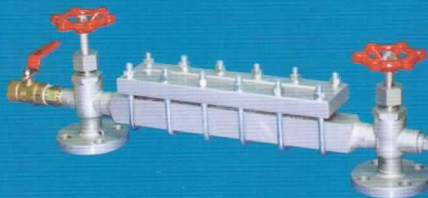


Boiler Control & Level Gauge

SAM KYONG LEVEL

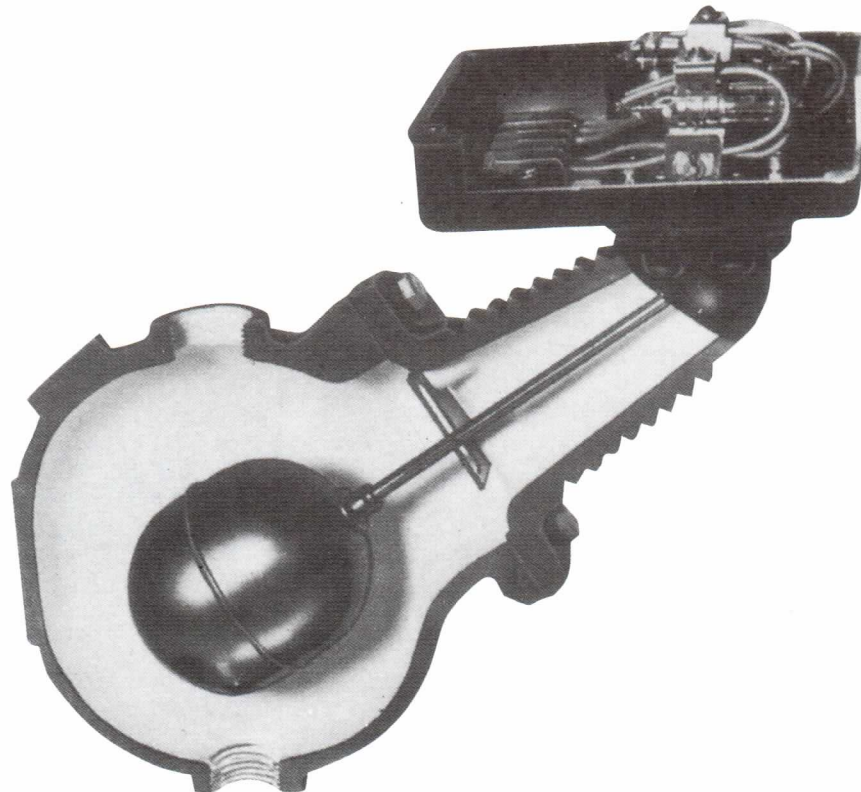


SAM KYONG INDUSTRY CO.

<http://www.samkyong.com>

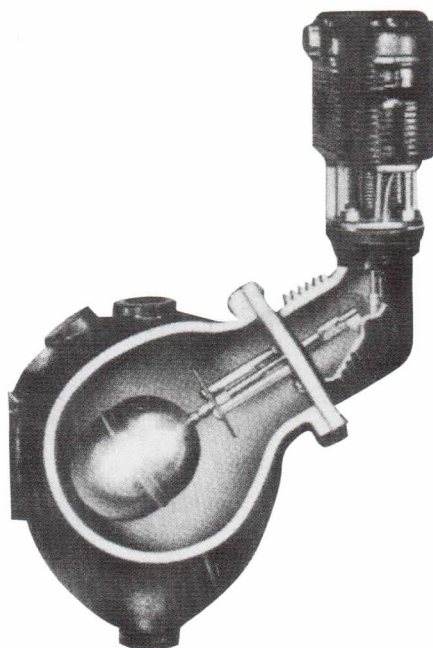
저수위 차단기 (Pump Control Low Water Cut-Off & Alarm)

McDONNELL & MILLER
NO. 150, 150S



- Float type
- 최고사용압력 : 10kg/cm²
- Mercury Switch
- Snap Switch

McDONNELL & MILLER
NO. 94



- Float type
- 최고사용압력 : 17kg/cm²
- Magnet Switch

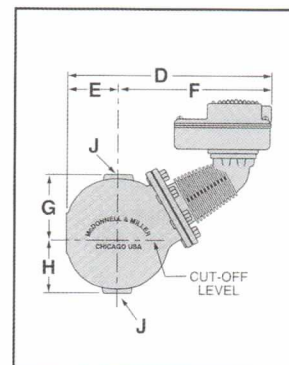
Low Water Cut-Offs - Float Type For Steam Boilers

Series 150



Low Water Cut-Offs

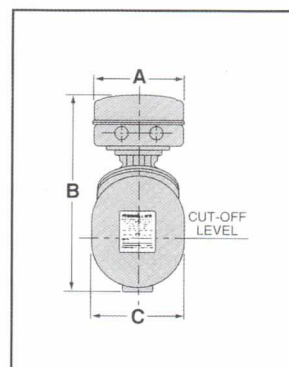
- For commercial and industrial low or high pressure boiler applications
- For boilers of any steaming capacity
- Monel bellows provides corrosion resistance
- Mercury switches for high temperature service
 - 1 Single pole, single throw switch for pump control
 - 1 Single pole, double throw switch for low water cut-off and alarm actuation
- Optional features
 - Manual reset
 - 2 Single pole, single throw switches
 - 2 Single pole, double throw switches
 - Float block
 - BSPT threads
- Maximum pressure 150 psi (10.5 kg/cm²)



Model 150-MD

Maximum differential operation

- Prevents nuisance burner shutdowns in low pressure applications
- Maximum operating pressure 50 psi (3.5 kg/cm²)



Electrical Ratings

Voltage	Cut-off and Pump Circuits Rating (Amperes)		Pilot Duty
	Full Load	Locked Rotor	
120 VAC	7.4	44.4	345 VA at 120 or 240 VAC
240 VAC	3.7	22.2	

Alarm Circuit Rating (Amperes)	
Voltage	Amps
120 VAC	1
240 VAC	1/2

Ordering Information

Model Number	Part Number	Description	Weight lbs. (kg)
150	171700	Combination low water cut-off/pump controller	24.7 (11.2)
150-B	171900	150 w/float block	24.7 (11.2)
150-B-M	172100	150-B w/manual reset	24.7 (11.2)
150-J	172600	150 w/BSPT threads	24.7 (11.2)
150-MD	171800	150 w/maximum differential	24.7 (11.2)
150-M	172700	150 w/manual reset	24.7 (11.2)
150-M-MD	172800	150-M w/maximum differential	24.7 (11.2)
150-J-M	172900	150-M w/BSPT threads	24.7 (11.2)
158	178400	150 w/2 SPDT switches	26.3 (11.9)
158-M	178500	158 w/manual reset	27.3 (12.4)
159	178800	150 w/2 SPST switches	26.0 (11.8)

Dimensions, in. (mm)

A	B	C	D	E
5 ⁷ / ₈ (149)	12 ¹⁷ / ₁₆ (316)	6 (152)	13 ¹ / ₄ (337)	3 ⁵ / ₁₆ (84)
F	G	H	J	
9 ¹⁵ / ₁₆ (252)	4 ¹ / ₈ (105)	3 ⁷ / ₁₆ (87)	1 (25)	NPT

Low Water Cut-Offs - Float Type For Steam Boilers

Series 150S



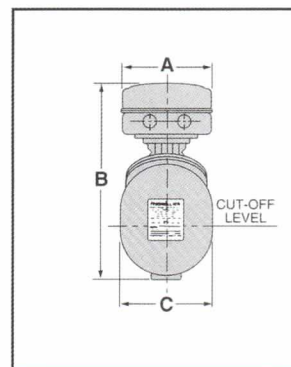
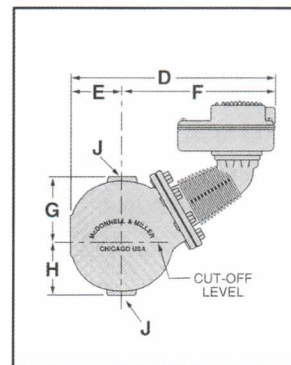
Low Water Cut-Off/Pump Controllers

