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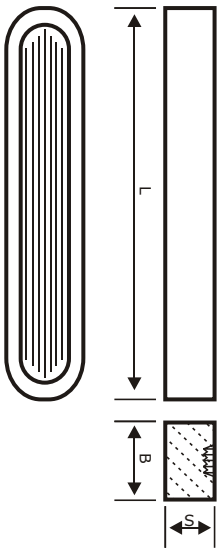
REFLEX AND TRANSARENT GLASSES GS-QUALITY



KLINGER reflex glasses are provided with moulded prismatic grooves on the side in contact with the medium. As a result of the difference in refractive index, light rays entering the gauge from outside are reflected or absorbed.

The light ray entering the steam or gas space strikes the groove face at an angle of 45°, being thereby refracted into the opposite groove face from which it is reflected back in the direction of observation. The steam or gas space thereby appears silver-white. The liquid space behind the reflex glass appears black.

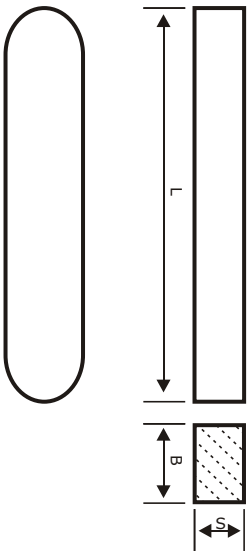
This eliminates any possibility of errors in reading the liquid level.

KLINGER reflex glasses are recommended for use within the limits shown in the pressure and temperature table.

Transparent Glasses

KLINGER transparent glasses have smooth surfaces and are mainly used for high pressure (above 35 bars) and temperatures within the limits shown in the prsssure and temperature table.

Owing to the rapid attack of the boiler water on the glass at high temperatures we in general recommend the use of mica-protected glasses at temperatures above 243°C.



Size	Type A			Type B			Type H			Type TA 28		
	L	B	S	L	B	S	L	B	S	L	B	S
I	115	30	17	115	34	17	-	-	-	113	27,6	16,8
II	140	30	17	140	34	17	140	34	22	-	-	-
III	165	30	17	165	34	17	165	34	22	163	27,6	16,8
IV	190	30	17	190	34	17	190	34	22	188	27,6	16,8
V	220	30	17	220	34	17	220	34	22	218	27,6	16,8
VI	250	30	17	250	34	17	250	34	22	248	27,6	16,8
VII	280	30	17	280	34	17	280	34	22	278	27,6	'16,8
VIII	320	30	17	320	34	17	320	34	22	318	27,6	16,8
IX	340	30	17	340	34	17	:'40	34	22	338	27,6	16,8
X	-	-	-	370	34	17	-	-	-	-	-	-

L Length, B = Width, S = Thickness

Klinger glass type Application Reflex glasses	Type A[1]) bar	 °C	Type B[1]) bar	 °C	TYPE H bar	 °C
For media which do not significantly affect the glass e. g. oils and hydro-carbons	220 150 0-10	120 400 430	265 180 0-10	120 400 430	300 200 0-10	120 400 430
For media which seriously attack the glas e. g. saturated steam, HPWH, alkalis	35	243	35	243	[2]) 42	 253

[1]) Glass types to DIN 7081 (ONORM 7354)
[2]) For Steam pressures above 35 bar we recommend the use of mica-protected transparent glasses.

Klinger glass type Application Transparent glasses	Type A[1]) bar	 °C	Type B[1]) bar	 °C	TYPE TA 28[4]) bar	 °C
For media which do not significantly affect the glass e. g. oils and hydro-carbons	240 160 0-10	120 400 430	290 200 0-10	120 400 430	-- -- --	-- -- --
For media which seriously attack the glas, e. g. saturated steam, HPWH, alkalis	[2]) 35 70	 243 300	[2]) 35 85	 243 300	[3]) 120 180	 324 356

[1]) Glass types to DIN 708t (ONORM 7354)
[2]) For Steam pressures above 35 bar we recommend the use of mica-protected transparent glasses.
[3]) At steam pressure above 120 bar only TA-28 glasses. size l, may be used.
[4]) TA-28 glasses may only be used with mica-protection.

Appltcation range of KLINGER Glasses

The values for gauge pressure and temperature shown in the table are maxima. These service limitations should not be exceeded without prior consultation with our technical staff. At working temperatures above 300°C the glass begins to suffer stress relief (a release note for material data is only issued for temperatures to 300°C). In this temperature range care should be taken to prevent shock-effects on the glass during service.

KLINGER reflex and transparent glasses are sui· table for all technically practicable below-zero temperatures.

A dismantled glass should not be re-used.

KLINGER glasses are suitable for use in liquid level gauges of nearly all makes.

Standards

KLINGER GLASSES COMPLY WITH THE FOLLOWING STANDARDS:
ÖNORM M 7354 (long sight glasses)
DIN 7081 (long sight glasses)
TGL 7210 (sight glasses)
JISB8211 (Japanese Industrial Standard)
MIL-G-18498 B (US-Navy-Ships)
BS 3463(British Standards Institution)

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