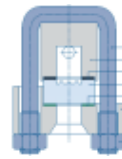




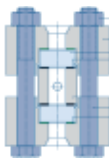
KLINGER R 25 DG und RAV

Reflex level gauges for process application
PN 25, ANSI 150
with gauge cock DG or gauge valve RAV



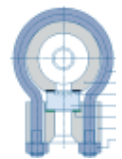
KLINGER R 100 / R 160 DG und RAV

Reflex level gauges for process application
PN 100 / PN 160, ANSI 600 / ANSI 900
with gauge cock DG or gauge valve RAV



KLINGER R 250 DG und RAV

Reflex level gauges for process application
PN 250, ANSI 900
with gauge cock DG or gauge valve RAV



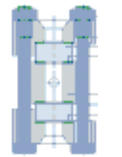
KLINGER UOR DG und RAV

Reflex level gauges for process application
PN 63, ANSI 400
with gauge cock DG or gauge valve RAV



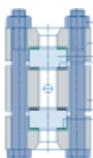
KLINGER A 400

Reflex level gauges for process application
PN 400, ANSI 2500



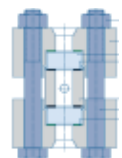
KLINGER T 50 / T 100 DG und RAV

Transparent level gauge for process applica-
tion, PN 40 / PN100, ANSI 300 / ANSI 600
with gauge cock DG and gauge valve RAV



KLINGER T 160 DG und RAV

Transparent level gauge for process applica-
tion, PN 160, ANSI 900
with gauge cock DG and gauge valve RAV



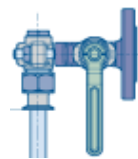
KLINGER T 250 DG und RAV

Transparent level gauge for process applica-
tion, PN 250, ANSI 1500
with gauge cock DG and gauge valve RAV



KLINGER UOT DG und RAV

Transparent level gauge for process applica-
tion, PN 63, ANSI 400
with gauge cock DG and gauge valve RAV



KLINGER R-D

Glass tube level gauge for process applica-
tion, PN 160, 10 bar, 120°C



Reflex level gauges

Process application

back to overview

R 25* *Nom. pressure: PN 25, ANSI 150*
PN 25 *with gauge cock DG*
ANSI 150 *with gauge valve RAV 946, 956, 947, 957*

**) former type designation LDR*

Construction to KLINGER material code FS/H, M/H
Gauge glass: Klinger Reflex glass A
Material Borosilicate

Connection gauge body – gauge valve

Not rotatable: 1/2"-NPT double nipple gauge cock DG, gauge valve RAV 946, 956

Rotatable: Union nut and nipple 1/2"-NPT, gauge valve RAV 947, 957
 Seal between nipple and gauge valve: joint ring.

Connection construction

End connection with gauge cock DG or gauge valve RAV 946 (see illustration) and RAV 947 with handwheel or weighted lever (page 40). Safety ball in the upper and lower shut-off fitting.

Gauges without gauge valves:

End, side or back connections with flanges or female thread.

Vessel connection with flanges or male thread to all recognized standards.

Weight: Gauges cock set with DN 25 flanges approx. 7,3 kg. Gauge valve set with DN 20 flanges approx. 8 kg.

Torque for body bolts 25 – 30 Nm, cold.

For gauge body, gauge cock and gauge valve part lists, dimensions of glasses and material specifications see pages 18, 37 and 40.

Suggested order specification

Reflex level gauge PN 25

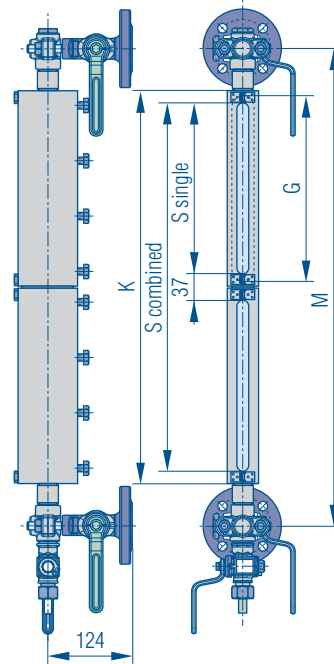
KLINGER material code FS/H, M/H

Gauge glass Borosilicate, thermally prestressed
 Connection gauge body – shut-off rotatable / not rotatable

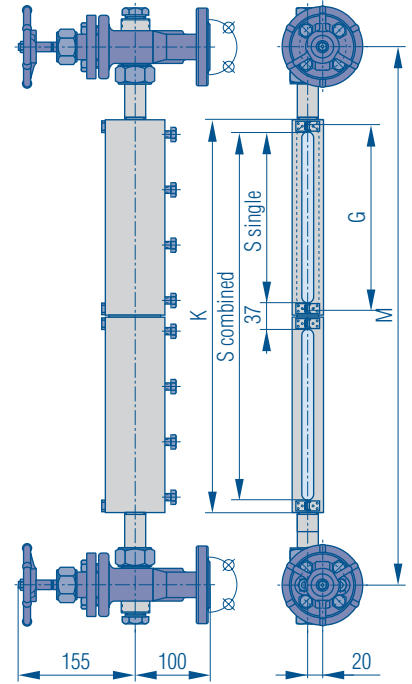
Shut-off fittings gauge cocks and gauge valves with safety balls

Ordering example:
R 25-DG, IX, FS/H
DN 25 / PN 16
M= 450 mm

R 25-DG



R 25-RAV 947



Overall and connection dimensions (mm)

Gauge size	Centre-to-centre distance M min			Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
	R 25 DG	R 25 RAV 946/956	R 25 RAV 947/957				
II	215	250	290	153	118	140	3,40
III	240	275	315	178	143	165	3,70
IV	265	300	340	203	168	190	4,10
V	295	330	370	233	198	220	4,80
VI	325	360	400	263	228	250	5,40
VII	355	390	430	293	258	280	5,90
VIII	395	430	470	333	298	320	6,80
IX	415	450	490	353	318	340	7,10
2 x IV	470	505	545	408	373	190	8,40
2 x V	530	565	605	468	433	220	9,90
2 x VI	590	625	665	528	493	250	11,00
2 x VII	650	685	725	588	553	280	12,10
2 x VIII	730	765	805	668	633	320	13,80
2 x IX	770	805	845	708	673	340	14,50
3 x VI	855	890	930	793	758	250	16,50
3 x VII	945	980	1020	883	848	280	18,10
3 x VIII	1065	1100	1140	1003	968	320	20,70
3 x IX	1125	1160	1200	1063	1028	340	21,80
4 x VII	1240	1275	1315	1178	1143	280	24,20
4 x VIII	1400	1435	1475	1338	1303	320	27,70
4 x IX	1480	1515	1555	1418	1383	340	29,10
5 x VII	1535	1570	1610	1473	1438	280	30,20
5 x VIII	1735	1770	1810	1673	1638	320	34,60
5 x IX	1835	1870	1910	1773	1738	340	36,30
6 x VIII	2070	2105	2145	2008	1973	320	41,50
6 x IX	2190	2225	2265	2128	2093	340	43,60
7 x VIII	2405	2440	2480	2343	2308	320	48,40
7 x IX	2545	2580	2620	2483	2448	340	50,90