- For commercial and industrial low or high pressure boiler applications
- For boilers of any steaming capacity
- Monel bellows provides corrosion resistance
- Snap action switches for high temperature service
 - 1 Single pole, single throw switch for pump control
 - 1 Single pole, double throw switch for low water cut-off and alarm actuation
- Optional features
 - Manual reset
 - 2 Single pole, single throw switches
 - 2 Single pole, double throw switches
 - Float block
 - BSPT threads
- Maximum pressure 150 psi (10.5 kg/cm²)

Model 150S-MD

Maximum differential operation

- Prevents nuisance burner shutdowns in **low pressure** applications
- Maximum operating pressure 50 psi (3.5 kg/cm²)



Electrical Ratings

Voltage	Pump Circuit Rating (Amperes)		Pilot Duty
	Full Load	Locked Rotor	
120 VAC	7.4	44.4	345 VA at 120 or 240 VAC
240 VAC	3.7	22.2	

Alarm Circuit Rating (Amperes)	
Voltage	Amps
120 VAC	1
240 VAC	1/2

Ordering Information

Model Number	Part Number	Description	Weight lbs. (kg)
150S	171702	Combination low water cut-off/pump controller	24.7 (11.2)
150S-B	171903	150S w/float block	24.7 (11.2)
150S-B-M	172104	150S-B w/manual reset	24.7 (11.2)
150S-J	172601	150S w/BSPT threads	24.7 (11.2)
150S-MD	171802	150S w/maximum differential	24.7 (11.2)
150S-M	172702	150S w/manual reset	24.7 (11.2)
150S-M-MD	172802	150S-M w/maximum differential	24.7 (11.2)
150S-J-M	172901	150S-M w/BSPT threads	24.7 (11.2)
158S	178402	150S w/2 SPDT switches	26.3 (11.9)
158S-M	178502	158S w/manual reset	27.3 (12.4)
159S	178802	150S w/2 SPST switches	26.0 (11.8)

Dimensions, in. (mm)

A	B	C	D
5 ⁷ / ₈ (149)	12 ¹⁷ / ₁₆ (316)	6 (152)	13 ¹ / ₄ (337)

E	F	G	H	J
3 ⁵ / ₁₆ (84)	9 ¹⁵ / ₁₆ (252)	4 ¹ / ₈ (105)	3 ⁷ / ₁₆ (87)	1 (25) NPT

Low Water Cut-Offs-Mechanical

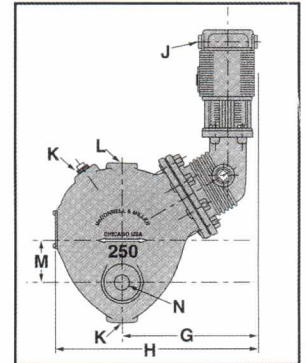
Combination Low Water Cut-Off/Pump Controllers for Steam Boilers

Series 94



Low Water Cut-Off/Pump Controllers

- For commercial and industrial low or high pressure steam boilers
- Maintains consistent water level regardless of pressure
- For boilers of any steaming capacity
- No. 5 Switch included
- Magnetic repulsion eliminates need for bellows
- Optional features
 - Manual reset
 - On/Off or proportional control switch to maintain constant boiler water level
 - BSPT threads
- Maximum pressure 250 psi (17.6 kg/cm²)

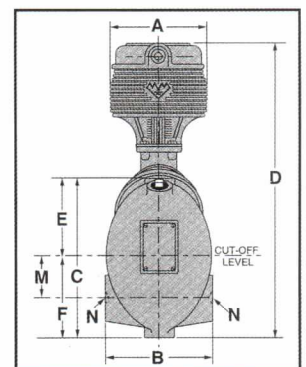


Electrical Ratings

345 VA at 120 or 240 VAC

Ordering Information

Model Number	Part Number	Description	Weight lbs. (kg)
94	165200	Combination low water cut-off/pump controller w/No. 5 switch	52.5 (23.8)
94-A	165500	94 w/alternate tapplings	50.3 (22.8)
94-AM	165800	94-A w/manual reset	50.3 (22.8)
94-A-7B	165700	94-AM w/No. 7B switch	52.5 (23.8)
94-J	165850	94 w/BSPT threads	52.5 (23.8)
94-J-7B	165875	94-7B w/BSPT threads	52.0 (23.6)
94-M	165900	94 w/manual reset	52.5 (23.8)
94-7B	166300	94 w/No. 7B switch	52.0 (23.6)



Dimensions, in. (mm)

Model	A	B	C	D
94	6 (152)	7 (178)	10 ⁹ / ₁₆ (268)	18 ¹³ / ₁₆ (478)
94-A	6 (152)	7 (178)	10 ⁹ / ₁₆ (268)	18 ¹³ / ₁₆ (478)

Model	E	F	G	H
94	5 ⁷ / ₈ (149)	4 ¹¹ / ₁₆ (119)	8 ³ / ₄ (222)	12 ¹⁵ / ₁₆ (328.6)
94-A	5 ⁷ / ₈ (149)	4 ¹¹ / ₁₆ (119)	8 ³ / ₄ (222)	12 ¹⁵ / ₁₆ (328.6)

Model	J	K NPT	L NPT	M	N
94	1/2 (15)	1 1/4 (32)	1 1/4 (32)	—	—
94-A	1/2 (15)	1 1/4 (32)	1 1/4 (32)	2 1/16 (52)	1 1/4 (32)

보일러 드럼 Level Switch (**Magnetrol®**)

External cage type level switches are completely self-contained units designed for side mounting to a tank or vessel with threaded or flanged pipe connections. These switches have thoroughly demonstrated their worth for years in hundreds of industrial applications - particularly in the fields of petroleum refining, petro-chemical production and power generation.

Features

- Carbon steel float chamber.
- Easy inspection of float chamber through a removable head.
- Stainless steel float and trim.
- Service pressures up to 900 psi (62 bar).
- Process temperatures up to 750° F (399° C).
- Specific gravity ratings as low as 0.375.
- Operating level differentials fully field adjustable.
- Single or multiple switch mechanisms available.
- Choice of switch mechanisms:
 - Mercury
 - High temperature mercury
 - Dry contact
 - Hermetically sealed
 - Pneumatic
- Choice of switch mechanism enclosures:
 - NEMA 1 for pneumatics
 - NEMA 4, moisture proof
 - NEMA 7/9, explosion proof
 - NEMA 7/9, Class I, Div. 1, Group B
- Tank connections and combinations of:
 - 1", 1 1/2", 2"
 - NPT/socket weld
 - side/side flanged
 - side/bottom flanged



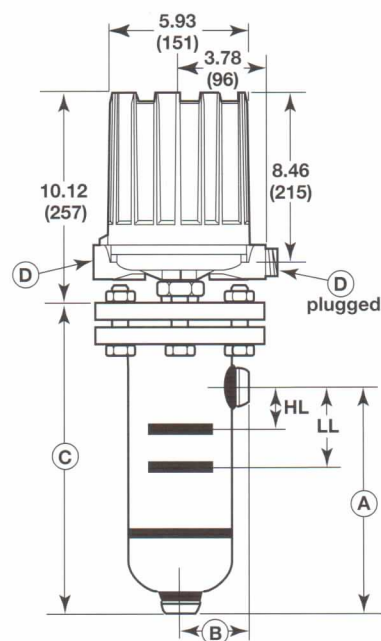
C29 : 34bar
B60 : 62bar

Applications

- Accumulators
- Receivers
- Flare pots
- Scrubbers
- Flash tanks
- Knock out drums
- Storage tanks
- Separators

■ **Dimensions. (mm)**

	Sp. Gr.	1" NPT Threaded&Socket Weld			Actuating Level	
		A	B	C	HL	LL
C29	0.76	252	76	342	51	74
B60	0.68	249	96	361	49	67

**Threaded and Socket Weld (in, (mm))**

액체용 후로우 스위치 (Flow Switches - Liquid)

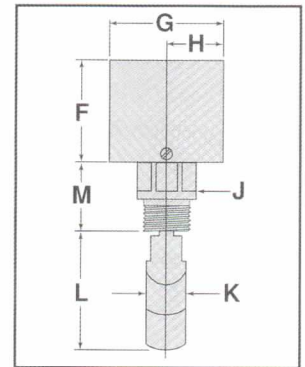
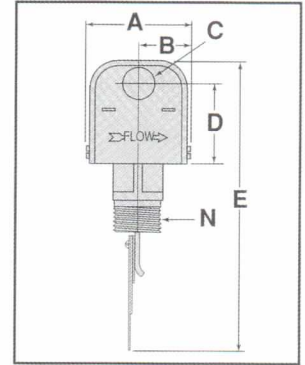
Series FS4-3



