1.1141 Ck-15)	Carbon steel (DIN-1.1141 Ck-15)	S. steel (DIN-1.4401) (AISI-316)															
16	Seating	S. steel (DIN-1.4028) (AISI-420)	S. steel (DIN-1.4028) (AISI-420)	S. steel (DIN-1.4028) (AISI-420)	S. steel (DIN-1.4401) (AISI-316)															
17	Seal	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)															
18	Shaft	S. steel (DIN-1.4028) (AISI-420)	S. steel (DIN-1.4028) (AISI-420)	S. steel (DIN-1.4028) (AISI-420)	S. steel (DIN-1.4401) (AISI-316)															
19	Upper dowel	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	S. steel (DIN-1.4401) (AISI-316)															
20	Coupling	Copper	Copper	Copper	PTFE (Teflon)															
21	Double screw	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	S. steel (DIN-1.4401) (AISI-316)															
22	Lower dowel	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	S. steel (DIN-1.4401) (AISI-316)															
24	Box	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	S. steel (DIN-1.4401) (AISI-316)															
25	Gudgeon	Carbon steel (DIN-1.1231 Ck-67)	Carbon steel (DIN-1.1231 Ck-67)	Carbon steel (DIN-1.1231 Ck-67)	S. steel (DIN-1.4310) (AISI-304)															
26	Viewer	Boron-Silicate	Boron-Silicate	Boron-Silicate	Boron-Silicate															
27	Reglet	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)	S. steel (DIN-1.4401) (AISI-316)															
28	Rivet	Carbon steel (DIN-1.1141 Ck-15)	Carbon steel (DIN-1.1141 Ck-15)	Carbon steel (DIN-1.1141 Ck-15)	C. steel (DIN-1.1141 Ck-15)															
29	Indicator arrow	Aluminium	Aluminium	Aluminium	Aluminium															
30	Coupling	Klingerit cardboard	Klingerit cardboard	Klingerit cardboard	Klingerit cardboard															
31	Body	Carbon steel (DIN-1.0570 ST.52.3)	Carbon steel (DIN-1.0570 ST.52.3)	Carbon steel (DIN-1.0570 ST.52.3)	S. steel (DIN-1.4408) (ASTMA351 CF8M)															
32	Screw	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	Carbon steel (DIN-1.1191 Ck-45)	S. steel (DIN-1.4401) (AISI-316)															
33	Stud	Carbon steel (DIN-1.1181 Ck-35)	Carbon steel (DIN-1.1181 Ck-35)	Carbon steel (DIN-1.1181 Ck-35)	S. steel (DIN-1.4401) (AISI-316)															
DN		20 and 25																		
FN		40																		
OPERATING CONDITIONS	PRESSURE IN bar	16	13	13	13	40	35	32	28	24	40	35	32	28	24	21	40	34	32	29
	MAXIMUM TEMP. IN °C	120	200	250	300	120	200	250	300	350	120	200	250	300	350	400	120	200	300	400
	MINIMUM TEMP. IN °C	-10				-20				-29				-60						



	LEVEL GAUGE	UPPER		LOWER		
		20	25	20	25	
	DN	20	25	20	25	
	A	-	-	127	127	
	L	165	165	165	165	
	L ¹	180	180	180	180	
	P	185	185	185	185	
	d	83	83	83	83	
	O	-	-	12	12	
PN-16 DN-20/25/30 PN-40 DN-20/25 DN-25/40/50/65	D	106	115	105	115	
	K	75	85	75	85	
	I	14	14	14	14	
	b	PN-16	16	16	16	16
		PN-40	18	18	18	18
	REDUCED PITCH Ø	15	15	15	15	
	DRILLS N°.	4	4	4	4	
WEIGHT IN Kgs.	CAST IRON	2,18	2,39	2,18	2,39	
	MODULAR IRON	2,20	2,42	2,20	2,42	
	CAST STEEL	2,30	2,53	2,30	2,53	
	STAINLESS STEEL	2,30	2,53	2,30	2,53	
CODE 2101-488	CAST IRON	5346	5106	5346	5106	
	MODULAR IRON	8346	8106	8346	8106	
	CAST STEEL	8344	8104	8344	8104	
	STAINLESS STEEL	8342	8102	8342	8102	



N°. LEVEL INDICATOR BOX	0	I	II	III	IV	V	VI	VII	VIII	IX	X
h ¹	160	180	205	230	255	285	320	345	385	405	435
V	75	95	120	145	170	200	230	260	300	320	350
M	95	115	140	165	190	220	250	280	320	340	370
F	115	135	160	185	210	240	275	300	340	360	390
G	337	357	382	407	432	462	497	522	562	582	612
H	413	433	458	483	508	538	573	598	638	658	688
WEIGHT IN Kgs.	CARBON STEEL, PN-16	2,84	3,30	3,89	4,40	4,97	5,59	6,20	6,79	7,40	8,40
	CARBON STEEL, PN-40	2,84	3,30	3,89	4,40	4,97	5,59	6,20	6,79	7,40	8,40
	STAINLESS STEEL, PN-40	2,98	3,39	4,06	4,46	5,11	5,80	6,60	7,00	7,80	8,40
CODE 2101-166.	CARBON STEEL, PN-16	51840	51841	51842	51843	51844	51845	51846	51847	51848	51849
	CARBON STEEL, PN-40	81840	81841	81842	81843	81844	81845	81846	81847	81848	81849
	STAINLESS STEEL, PN-40	81820	81821	81822	81823	81824	81825	81826	81827	81828	81829

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