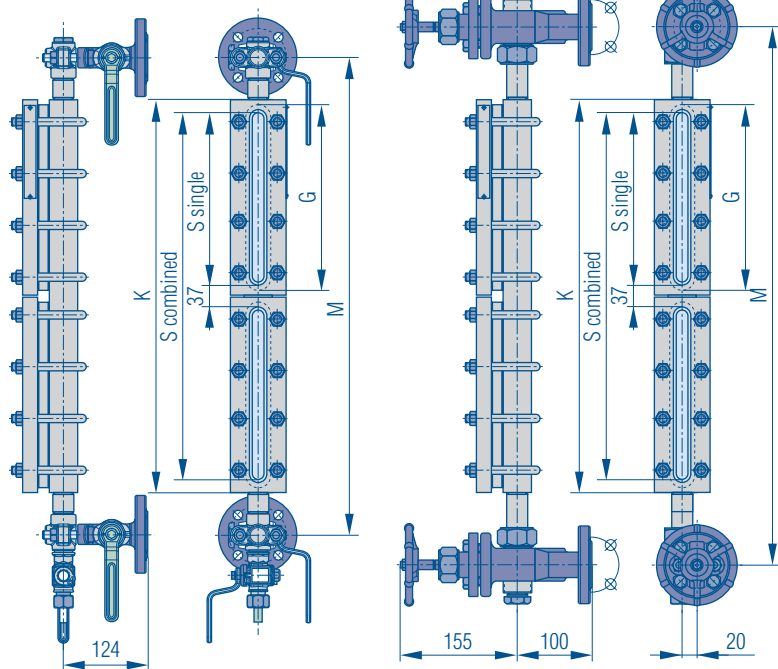
Shorter distance on request.

Reflex level gauges

Process application

R 100-DG

R 100-RAV 947



Overall and connection dimensions (mm)

Gauge size	Centre-to-centre distance M min			Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
	R 100 DG	R 100 RAV 946/956	R 100 RAV 947/957				
II	215	250	290	153	118	140	3,40
III	240	275	315	178	143	165	3,70
IV	265	300	340	203	168	190	4,10
V	295	330	370	233	198	220	4,80
VI	325	360	400	263	228	250	5,40
VII	355	390	430	293	258	280	5,90
VIII	395	430	470	333	298	320	6,80
IX	415	450	490	353	318	340	7,10
2 x IV	470	505	545	408	373	190	8,40
2 x V	530	565	605	468	433	220	9,90
2 x VI	590	625	665	528	493	250	11,00
2 x VII	650	685	725	588	553	280	12,10
2 x VIII	730	765	805	668	633	320	13,80
2 x IX	770	805	845	708	673	340	14,50
3 x VI	855	890	930	793	758	250	16,50
3 x VII	945	980	1020	883	848	280	18,10
3 x VIII	1065	1100	1140	1003	968	320	20,70
3 x IX	1125	1160	1200	1063	1028	340	21,80
4 x VII	1240	1275	1315	1178	1143	280	24,20
4 x VIII	1400	1435	1475	1338	1303	320	27,70
4 x IX	1480	1515	1555	1418	1383	340	29,10
5 x VII	1535	1570	1610	1473	1438	280	30,20
5 x VIII	1735	1770	1810	1673	1638	320	34,60
5 x IX	1835	1870	1910	1773	1738	340	36,30
6 x VIII	2070	2105	2145	2008	1973	320	41,50
6 x IX	2190	2225	2265	2128	2093	340	43,60
7 x VIII	2405	2440	2480	2343	2308	320	48,40
7 x IX	2545	2580	2620	2483	2448	340	50,90

Shorter distance on request.

Nom. pressure: PN 100, ANSI 600
with gauge cock DG
with gauge valve RAV 946, 956,
947, 957

Construction to KLINGER
material code FS/H, M/H, M
Gauge glass:
Klinger Reflex glass B
Material Borosilicate

Connection gauge body – gauge
valve

Not rotatable: 1/2"-NPT double
nipple gauge cock DG, gauge valve
RAV 946, 956

Rotatable: Union nut and nipple 1/2"-
NPT, gauge valve RAV 947, 957
Seal between nipple and gauge valve:
joint ring.

Connection construction

End connection with gauge cock DG
or gauge valve RAV 946 (see
illustration) and RAV 947 with
handwheel or weighted lever (page 40).
Safety ball in the upper and lower shut-
off fitting.

Gauges without gauge valves:

End, side or back connections with
flanges or female thread.

Vessel connection with flanges or
male thread to all recognized standards.

Weight: Gauges cock set with DN 25
flanges approx. 7,3 kg. Gauge valve set
with DN 20 flanges approx. 8 kg.

Torque for body bolts 50 Nm,
cold.

For gauge body, gauge cock and gauge
valve part lists, dimensions of glasses
and material specifications see pages
18, 37 and 40.

Suggested order specification

Reflex level gauge PN 100

KLINGER material code FS/H, M/H, M

Gauge glass Borosilicate, thermally prestressed
Connection gauge body – shut-off rotatable / not
rotatable

Shut-off fittings gauge cocks and gauge valves
with safety balls

Ordering example:
R 100-DG, IX, FS/H
DN 25 / PN 100
M= 450 mm

R 100*

PN 100

ANSI 600

*) former type
designation MPR



Reflex level gauges

Process application

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R 160* Nom. pressure: PN 160, ANSI 900
with gauge cock DG
PN 160
with gauge valve RAV 946, 956,
ANSI 900
947, 957

*) former type
designation UPR

Construction to KLINGER
material code FS/H, M/H, M
Gauge glass:
Klinger Reflex glass B
Material Borosilicate

Connection
gauge body – gauge valve

Not rotatable: 1/2"-NPT double
nipple gauge cock DG, gauge valve
RAV 946, 956

Rotatable: Union nut and nipple 1/2"-
NPT, gauge valve RAV 947, 957
Seal between nipple and gauge valve:
joint ring.

Connection construction

End connection with gauge cock DG
or gauge valve RAV 946 (see
illustration) and RAV 947 with
handwheel or weighted lever (page 40).
Safety ball in the upper and lower shut-
off fitting.

Gauges without gauge valves:
End, side or back connections with
flanges or female thread.

Vessel connection with flanges or
male thread to all recognized standards.

Weight: Gauges cock set with DN 25
flanges approx. 7,3 kg. Gauge valve set
with DN 20 flanges approx. 8 kg.

Torque for body bolts 50 Nm,
cold.

For gauge body, gauge cock and gauge
valve part lists, dimensions of glasses
and material specifications see pages
18, 37 and 40.

Suggested order specification
Reflex level gauge PN 160

KLINGER material code FS/H, M/H, M

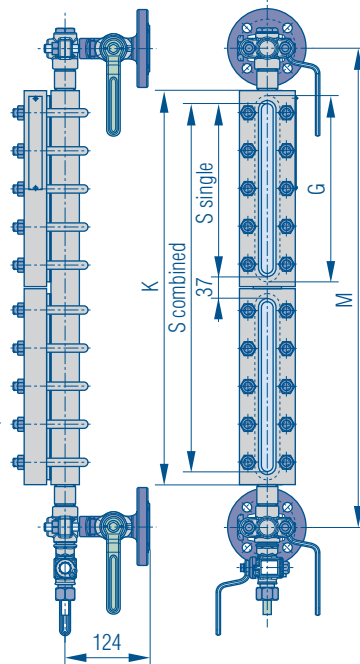
Gauge glass Borosilicate, thermally prestressed
Connection gauge body – shut-off rotatable / not
rotatable