(for specified models)

General Purpose Liquid Flow Switches

- Universal design serves the widest variety of applications
- For starting or stopping electrically operated equipment such as signal lights, alarms, motors, automatic burners, metering devices and others
- Replacement for Johnson Controls flow switch Model F61KB-11
- 1" (25mm) NPT
- Two electrical knock-outs allows connection from either end
- Sensitivity adjusting screw makes flow adjustment easy
- Single pole, double throw snap switch
- Hardened stainless steel bearings minimize friction
- Sealed Monel bellows
- Four stainless steel paddles included-1", 2", 3" & 6" (25, 50, 80 & 150mm)
- Optional features
 - Time delay (5 or 20 seconds)
 - Two SPDT switches to make or break two separate circuits
 - Reinforced paddles
 - Materials of construction suitable for corrosive liquids
 - Sprinkler service - Model FS4-3F only
 - BSPT threads
- Minimum temperature (fluid or ambient) 32°F (0°C)
- Maximum temperature 300°F (149°C)
- Maximum pressure 150 psi (10.5kg/cm²)



■ Electrical Ratings

Voltage	Motor Switch Rating (Amperes)		Pilot Duty
	Full Load	Locked Rotor	
120 VAC	7.4	44.4	125 VA at 120 or 240 VAC 50 or 60 cycles
240 VAC	3.7	22.2	

■ Dimensions, in. (mm)

A	B	C	D	E	F	G
3 (76)	1½ (38)	7/8 (22)	27/32 (56)	87/16 (211)	215/16 (75)	33/8 (86)

H	J	K	L	M	N NPT
111/16 (43)	17/16 (37)	11/8 (29)	37/16 (87)	21/16 (52)	1 (25)

공기용 후로우 스위치 (Flow Switches - Air)

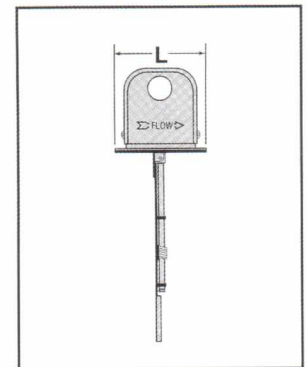
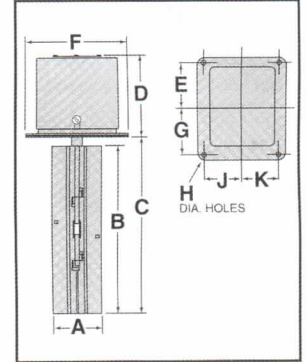
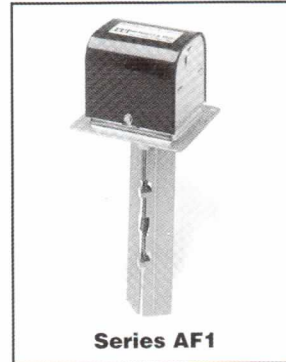
Series AF1



(for specified models)

Air Flow Switches

- For general purpose applications with medium and high velocity requirements
- Paddle fits 8" (203mm) minimum duct size, or 6" (152mm) if trimmed
- Brass, steel and aluminum construction
- Single pole, double throw snap switch
- Sensitivity adjusting screw makes flow adjustment easy
- Two electrical knock-outs allow connection from either end
- Can be equipped with a time delay relay
- Optional features
 - Stainless steel
 - Anti-corrosion treatment
- Minimum ambient temperature 32°F (0°C)
- Maximum duct temperature 300°F (149°C)



■ Electrical Ratings

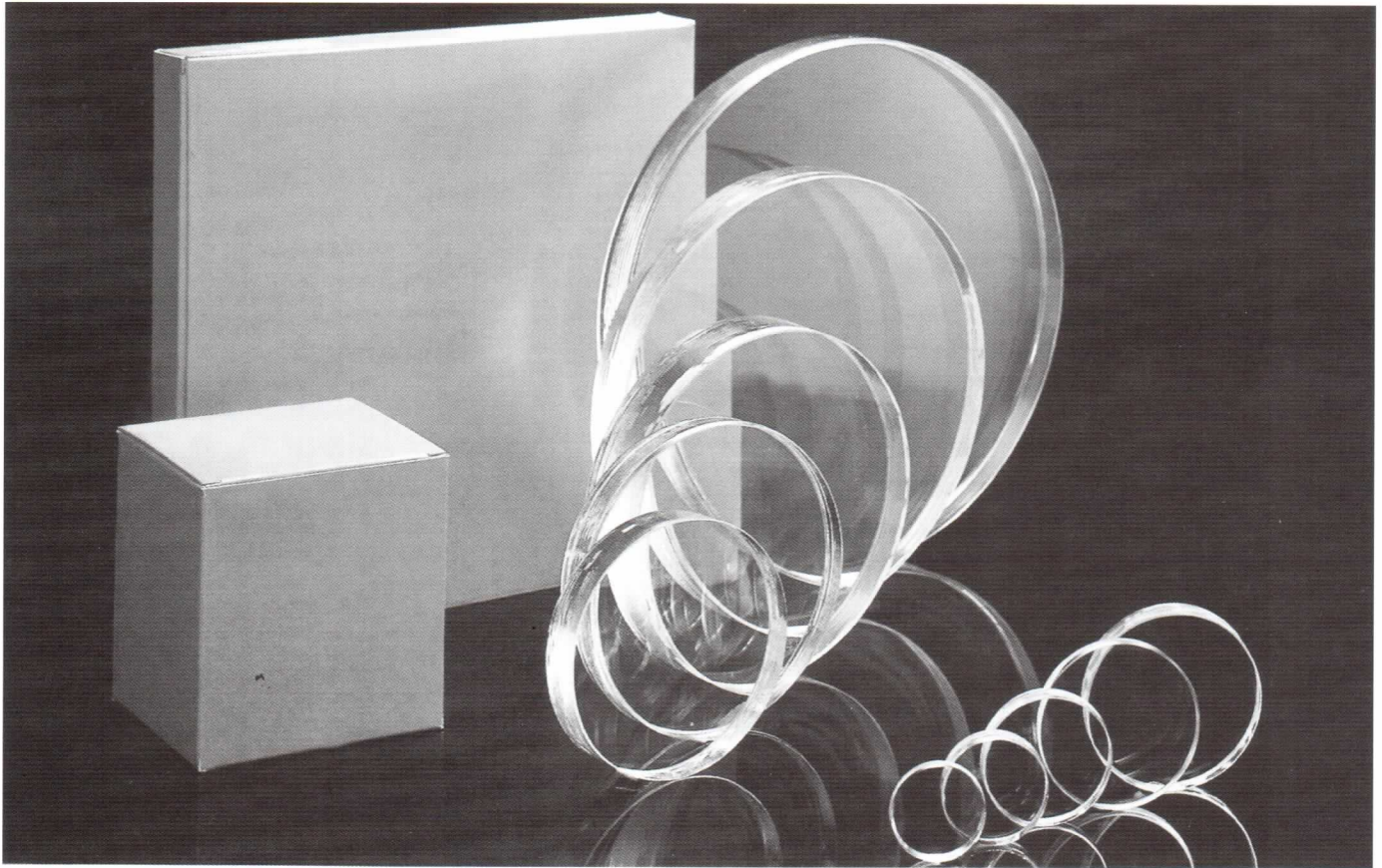
Voltage	Motor Switch Rating (Amperes)		Pilot Duty
	Full Load	Locked Rotor	
120 VAC	7.4	44.4	125 VA at 120 or 240 VAC 50 or 60 cycles
240 VAC	3.7	22.2	

■ Dimensions, in. (mm)

A	B	C	D	E	F
2 $\frac{1}{8}$ (54)	7 $\frac{5}{16}$ (186)	7 $\frac{23}{32}$ (196)	3 $\frac{7}{16}$ (16)	1 $\frac{29}{32}$ (48.4)	4 $\frac{3}{8}$ (111)