Shut-off fittings gauge cocks and gauge valves
with safety balls

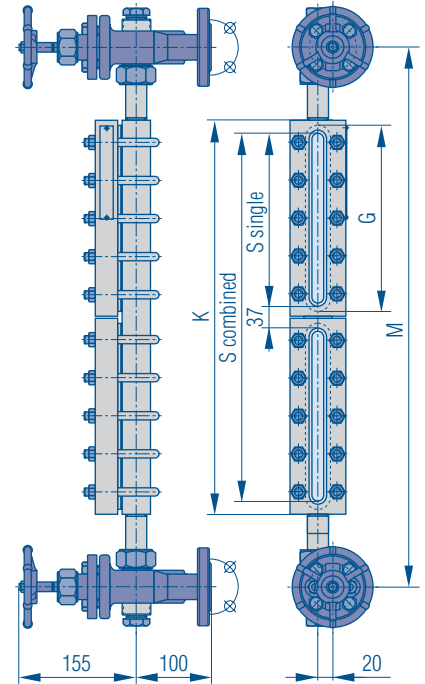
Ordering example:

R 160-RAV 956, 4 x VIII, FS/H
DN 25 / PN 160
M= 1450 mm

R 160-DG



R 160-RAV 947



Overall and connection dimensions (mm)

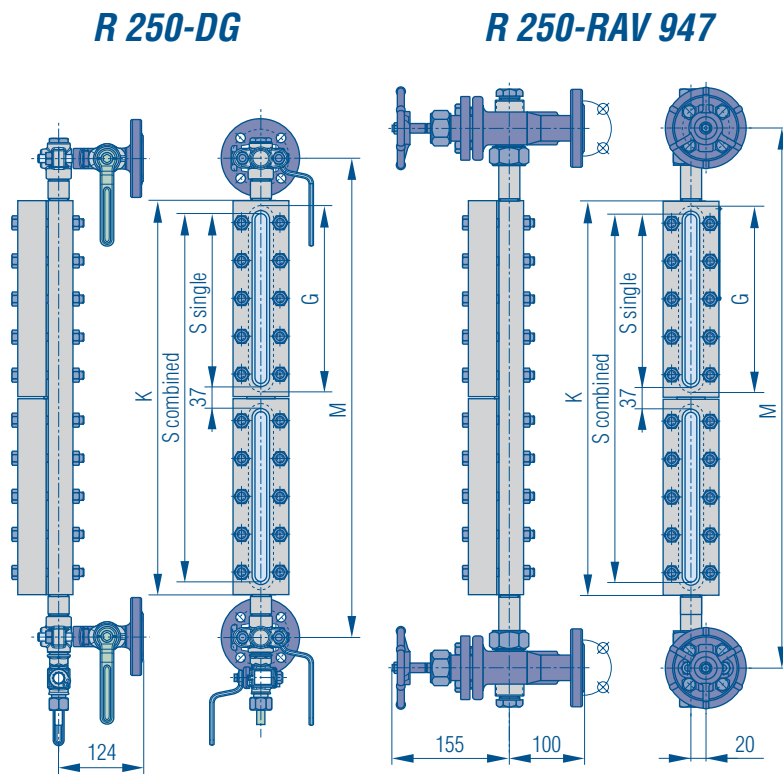
Gauge size	Centre-to-centre distance M min			Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
	R 160 DG	R 160 RAV 946/956	R 160 RAV 947/957				
II	215	250	290	153	118	140	3,70
III	240	275	315	178	143	165	4,30
IV	265	300	340	203	168	190	4,90
V	295	330	370	233	198	220	5,60
VI	325	360	400	263	228	250	6,30
VII	355	390	430	293	258	280	7,00
VIII	395	430	470	333	298	320	8,00
IX	415	450	490	353	318	340	8,40
2 x IV	470	505	545	408	373	190	9,90
2 x V	530	565	605	468	433	220	11,50
2 x VI	590	625	665	528	493	250	12,80
2 x VII	650	685	725	588	553	280	14,30
2 x VIII	730	765	805	668	633	320	16,30
2 x IX	770	805	845	708	673	340	17,10
3 x VI	855	890	930	793	758	250	19,20
3 x VII	945	980	1020	883	848	280	21,50
3 x VIII	1065	1100	1140	1003	968	320	24,40
3 x IX	1125	1160	1200	1063	1028	340	25,60
4 x VII	1240	1275	1315	1178	1143	280	28,60
4 x VIII	1400	1435	1475	1338	1303	320	32,50
4 x IX	1480	1515	1555	1418	1383	340	34,20
5 x VII	1535	1570	1610	1473	1438	280	35,80
5 x VIII	1735	1770	1810	1673	1638	320	40,70
5 x IX	1835	1870	1910	1773	1738	340	42,80
6 x VIII	2070	2105	2145	2008	1973	320	48,80
6 x IX	2190	2225	2265	2128	2093	340	51,30
7 x VIII	2405	2440	2480	2343	2308	320	56,90
7 x IX	2545	2580	2620	2483	2448	340	59,90

Shorter distance on request.

Reflex level gauges

Process application

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Overall and connection dimensions (mm)

Gauge size	Centre-to-centre distance M min			Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
	R 250 DG	R 250 RAV 946/956	R 250 RAV 947/957				
II	215	250	290	153	118	140	3,70
III	240	275	315	178	143	165	4,30
IV	265	300	340	203	168	190	4,90
V	295	330	370	233	198	220	5,60
VI	325	360	400	263	228	250	6,30
VII	355	390	430	293	258	280	7,00
VIII	395	430	470	333	298	320	8,00
IX	415	450	490	353	318	340	8,40
2 x IV	470	505	545	408	373	190	9,90
2 x V	530	565	605	468	433	220	11,50
2 x VI	590	625	665	528	493	250	12,80
2 x VII	650	685	725	588	553	280	14,30
2 x VIII	730	765	805	668	633	320	16,30
2 x IX	770	805	845	708	673	340	17,10
3 x VI	855	890	930	793	758	250	19,20
3 x VII	945	980	1020	883	848	280	21,50
3 x VIII	1065	1100	1140	1003	968	320	24,40
3 x IX	1125	1160	1200	1063	1028	340	25,60
4 x VII	1240	1275	1315	1178	1143	280	28,60
4 x VIII	1400	1435	1475	1338	1303	320	32,50
4 x IX	1480	1515	1555	1418	1383	340	34,20
5 x VII	1535	1570	1610	1473	1438	280	35,80
5 x VIII	1735	1770	1810	1673	1638	320	40,70
5 x IX	1835	1870	1910	1773	1738	340	42,80
6 x VIII	2070	2105	2145	2008	1973	320	48,80
6 x IX	2190	2225	2265	2128	2093	340	51,30
7 x VIII	2405	2440	2480	2343	2308	320	56,90
7 x IX	2545	2580	2620	2483	2448	340	59,90

Shorter distance on request.

Nom. pressure: PN 250, ANSI 900
with gauge cock DG
with gauge valve RAV 946, 956,
947, 957

Construction to KLINGER
material code FS/H, M/H, M
Gauge glass:
Klinger Reflex glass B
Material Borosilicate

Connection
gauge body – gauge valve

Not rotatable: 1/2"-NPT double
nipple gauge cock DG, gauge valve
RAV 946, 956

Rotatable: Union nut and nipple 1/2"-
NPT, gauge valve RAV 947, 957
Seal between nipple and gauge valve:
joint ring.

Connection construction

End connection with gauge cock DG
or gauge valve RAV 946 (see
illustration) and RAV 947 with
handwheel or weighted lever (page 40).
Safety ball in the upper and lower shut-
off fitting.