G	H	J	K	L
1 $\frac{29}{32}$ (48.4)	$\frac{9}{32}$ (4.2)	1 $\frac{19}{32}$ (40.5)	1 $\frac{19}{32}$ (40.5)	3 $\frac{13}{16}$ (48.4)

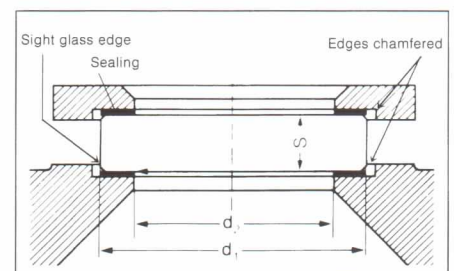
투시구용 유리 (Disc sight glasses)



■ Technical characteristics

Bending strength	> 160 N/mm ²	23.000 psi
Surface compressive stress	> 100 - 140 N/mm ²	14.500 - 20.000 psi
Plane parallelism	≤ 0,20 mm	0.008 inches
Flatness	Diameter:	
	up to 100 mm	= 0.05
	above 100 up to 150 mm	= 0.08
	above 150 up to 200 mm	= 0.12
	above 200 mm	= 0.15
Thermal shock resistance Δ T min.	265 °C	509 °F
Max. permissible temperature	300 °C	572 °F
protected with mica	320 °C	608 °F

Calculation of the glass thickness acc. to DIN 7080



$$s = 0,55 \cdot d_m \sqrt{\frac{p \cdot S}{10 \cdot \sigma_{bb}}}$$

s: Theoretical minimum glass thickness in mm

d_m : $\frac{d_1 + d_2}{2}$ Mean sealing diameter in mm

d_1 : Glass and sealing outside diameter in mm

d_2 : Sealing inside diameter in mm

p: Max. permissible pressure in bar

σ_{bb} : Min. value of bending strength in N/mm²

S: Safety factor

■ Dimensional tolerances (DIN 7080)

Diameter:	to 125 mm:	± 0,5 mm
	150 to 200 mm:	± 0,8 mm
	over 200 mm:	± 1 mm
Thickness:	up to 21 mm:	+ 0,50 mm / - 0,25 mm
	over 21 mm:	+ 0,80 mm / - 0,40 mm

The working pressure values given for DIN-glasses guarantee 8-fold safety, i.e. the sight glasses are subjected to a test pressure which is at least 8 times higher than the working pressure.

투시구용 유리 (Disc sight glasses)

Available sizes

Dimensions d ₁ xs (mm)	Inspection aperture d ₂ (mm)	Permissible pressure in bar	Test pressure in bar	Dimensions d ₁ xs (inch)	Inspection aperture d ₂ (inch)	Permissible pressure in psi	Test pressure in psi
30 x 15	20	2000	1.60	1.181 x 0.591	0.787	2900	2320
35 x 7	25	25	200	1.378 x 0.276	0.984	363	2904
40 x 12	30	50	400	1.575 x 0.472	1.181	725	5800
45 x 10	32	40	320	1.772 x 0.394	1.260	580	4640
45 x 12	32	50	400	1.772 x 0.472	1.260	725	5800
50 x 10	35	25	200	1.969 x 0.394	1.378	363	2904
50 x 12	35	40	320	1.969 x 0.472	1.378	580	4640
55 x 10	40	25	200	2.165 x 0.394	1.575	363	2904
60 x 10	45	16	128	2.362 x 0.394	1.772	232	1856
60 x 12	45	25	200	2.362 x 0.472	1.772	363	2904
60 x 15	45	40	320	2.362 x 0.591	1.772	580	4640
63 x 8	48	8	64	2.480 x 0.315	1.890	116	928
63 x 10	48	16	128	2.480 x 0.394	1.890	232	1856
63 x 12	48	25	200	2.480 x 0.472	1.890	363	2504
63 x 15	48	40	320	2.480 x 0.591	1.890	580	4640
70 x 12	55	16	128	2.756 x 0.472	2.165	232	1856
70 x 15	55	25	200	2.756 x 0.591	2.165	363	2904
80 x 10	65	10	80	3.150 x 0.394	2.559	145	1160
80 x 12	65	16	128	3.150 x 0.472	2.559	232	1856
80 x 15	65	25	200	3.150 x 0.591	2.559	363	2904
80 x 20	65	40	320	3.150 x 0.787	2.559	580	4640
90 x 10	70	8	64	3.543 x 0.394	2.756	116	928
95 x 15	75	16	128	3.740 x 0.591	2.953	232	1856
100 x 10	80	7	56	3.937 x 0.394	3.150	101	808
100 x 15	80	16	128	3.937 x 0.591	3.150	232	1856
100 x 20	80	25	200	3.937 x 0.787	3.150	363	2904
100 x 25	80	40	320	3.937 x 0.984	3.150	580	4640
125 x 15	100	10	80	4.921 x 0.591	3.937	145	1160
125 x 20	100	16	128	4.921 x 0.787	3.937	232	1856
125 x 25	100	25	200	4.921 x 0.984	3.937	363	2904
125 x 30	100	40	320	4.921 x 1.181	3.937	580	4640
135 x 25	110	25	200	5.315 x 0.984	4.331	363	2904
150 x 15	125	8	64	5.906 x 0.591	4.921	116	928
150 x 20	125	10	80	5.906 x 0.787	4.921	145	1160
150 x 25	125	16	128	5.906 x 0.984	4.921	232	1856
150 x 30	125	25	200	5.906 x 1.181	4.921	363	2904
175 x 20	150	10	80	6.890 x 0.787	5.906	145	1160
175 x 25	150	16	128	6.890 x 0.984	5.906	232	1856
175 x 30	150	25	200	6.890 x 1.181	5.906	363	2904
200 x 20	175	8	64	7.874 x 0.787	6.890	116	928
200 x 25	175	10	80	7.874 x 0.984	6.890	145	1160
200 x 30	175	16	128	7.874 x 1.181	6.890	232	1856
250 x 25	225	8	64	9.843 x 0.984	8.858	116	928
250 x 30	225	10	80	9.843 x 1.181	8.858	145	1160
265 x 30	240	8	64	10.433 x 1.181	9.449	116	928

수면계 유리 (Gauge Glass)

The gauge glass is the most important component of the liquid level gauge.

We manufacture our gauge glasses ourselves and use exclusively "extra-hard" borosilicate glass which is subsequently heat-treated.

Klinger gauge glasses have high mechanical strength and are exceptionally resistant to alkalis, acids and boiler water (within the service limitation). Our glass testing laboratory carries out continuous quality control tests: purity of glass, flaws in glass, dimensional accuracy, etc. this ensures the high quality standard of Klinger gauge glasses.

Klinger gauge glasses are suitable for installation in liquid level gauges of almost any make. We manufacture reflex and transparent glasses to the most varied international standards.

Reflex glasses

The side facing the medium chamber is provided with moulded grooves set at 90° angles. The moulding process increases the resistance of the glass grooves to wear; the "skin" which the glass attains during moulding gives it maximum smoothness and hardness. This makes it extremely resistant to the attack of boiler water.

Applications:

Up to 35 bar saturated steam, reflex glasses provide the optimum solution: they are corrosion resistant and provide an absolutely clear indication.

Reflex glasses can be used with all media except steam at service conditions up to 400 bar or temperatures up to 400°C.