Gauges without gauge valves:

End, side or back connections with
flanges or female thread.

Vessel connection with flanges or
male thread to all recognized standards.

Weight: Gauges cock set with DN 25
flanges approx. 7,3 kg. Gauge valve set
with DN 20 flanges approx. 8 kg.

Torque for body bolts 60 Nm,
cold.

For gauge body, gauge cock and gauge
valve part lists, dimensions of glasses
and material specifications see pages
18, 37 and 40.

Suggested order specification

Reflex level gauge PN 250

KLINGER material code FS/H, M/H, M

Gauge glass Borosilicate, thermally prestressed
Connection gauge body – shut-off rotatable / not
rotatable

Shut-off fittings gauge cocks and gauge valves
with safety balls

Ordering example:

R 160-RAV 956, 4 x VIII, FS/H
DN 25 / PN 250
M= 1450 mm

R 250*

PN 250

ANSI 1500

*) former type
designation HPR



Reflex level gauges

Process application

back to overview

UOR Nom. pressure: PN 63, ANSI 400
 with gauge cock DG
 PN 63 with gauge valve RAV 946, 956,
 ANSI 400 947, 957

Construction to **KLINGER**
 material code FS/H, M/H
 Gauge glass:
Klinger Reflex glass B
 Material Borosilicate

Application range

Primarily for media with boiling point in the low temperature region (low boiling point media).
 Klinger material code:
 FS/H down to -80 °C
 Pressure rating to DIN 2401 – PN 63
 (at -196 °C 63 bar)

Connection

gauge body – gauge valve

Not rotatable: 1/2"-NPT double nipple gauge cock DG, gauge valve RAV 946, 956

Rotatable: Union nut and nipple 1/2"-NPT, gauge valve RAV 947, 957

Seal between nipple and gauge valve: joint ring.

Connection construction

End connection with gauge cock DG or gauge valve RAV 946/956 (see illustration) and RAV 947/957 with handwheel or weighted lever (page 32). Safety ball in the upper and lower shut-off fitting.

Vessel connection with flanges or male thread to all recognized standards.

Weight: Gauges cock set with DN 25 flanges approx. 7,3 kg. Gauge valve set with DN 20 flanges approx. 8 kg.

Torque for body bolts 40 Nm, cold. For gauge body, gauge cock and gauge valve part lists, dimensions of glasses and material specifications see pages 18, 37 and 40.

Suggested order specification

Reflex level gauge PN 63

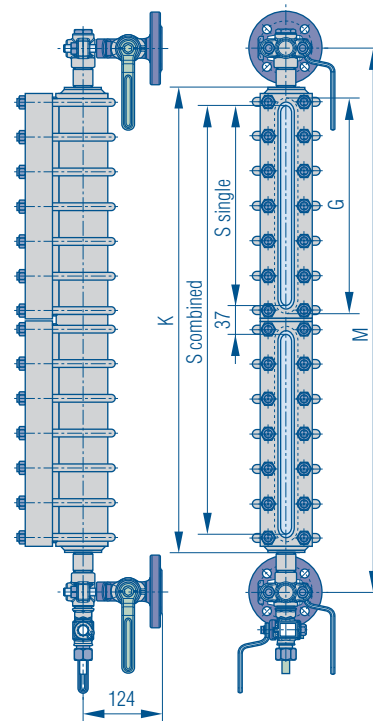
KLINGER material code FS/H, M/H
 Gauge glass Borosilicate
 thermally prestressed

Connection gauge body – shut-off rotatable / not rotatable

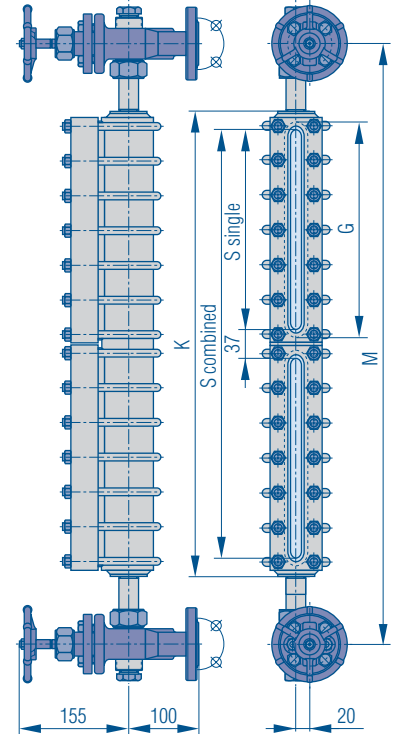
Shut-off fittings gauge cocks and gauge valves with safety balls

Ordering example:
UOR-DG, IX, FS/H
DN 25 / PN 63
M= 480 mm

UOR-DG



UOR-RAV 947



Overall and connection dimensions (mm)

Gauge size	Centre-to-centre distance M min		Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
	UOR DG	UOR RAV 946				
II	258	276	168	118	140	5,80
III	283	300	193	143	165	6,80
IV	308	326	218	168	190	7,30
V	338	356	248	198	220	7,80
VI	368	386	278	228	250	8,70
VII	398	416	308	258	280	9,80
VIII	438	456	348	298	320	10,90
IX	458	472	368	318	340	12,00
2 x IV	513	531	423	373	190	14,80
2 x V	573	591	483	433	220	15,60
2 x VI	633	651	543	493	250	17,40
2 x VII	643	711	603	553	280	19,60
2 x VIII	773	791	683	633	320	21,80
2 x IX	813	831	723	673	340	24,00
3 x VI	898	916	808	758	250	26,10
3 x VII	988	1006	898	848	280	29,40
3 x VIII	1108	1126	1018	968	320	32,70
3 x IX	1168	1186	1078	1028	340	36,00
4 x VII	1283	1301	1193	1143	280	39,20
4 x VIII	1443	1461	1353	1303	320	42,50
4 x IX	1523	1541	1433	1383	340	48,00
5 x VII	1578	1596	1488	1438	280	49,00
5 x VIII	1778	1796	1688	1638	320	54,00
5 x IX	1878	1896	1786	1738	340	60,00
6 x VIII	2113	2131	2023	1973	320	64,80
6 x IX	2233	2261	2143	2093	340	72,00

Shorter distance on request.

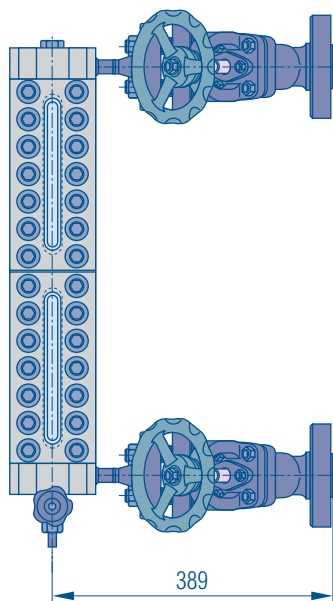
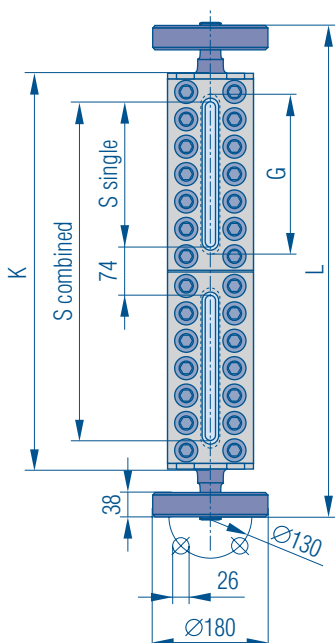
Reflex level gauges