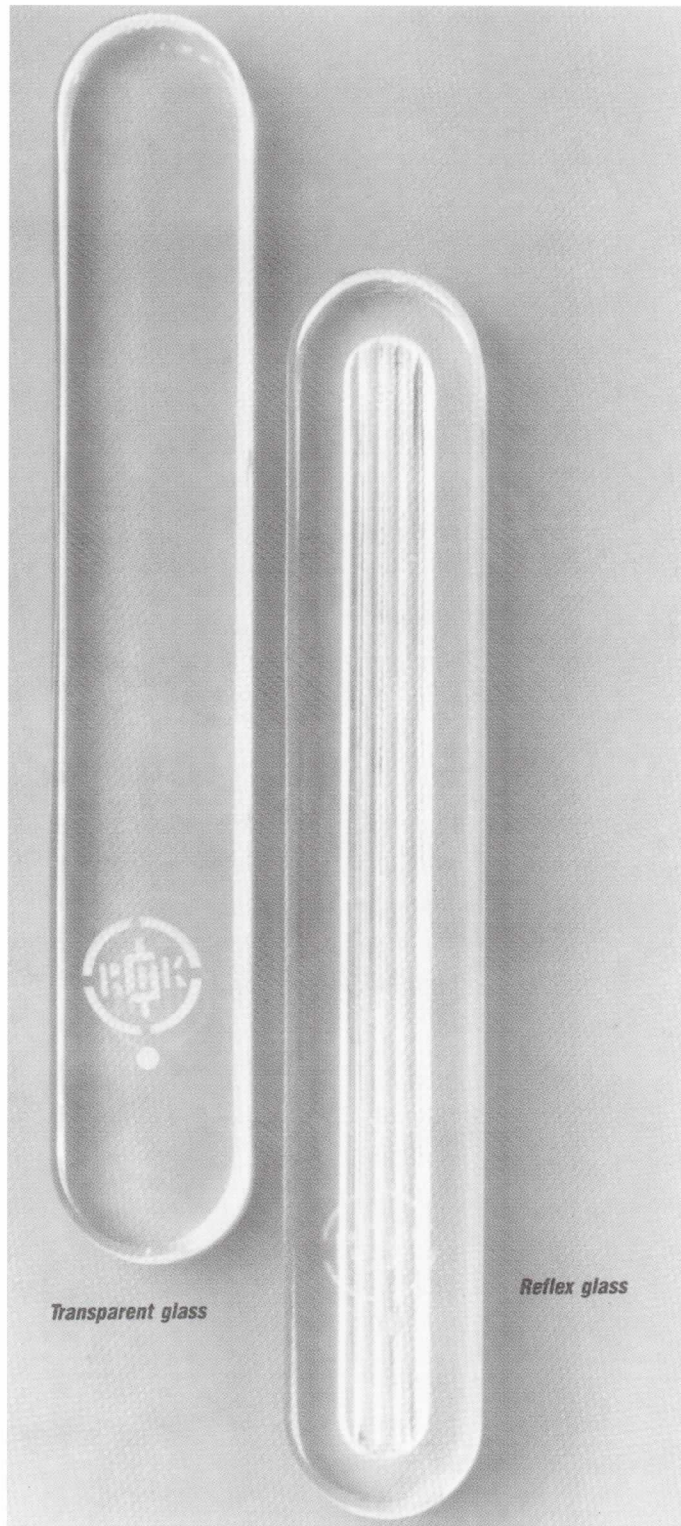
Transparent glasses

Klinger transparent glasses are also manufactured from "extra-hard" borosilicate glass. The surfaces on both sides are finely ground and polished to ensure optimal transparency.

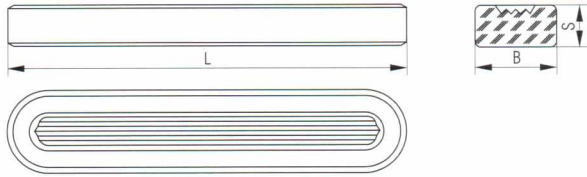
Applications:

In steam service above 35 bar and with media with a high pH-value.

Klinger transparent glasses must be protected by a mica shield on the side facing the medium chamber. Transparent glasses should always be chosen for contaminated, viscous or corrosive media. Within the given service limitations they may be used for all media except steam at pressures up to 340 bar or temperatures up to 400°C.



반사식유리 (Reflex glasses)



Overall dimensions (mm)

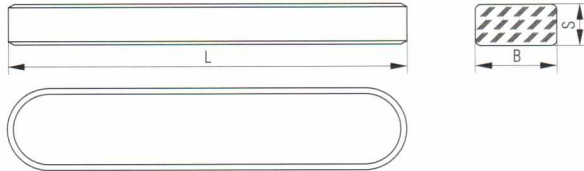
Size	Type A			Weight gm/piece	Type B			Weight gm/piece	Type C			Weight gm/piece	Type H			Weight gm/piece
	L	B	S		L	B	S		L	B	S		L	B	S	
0	95	30	17	96	95	34	17	110	85	20	12	48	—	—	—	—
I	115	30	17	118	115	34	17	132	115	20	12	64	115	34	22	176
II	140	30	17	146	140	34	17	162	130	20	12	68	140	34	22	214
III	165	30	17	176	165	34	17	195	140	20	12	72	165	34	22	254
IV	190	30	17	200	190	34	17	228	165	20	12	84	190	34	22	294
V	220	30	17	237	220	34	17	264	190	20	12	94	220	34	22	344
VI	250	30	17	265	250	34	17	301	220	20	12	112	250	34	22	392
VII	280	30	17	303	280	34	17	338	250	20	12	130	280	34	22	445
VIII	320	30	17	334	320	34	17	387	280	20	12	142	320	34	22	503
IX	340	30	17	359	340	34	17	410	320	20	12	165	340	34	22	536
X	—	—	—	—	370	34	17	461	—	—	—	—	—	—	—	—

Klinger gauge glasses Applicational range Reflex glasses	Type A ¹⁾		Type B ¹⁾		Type C		Type H	
	bar	°C	bar	°C	bar	°C	bar	°C
For media with no significant glass attack, e. g. oils, hydrocarbons	220	120	265	120	100	120	300	120
	150	400	180	400	0—50	350	200	400
	0—10	430	0—10	430	—	—	0—10	430
For media with significant glass attack, e. g. saturated steam, HPHW, alkalis	35	243	35	243	18	209	42	253
							²⁾	

¹⁾ Glass types to ONORM M 7354 or DIN 7081.

²⁾ For steam pressures above 35 bar we recommend the use of transparent glasses with mica shields

투시식유리 (Transparent glasses)



Overall dimensions (mm)

Size	Type A			Weight gm/piece	Type B			Weight gm/piece	Type H			Weight gm/piece	Type TA 28			Weight gm/piece
	L	B	S		L	B	S		L	B	S		L	B	S	
I	115	30	17	122	115	34	17	137	—	—	—	—	113	27.6	16.8	114
II	140	30	17	152	140	34	17	172	140	34	22	218	—	—	—	—
III	165	30	17	176	165	34	17	204	165	34	22	260	163	27.6	16.8	168
IV	190	30	17	211	190	34	17	238	190	34	22	302	188	27.6	16.8	194
V	220	30	17	250	220	34	17	280	220	34	22	357	218	27.6	16.8	226
VI	250	30	17	280	250	34	17	317	250	34	22	400	248	27.6	16.8	258
VII	280	30	17	314	280	34	17	356	280	34	22	460	278	27.6	16.8	290
VIII	320	30	17	360	320	34	17	407	320	34	22	530	318	27.6	16.8	334
IX	340	30	17	387	340	34	17	430	340	34	22	562	338	27.6	16.8	356
X	—	—	—	—	370	34	17	480	—	—	—	—	—	—	—	—

Klinger gauge glasses Applicational range Transparent glass	Type A ¹⁾		Type B ¹⁾		Type H		Type TA 28 ⁴⁾	
	bar	°C	bar	°C	bar	°C	bar	°C
For media with no significant glass attack, e. g. oils, hydrocarbons	240	120	290	120	340	120	—	—
	160	400	200	400	230	400	—	—
	0—10	430	0—10	430	0—10	430	—	—
For media with significant glass attack, ²⁾ e. g. saturated steam, HPHW, alkalis	²⁾		²⁾		³⁾			
	35	243	35	243	42	253	120	324
	70	300	85	300	85	300	180	356

¹⁾ Glass types to ONORM M 7354 or DIN 7081.

²⁾ For steam pressure above 35 bar we recommend the use of transparent glasses with mica shields.

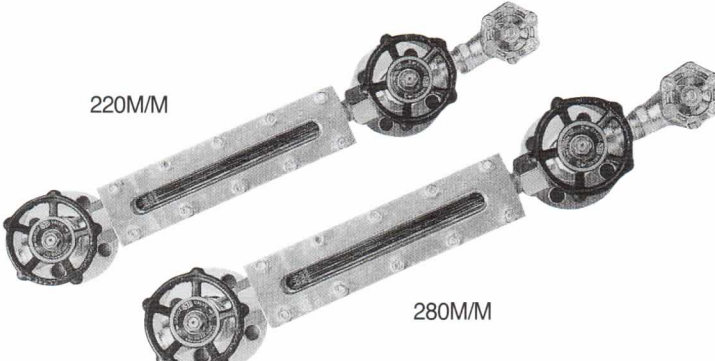
³⁾ For steam pressures above 120 bar only TA 28 glasses, size I, may be used.