Process application

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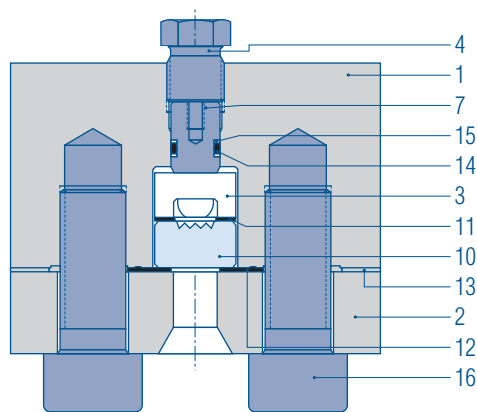
A 400

A 400-DVK 2



Nominal pressure:
PN 400, ANSI 2500
Construction to KLINGER
material code FS/H
Gauge glass:
Klinger Reflex glass A extra
Material Borosilicate

A 400
PN 400
ANSI 2500
max. 120 °C



Overall and connection dimensions (mm)

Gauge size	Centre-to-centre distance M min A 400-DVK 2	Total length L	Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
III	255	385	231	142	165	35
IV	280	410	256	167	190	38
V	310	440	286	197	220	41
VI	340	470	316	227	250	45
VII	370	500	346	257	280	48
VIII	410	540	386	297	320	52
IX	430	560	406	317	340	54
2 x IV	495	625	471	382	190	66
2 x V	568	698	544	455	220	72
2 x VI	641	771	617	528	250	80
2 x VII	671	801	647	558	280	86
2 x VIII	754	884	730	641	320	94
2 x IX	817	947	793	704	340	98
3 x VI	942	1072	918	829	250	115
3 x VII	972	1102	948	859	280	124
3 x VIII	1098	1228	1047	985	320	136
3 x IX	1204	1334	1180	1091	340	142
4 x VII	1273	1403	1249	1160	280	162
4 x VIII	1442	1572	1418	1329	320	178
4 x IX	1591	1721	1567	1478	340	186
5 x VIII	1786	1916	1762	1673	320	220
5 x IX	1978	2108	1964	1865	340	230
6 x VIII	2130	2260	2106	2017	320	262
6 x IX	2365	2495	2341	2252	340	274
7 x VIII	2474	2604	2450	2361	320	304
7 x IX	2752	2882	2728	2639	340	318

Dimension L is standard, but may be exceeded on request.

Pos.	Part	Materials FS/H
1	Level gauge body	Ck 45 N
2	Cover	Ck 45 N
3	Pressure plate	St 34
4	Pressure screw	9SMn28K
7	Pressure piece	9SMn28K
10	Reflex glass	Borosilicate
11	Sealing gasket	Graphite
12	Frame gasket	Klinger-SIL
13	Cushion joint	Klinger-SIL
14	Sealing ring	119.90
15	Ring	PTFE
16	Ch. Head screw	10.9

Connection gauge body – gauge valve

Screwed of flanges to DN 25 PN 400 with lens groove DN 15 to DIN 2696 (see illustration).
The gauge may also be fitted with type DVK 2 gauge valves mounted directly on the piece.

Torque for body bolts 250 Nm.

Torque for pressure screws 80 Nm, cold.

For gauge and gauge valve part lists, dimensions of glasses and material specifications see pages 18, 37 and 40.

Suggested order specification

Reflex level gauge PN 400

KLINGER material code FS/H

Gauge glass Borosilicate
thermally prestressed

Ordering example:

A 400, IX
DN 25 / PN 400
M= 456 mm



Transparent level gauges

Process application

T 50*

**PN 40
ANSI 300**

*) former type
designation MPT

**Nom. pressure: PN 40, ANSI 300
with gauge cock DG
with gauge valve RAV 946, 956,
947, 957**

**Construction to KLINGER
material code FS/H, M/H, M
Gauge glass:
Klinger Transparent glass B
Material Borosilicate**

**Connection
gauge body – gauge valve**

Not rotatable: 1/2"-NPT double
nipple gauge cock DG, gauge valve
RAV 946, 956

Rotatable: Union nut and nipple 1/2"-
NPT, gauge valve RAV 947, 957
Seal between nipple and gauge valve:
joint ring.

Connection construction

End connection with gauge cock DG
or gauge valve RAV 946 (see
illustration) and RAV 947 with
handwheel or weighted lever (page 40).
Safety ball in the upper and lower shut-
off fitting.

Gauges without gauge valves:
End, side or back connections with
flanges or female thread.

Vessel connection with flanges or
male thread to all recognized standards.

Weight: Gauges cock set with DN 25
flanges approx. 7,3 kg. Gauge valve set
with DN 25 flanges approx. 8 kg.

**Torque for body bolts 50 Nm,
cold.**

For gauge body, gauge cock and gauge
valve part lists, dimensions of glasses
and material specifications see pages
19, 37 and 40.

Suggested order specification

Transparent level gauge PN 40

KLINGER material code FS/H, M/H, M

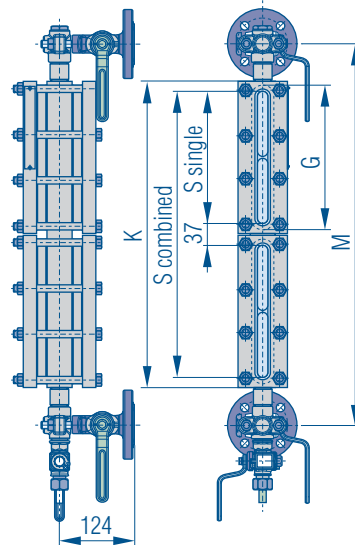
Gauge glass Borosilicate, thermally prestressed
Connection gauge body – shut-off rotatable / not
rotatable

Shut-off fittings gauge cocks and gauge valves
with safety balls

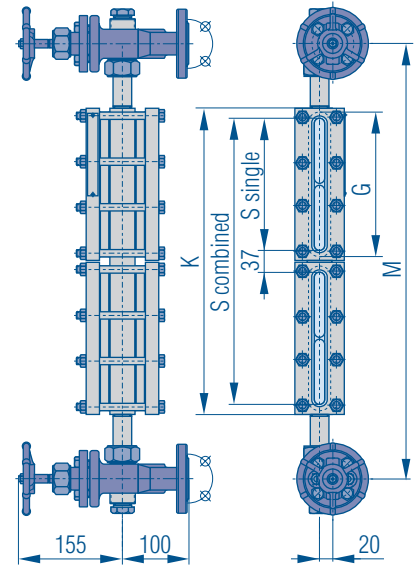
Ordering example:

**T 50-DG, 2 x VIII, M/H
DN 25 / PN 40
M= 760 mm**

T 50-DG



T 50-RAV 947



Overall and connection dimensions (mm)