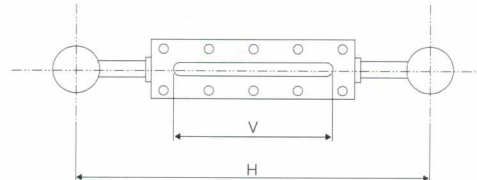
⁴⁾ TA glasses may only be used with mica shields.

보일러용 수면계 (Clean Level Gauge)

크린레벨게이지는 특수코팅된 수면계 유리를 사용함으로써 보일러수에 의한 유리의 부식을 방지하고, 녹이나 기름때 등이 유리면에 부착되지 않아 항상 깨끗한 수면을 볼 수 있다.

앵글형 크린수면계(Angle Type Clean Level Gauge)

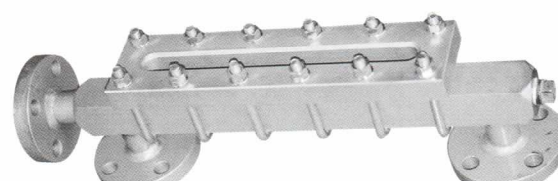


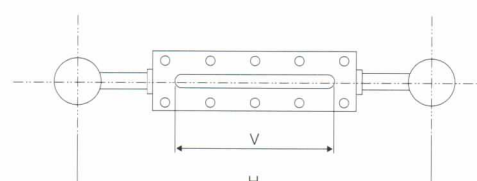


Dimensions(mm)

Glass	H	V	Connection
220	370	190	20A
280	430	250	20A

후렌지형 크린수면계(Flange Type Clean Level Gauge)

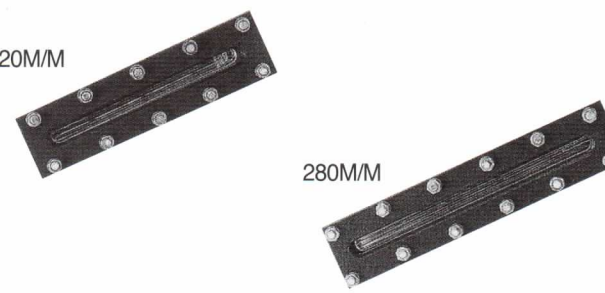


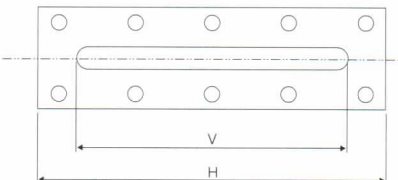


Dimensions(mm)

Glass	H	V	Connection
220	280	190	20A
280	340	250	20A

I형 크린수면계(I Type Clean Level Gauge)

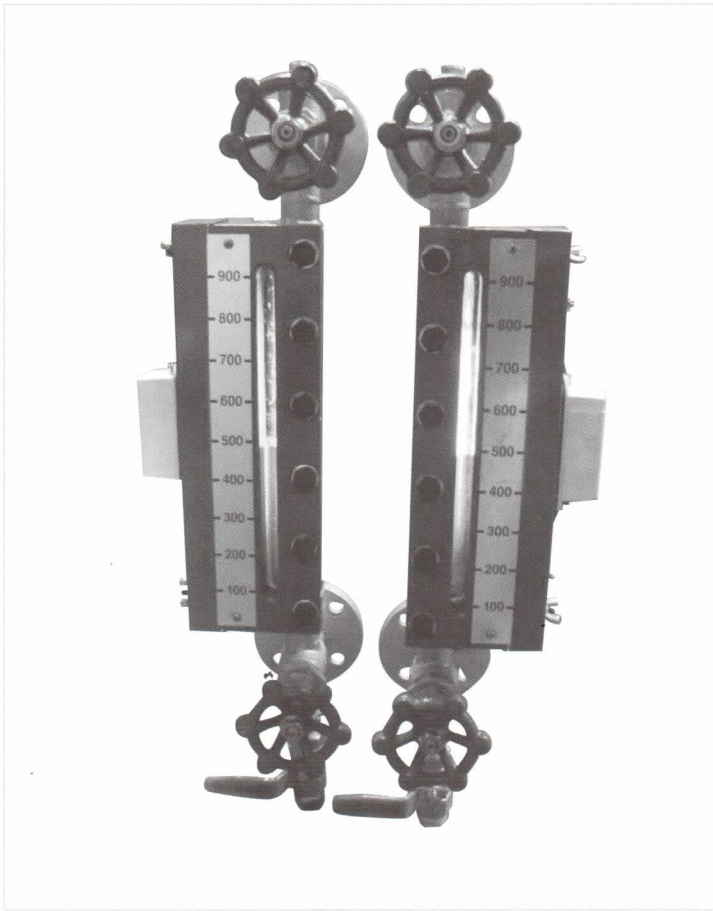




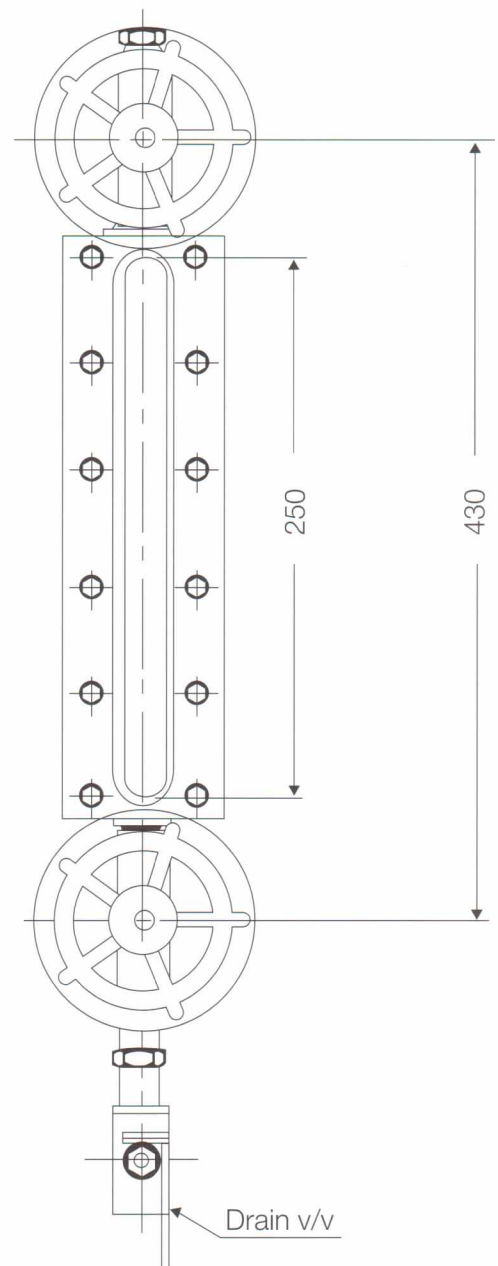
Dimensions(mm)

Glass	H	V	Connection
220	250	190	PT 3/4"
280	300	250	PT 3/4"

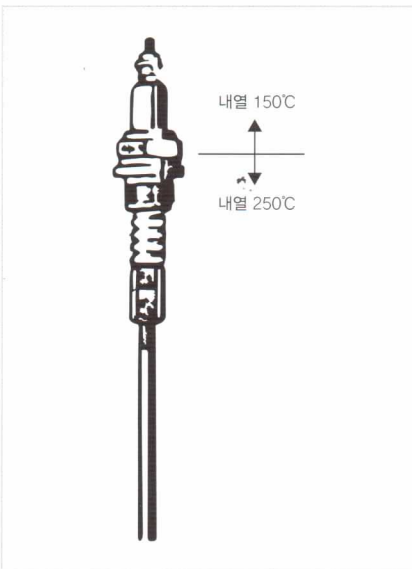
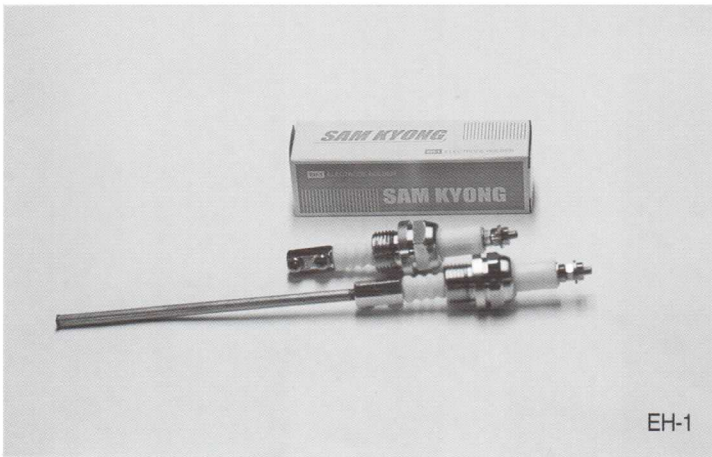
보일러용 칼라수면계 (Color Level Gauge)



- Pressure : MAX 20kg/cm²
- Conn't : KS 20K 20A RF
- C to C : 430mm
- Glass : Borosilicate(285mm)
- Color : water/Red, steam/Blue
- Lamp : 7W(220V)



전극봉 (Electrode Holder)



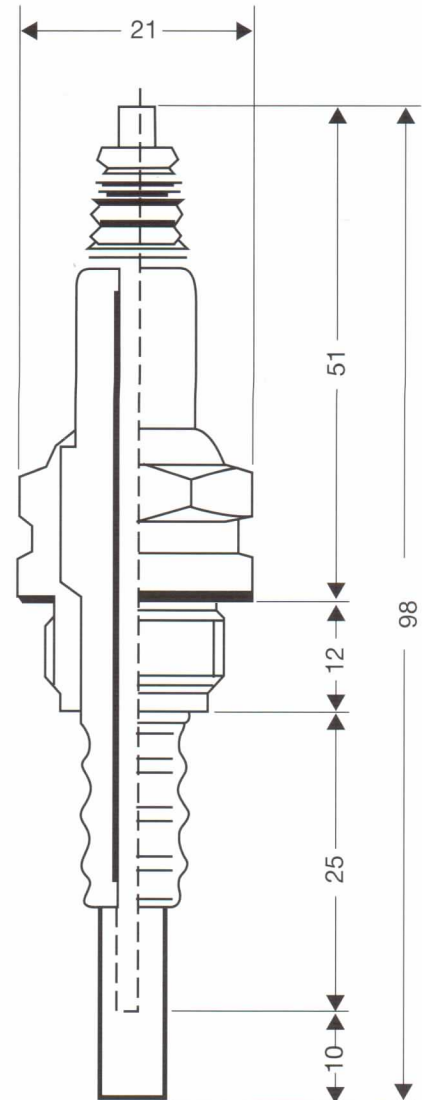
■ 보일러 및 압력용기에 사용이 적합하도록 설계되어 있다.

- 절연체 : 불소수지(PFA)
- Service Temperature : 250°C 이내
- Service Pressure : 10kg/cm²
- Electrical Properties : 10¹⁸ Ω-cm (D 257)

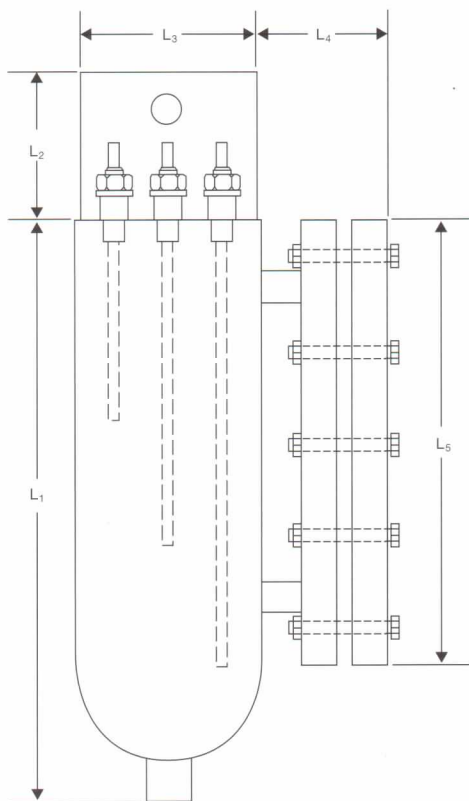
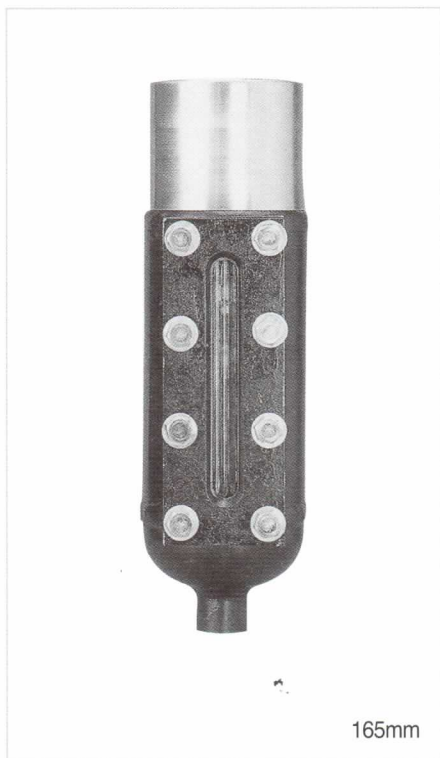
■ 보수점검

전극봉 표면에 오물이나 관석이 많이 붙으면 전류를 통하지 않게 하므로 일정기간이 지난후 전극봉이 붙은 이물질질을 닦아내고 사용한다.

■ Dimensions(mm)



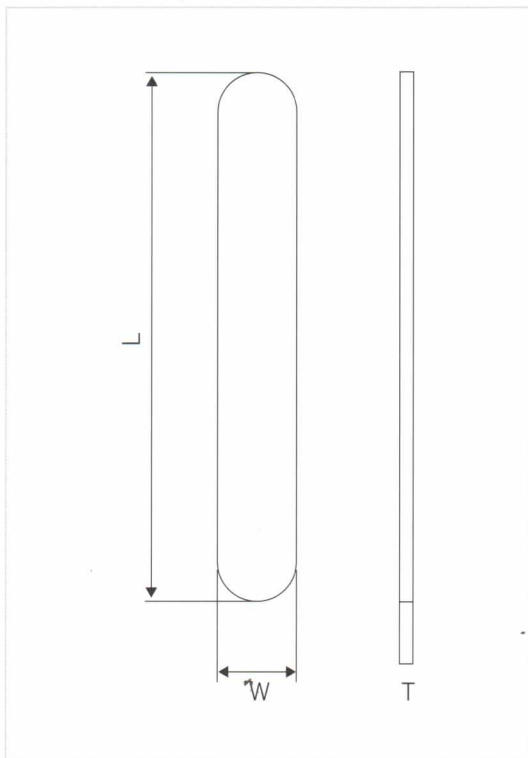
수주관 (Level Sensor & Gauge)



■ Dimensions(mm)

Glass	L1	L2	L3	L4	L5	소켓
165(mm)	260	80	95	80	190	3/4"
220(mm)	320	80	95	80	250	3/4" 1"
280(mm)	380	80	95	80	300	1"

마이카 (MICA SHIELD)