Gauge size	Centre-to-centre distance M min			Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
	T 50 DG	T 50 RAV 946/956	T 50 RAV 947/957				
II	215	250	290	153	118	140	4,40
III	240	275	315	178	143	165	5,30
IV	265	300	340	203	168	190	6,00
V	295	330	370	233	198	220	6,90
VI	325	360	400	263	228	250	7,70
VII	355	390	430	293	258	280	8,50
VIII	395	430	470	333	298	320	9,70
IX	415	450	490	353	318	340	10,20
2 x IV	470	505	545	408	373	190	12,00
2 x V	530	565	605	468	433	220	14,00
2 x VI	590	625	665	528	493	250	15,50
2 x VII	650	685	725	588	553	280	17,10
2 x VIII	730	765	805	668	633	320	19,60
2 x IX	770	805	845	708	673	340	20,50
3 x VI	855	890	930	793	758	250	23,30
3 x VII	945	980	1020	883	848	280	25,70
3 x VIII	1065	1100	1140	1003	968	320	29,40
3 x IX	1125	1160	1200	1063	1028	340	30,80
4 x VII	1240	1275	1315	1178	1143	280	34,30
4 x VIII	1400	1435	1475	1338	1303	320	38,90
4 x IX	1480	1515	1555	1418	1383	340	41,10
5 x VII	1535	1570	1610	1473	1438	280	42,80
5 x VIII	1735	1770	1810	1673	1638	320	48,90
5 x IX	1835	1870	1910	1773	1738	340	51,40
6 x VIII	2070	2105	2145	2008	1973	320	58,70
6 x IX	2190	2225	2265	2128	2093	340	61,70
7 x VIII	2405	2440	2480	2343	2308	320	68,50
7 x IX	2545	2580	2620	2483	2448	340	72,00

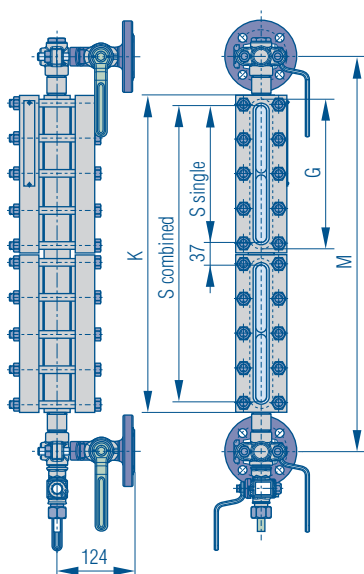
Shorter distance on request.

Transparent level gauges

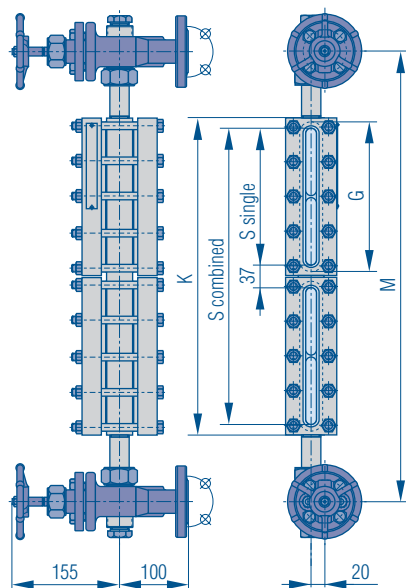
Process application

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T 100-DG



T 100-RAV 947



Overall and connection dimensions (mm)

Gauge size	Centre-to-centre distance M min			Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
	T 100 DG	T 100 RAV 946/956	T 100 RAV 947/957				
II	215	250	290	153	118	140	5,50
III	240	275	315	178	143	165	6,40
IV	265	300	340	203	168	190	7,30
V	295	330	370	233	198	220	8,40
VI	325	360	400	263	228	250	9,40
VII	355	390	430	293	258	280	10,40
VIII	395	430	470	333	298	320	11,90
IX	415	450	490	353	318	340	12,50
2 x IV	470	505	545	408	373	190	15,40
2 x V	530	565	605	468	433	220	17,90
2 x VI	590	625	665	528	493	250	19,80
2 x VII	650	685	725	588	553	280	22,20
2 x VIII	730	765	805	668	633	320	25,20
2 x IX	770	805	845	708	673	340	36,40
3 x VI	855	890	930	793	758	250	29,70
3 x VII	945	980	1020	883	848	280	33,20
3 x VIII	1065	1100	1140	1003	968	320	37,80
3 x IX	1125	1160	1200	1063	1028	340	39,70
4 x VII	1240	1275	1315	1178	1143	280	44,30
4 x VIII	1400	1435	1475	1338	1303	320	50,40
4 x IX	1480	1515	1555	1418	1383	340	52,90
5 x VII	1535	1570	1610	1473	1438	280	55,40
5 x VIII	1735	1770	1810	1673	1638	320	63,00
5 x IX	1835	1870	1910	1773	1738	340	66,10
6 x VIII	2070	2105	2145	2008	1973	320	75,60
6 x IX	2190	2225	2265	2128	2093	340	79,30
7 x VIII	2405	2440	2480	2343	2308	320	88,20
7 x IX	2545	2580	2620	2483	2448	340	92,60

Shorter distance on request.

Nom. pressure: PN 100, ANSI 600
with gauge cock DG
with gauge valve RAV 946, 956,
947, 957

Construction to KLINGER
material code FS/H, M/H, M
Gauge glass:
Klinger Transparent glass B
Material Borosilicate

Connection
gauge body – gauge valve

Not rotatable: 1/2"-NPT double
nipple gauge cock DG, gauge valve
RAV 946, 956

Rotatable: Union nut and nipple 1/2"-
NPT, gauge valve RAV 947, 957
Seal between nipple and gauge valve:
joint ring.

Connection construction

End connection with gauge cock DG
or gauge valve RAV 946 (see
illustration) and RAV 947 with
handwheel or weighted lever (page 40).
Safety ball in the upper and lower shut-
off fitting.

Gauges without gauge valves:

End, side or back connexions with
flanges or female thread.

Vessel connection with flanges or
male thread to all recognized standards.

Weight: Gauges cock set with DN 25
flanges approx. 7,3 kg. Gauge valve set
with DN 25 flanges approx. 8 kg.

Torque for body bolts 55 Nm,
cold.

For gauge body, gauge cock and gauge
valve part lists, dimensions of glasses
and material specifications see pages
19, 37 and 40.

Suggested order specification Transparent level gauge PN 100

KLINGER material code FS/H, M/H, M
Gauge glass Borosilicate, thermally prestressed
Connection gauge body – shut-off rotatable / not
rotatable
Shut-off fittings gauge cocks and gauge valves
with safety balls

Ordering example:
T 100-RAV 957, IX, M
DN 25 / PN 100
M= 500 mm

T 100*

PN 100
ANSI 600

*) former type
designation UPT



Transparent level gauges

Process application

back to overview

T 160* *Nom. pressure: PN 160, ANSI 900*
PN 160 *with gauge cock DG*
ANSI 900 *with gauge valve RAV 946, 956, 947, 957*

**) former type designation XDT*

Construction to KLINGER material code FS/H, M/H, M
Gauge glass: Klinger Transparent glass B
Material Borosilicate

Connection gauge body – gauge valve

Not rotatable: 1/2"-NPT double nipple gauge cock DG, gauge valve RAV 946, 956

Rotatable: Union nut and nipple 1/2"-NPT, gauge valve RAV 947, 957
 Seal between nipple and gauge valve: joint ring.

Connection construction

End connection with gauge cock DG or gauge valve RAV 946 (see illustration) and RAV 947 with handwheel or weighted lever (page 40). Safety ball in the upper and lower shut-off fitting.

Gauges without gauge valves: End, side or back connexions with flanges or female thread.

Vessel connection with flanges or male thread to all recognized standards.

Weight: Gauges cock set with DN 25 flanges approx. 7,3 kg. Gauge valve set with DN 25 flanges approx. 8 kg.

Torque for body bolts 65 Nm, cold.

For gauge body, gauge cock and gauge valve part lists, dimensions of glasses and material specifications see pages 19, 37 and 40.

Suggested order specification

Transparent level gauge PN 160

KLINGER material code FS/H, M/H, M

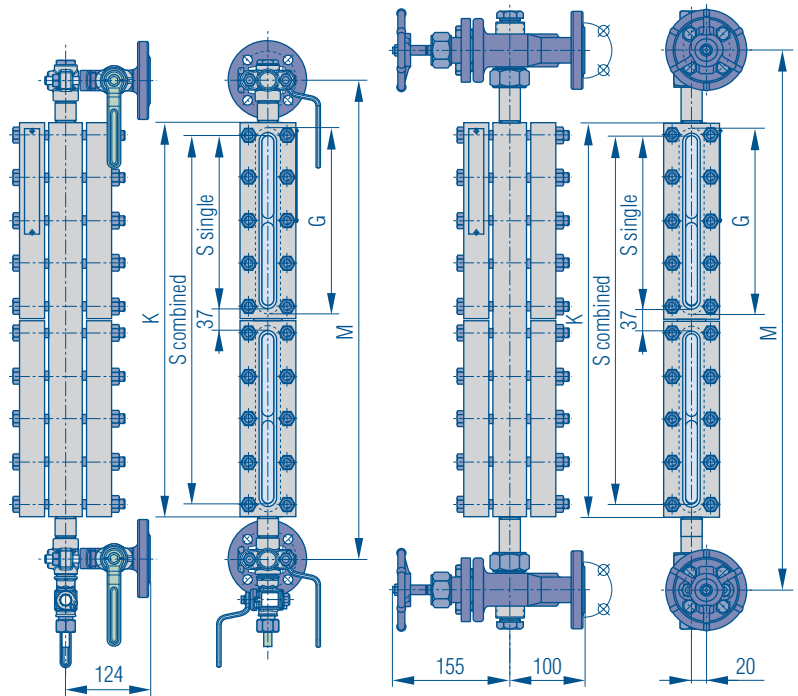
Gauge glass Borosilicate, thermally prestressed
 Connection gauge body – shut-off rotatable / not rotatable

Shut-off fittings gauge cocks and gauge valves with safety balls

Ordering example:
T 160-RAV 957, IX, M
DN 25 / PN 160
M= 500 mm

T 160-DG

T 160-RAV 947



Overall and connection dimensions (mm)

Gauge size	Centre-to-centre distance M min			Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
	T 160 DG	T 160 RAV 946/956	T 160 RAV 947/957				
II	215	250	290	153	118	140	5,50
III	240	275	315	178	143	165	6,40
IV	265	300	340	203	168	190	7,30
V	295	330	370	233	198	220	8,40
VI	325	360	400	263	228	250	9,40
VII	355	390	430	293	258	280	10,40
VIII	395	430	470	333	298	320	11,90
IX	415	450	490	353	318	340	12,50
2 x IV	470	505	545	408	373	190	15,40
2 x V	530	565	605	468	433	220	17,90
2 x VI	590	625	665	528	493	250	19,80
2 x VII	650	685	725	588	553	280	22,20
2 x VIII	730	765	805	668	633	320	25,20
2 x IX	770	805	845	708	673	340	36,40
3 x VI	855	890	930	793	758	250	29,70
3 x VII	945	980	1020	883	848	280	33,20
3 x VIII	1065	1100	1140	1003	968	320	37,80
3 x IX	1125	1160	1200	1063	1028	340	39,70
4 x VII	1240	1275	1315	1178	1143	280	44,30
4 x VIII	1400	1435	1475	1338	1303	320	50,40
4 x IX	1480	1515	1555	1418	1383	340	52,90
5 x VII	1535	1570	1610	1473	1438	280	55,40
5 x VIII	1735	1770	1810	1673	1638	320	63,00
5 x IX	1835	1870	1910	1773	1738	340	66,10
6 x VIII	2070	2105	2145	2008	1973	320	75,60
6 x IX	2190	2225	2265	2128	2093	340	79,30
7 x VIII	2405	2440	2480	2343	2308	320	88,20
7 x IX	2545	2580	2620	2483	2448	340	92,60

Shorter distance on request.

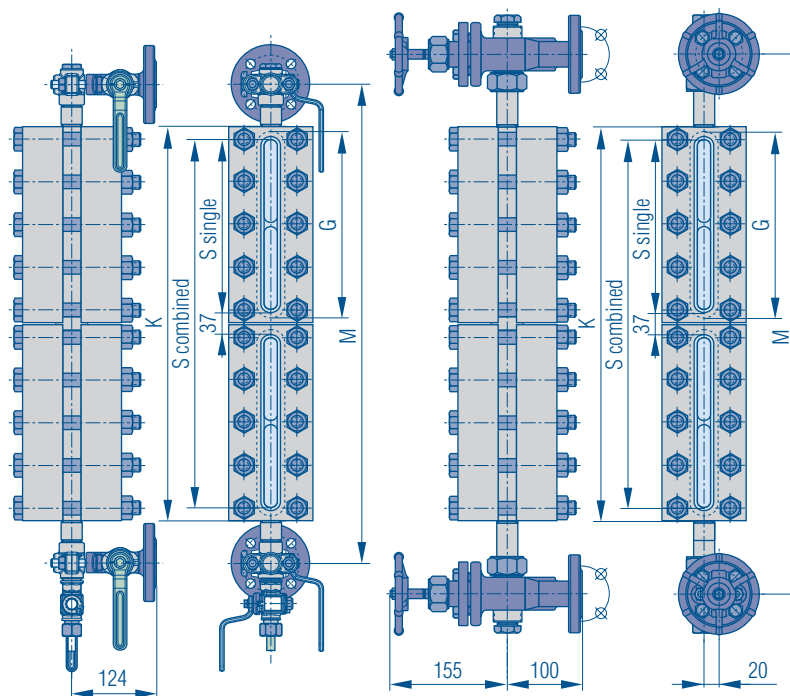
Transparent level gauges

Gauge cocks

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T 250-DG

T 250-RAV 947



Nom. pressure: PN 250, ANSI 1500
with gauge cock DG
with gauge valve RAV 946, 956,
947, 957

T 250*

PN 250
ANSI 1500

*) former type
designation HPT

Construction to KLINGER
material code FS/H, M/H, M
Gauge glass:
Klinger Transparent glass B
Material Borosilicate

Connection
gauge body – gauge valve

Not rotatable: 1/2"-NPT double
nipple gauge cock DG, gauge valve
RAV 946, 956

Rotatable: Union nut and nipple 1/2"-
NPT, gauge valve RAV 947, 957
Seal between nipple and gauge valve:
joint ring.

Connection construction

End connection with gauge cock DG
or gauge valve RAV 946 (see
illustration) and RAV 947 with
handwheel or weighted lever (page 40).
Safety ball in the upper and lower shut-
off fitting.

Gauges without gauge valves:

End, side or back connexions with
flanges or female thread.

Vessel connection with flanges or
male thread to all recognized standards.

Weight: Gauges cock set with DN 25
flanges approx. 7,3 kg. Gauge valve set
with DN 25 flanges approx. 8 kg.

**Torque for body bolts 100 Nm,
cold.**

For gauge body, gauge cock and gauge
valve part lists, dimensions of glasses
and material specifications see pages
19, 37 and 40.