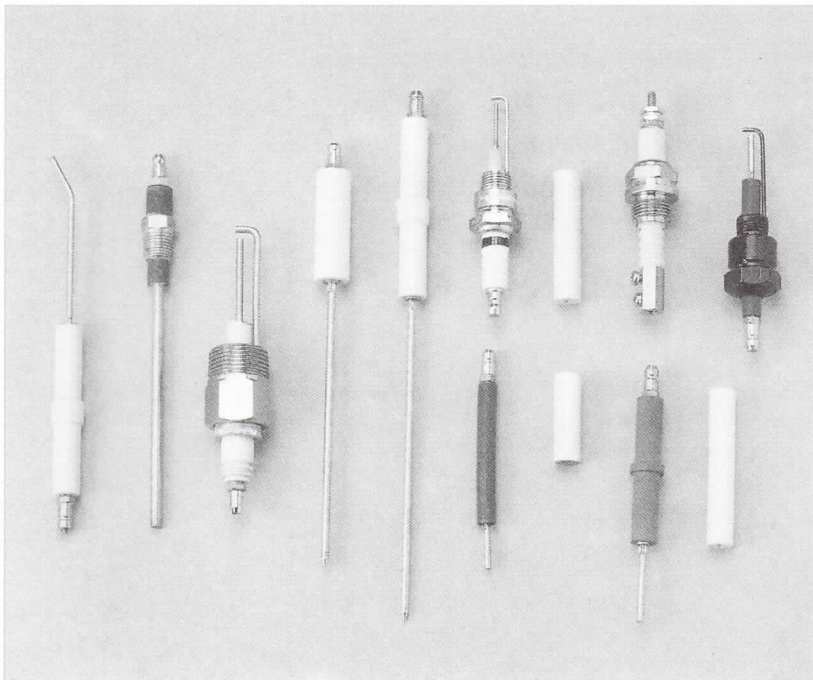


■ SOME OF THE POPULAR SIZE OF MICA SHIELDS

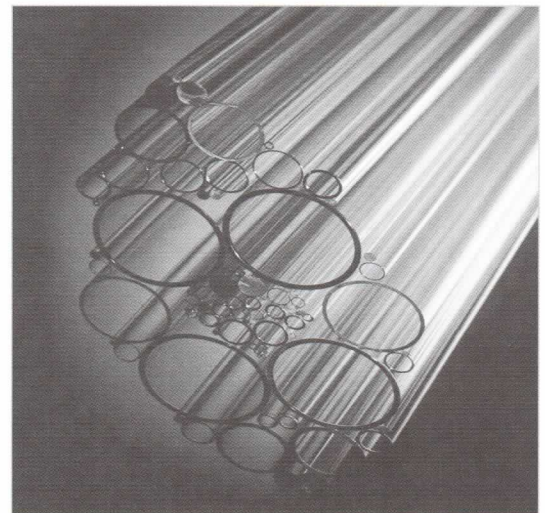
TYPE B/H (ROUNDED ENDS)				TYPE TA-28 (ROUNDED ENDS)			
Size :	5	220	x 34 mm	Size :	5	238	x 47 mm
"	6	250	x 34 mm	"	6	268	x 47 mm
"	7	280	x 34 mm	"	7	298	x 47 mm
"	8	320	x 34 mm	"	8	338	x 47 mm
"	9	340	x 34 mm	"	9	358	x 47 mm
"	10	370	x 34 mm	"	10	378	x 47 mm
"	11	400	x 34 mm			—	
Standard Thickness :							
0.10 - 0.15 mm							
0.15 - 0.20 mm							
0.20 - 0.30 mm							
0.30 - 0.40 mm							

Working Temperature : 800°C

점화 플러그 (Ignition Plug)

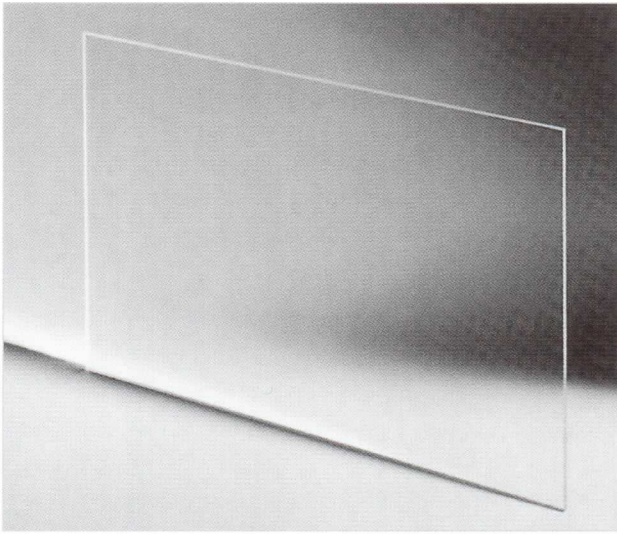


튜브 글라스 (Tube Glass)



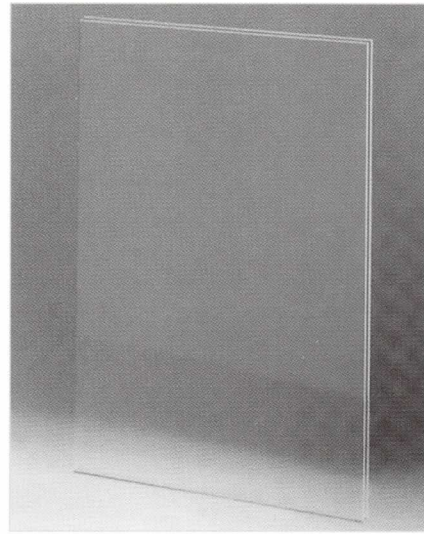
- Tubing : 4 ~ 100mm
- Working Temp. : 500°C
- Density : 2.23 g/cm³
- Length : 1500mm

고온용 유리 (Borofloat & Quartz Glass)



■ Borofloat

- 두께 1.1 ~ 21mm
- 사용온도 : 500°C



■ Quartz

- 내열온도 : 1200°C

게이지 밸브 (Level Gauge Value)

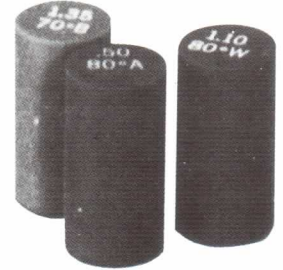


- Material : Carbon steel & stainless steel
- Size : 15A, 20A, 25A
- Pressure : MAX 50 kg/cm²
- Temperature : MAX 250 °C

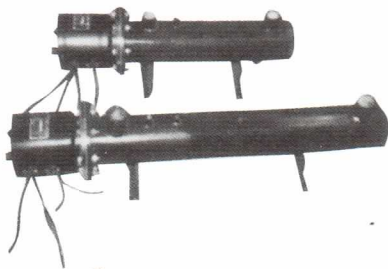
오일버너노즐 (Oil Burner Nozzle)



• Variflo Type 압력분사식 오일버너용 노즐

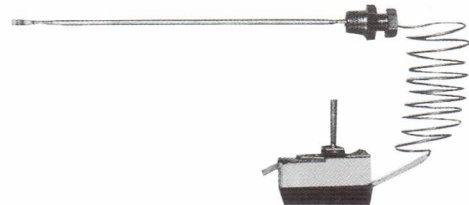


오일히터 (Oil Heater)



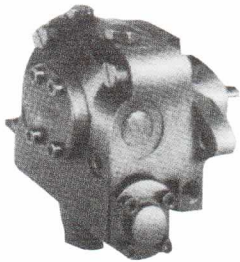
• (MAX. 25kg/cm²) OSK 오일히터

자동온도조절기 (Thermostat)



• 각종 자동온도조절기 : 0℃~300℃

오일기어펌프 (Oil Gear Pump)



TA TYPE

- 용도 : B-C유
- 용량 : 400ℓ /h~3,800ℓ /h
- 온도 : MAX. 140℃
- 압력 : MAX. 40kg/cm²
- Speed : 3,600RPM



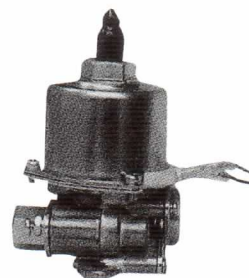
E TYPE

- 용도 : 경유, B-C유
- 용량 : 60ℓ /h~300ℓ /h
- 온도 : MAX. 90℃ (Type 1001)
- 압력 : MAX. 120℃ (Type 1069)
- 노즐압력 : 14kg/cm²~30kg/cm²

전자펌프 (Solenoid pump)



- 100V/220V, 24W/50Hz, 60Hz
- 백등유, 경유, A중유
- 사용노즐 : 1.5~3.0GPH
- 압력 : 7~10kg/cm²



- 100V/220V, 19W/50Hz, 21/60Hz
- 백등유, 경유
- 사용노즐 : 0.4~1.25GPH
- 압력 : 7.5~10kg/cm²



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