Suggested order specification

Transparent level gauge PN 250

KLINGER material code FS/H, M/H, M

Gauge glass Borosilicate, thermally prestressed
Connection gauge body – shut-off rotatable / not
rotatable

Shut-off fittings gauge cocks and gauge valves
with safety balls

Ordering example:

T 250-RAV 957, IX, M

DN 25 / PN 250

M= 500 mm

Overall and connection dimensions (mm)

Gauge size	Centre-to-centre distance M min			Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
	T 250 DG	T 250 RAV 946/956	T 250 RAV 947/957				
II	215	250	290	153	118	140	5,50
III	240	275	315	178	143	165	6,40
IV	265	300	340	203	168	190	7,30
V	295	330	370	233	198	220	8,40
VI	325	360	400	263	228	250	9,40
VII	355	390	430	293	258	280	10,40
VIII	395	430	470	333	298	320	11,90
IX	415	450	490	353	318	340	12,50
2 x IV	470	505	545	408	373	190	15,40
2 x V	530	565	605	468	433	220	17,90
2 x VI	590	625	665	528	493	250	19,80
2 x VII	650	685	725	588	553	280	22,20
2 x VIII	730	765	805	668	633	320	25,20
2 x IX	770	805	845	708	673	340	36,40
3 x VI	855	890	930	793	758	250	29,70
3 x VII	945	980	1020	883	848	280	33,20
3 x VIII	1065	1100	1140	1003	968	320	37,80
3 x IX	1125	1160	1200	1063	1028	340	39,70
4 x VII	1240	1275	1315	1178	1143	280	44,30
4 x VIII	1400	1435	1475	1338	1303	320	50,40
4 x IX	1480	1515	1555	1418	1383	340	52,90
5 x VII	1535	1570	1610	1473	1438	280	55,40
5 x VIII	1735	1770	1810	1673	1638	320	63,00
5 x IX	1835	1870	1910	1773	1738	340	66,10
6 x VIII	2070	2105	2145	2008	1973	320	75,60
6 x IX	2190	2225	2265	2128	2093	340	79,30
7 x VIII	2405	2440	2480	2343	2308	320	88,20
7 x IX	2545	2580	2620	2483	2448	340	92,60

Shorter distance on request.



Transparent level gauges

Process application

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UOT
PN 63
ANSI 400

Nom. pressure: PN 63, ANSI 400
with gauge cock DG
with gauge valve RAV 946, 956,
947, 957

Construction to KLINGER
material code FS/H, M/H
Gauge glass:
Klinger Transparent glass B
Material Borosilicate

Application range

Primarily for media with boiling point in the low temperature region (low boiling point media).
Klinger material code:
FS/H down to -80 °C
Pressure rating to DIN 2401 – PN 63
(at -196 °C 63 bar)

Connection

gauge body – gauge valve

Not rotatable: 1/2"-NPT double nipple
gauge cock DG, gauge valve RAV 946,
956

Rotatable: Union nut and nipple
1/2"-NPT, gauge valve RAV 947, 957
Seal between nipple and gauge valve:
joint ring.

Connection construction

End connection with gauge cock DG
or gauge valve RAV 946/947 (see
illustration) and RAV 956/957 with
handwheel or weighted lever (page 32).
Safety ball in the upper and lower shut-off
fitting.

Vessel connection with flanges or male
thread to all recognized standards.

Weight: Gauges cock set with DN 25
flanges approx. 7,3 kg. Gauge valve set
with DN 25 flanges approx. 8 kg.

Torque for body bolts 40 Nm, cold.
For gauge body, gauge cock and gauge
valve part lists, dimensions of glasses
and material specifications see pages 19,
37 and 40.

Suggested order specification

Transparent level gauge PN 63

KLINGER material code FS/H, M/H

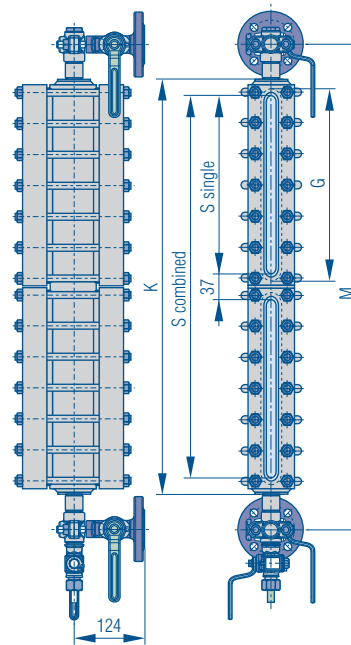
Gauge glass Borosilicate, thermally prestressed
Connection gauge body – shut-off rotatable / not
rotatable

Shut-off fittings gauge cocks and gauge valves
with safety balls

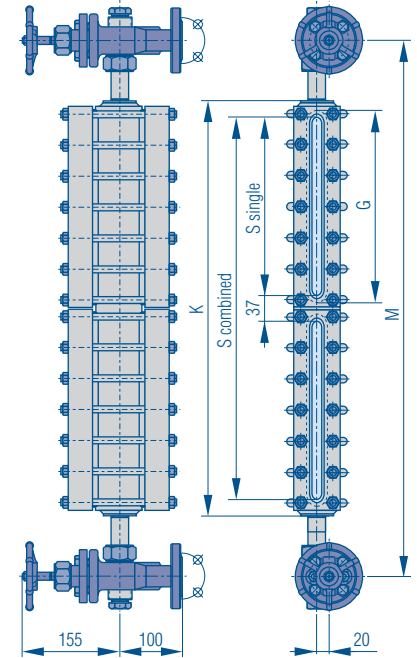
Ordering example:

UOT-RAV 946, 2 x v, M/H
DN 25 / PN 63
M= 600 mm

UOT-DG



UOT-RAV 947



Overall and connection dimensions (mm)

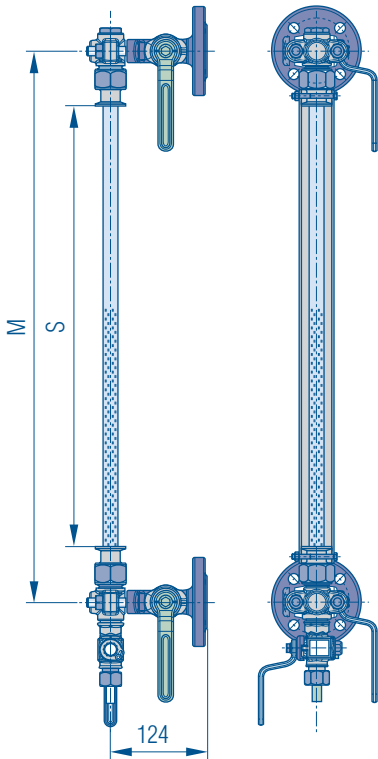
Gauge size	Centre-to-centre distance M min		Body length K	Sight length S	Glass length G	Approx. weight of gauge (kg)
	UOT DG	UOT RAV 946				
II	258	276	168	118	140	14,10
III	283	300	193	143	165	15,60
IV	308	326	218	168	190	17,00
V	338	356	248	198	220	18,80
VI	368	386	278	228	250	20,60
VII	398	416	308	258	280	22,30
VIII	438	456	348	298	320	24,70
IX	458	472	368	318	340	25,80
2 x IV	513	531	423	373	190	29,10
2 x V	573	591	483	433	220	32,60
2 x VI	633	651	543	493	250	36,10
2 x VII	643	711	603	553	280	39,70
2 x VIII	773	791	683	633	320	44,40
2 x IX	813	831	723	673	340	46,70
3 x VI	898	916	808	758	250	51,70
3 x VII	988	1006	898	848	280	57,00
3 x VIII	1108	1126	1018	968	320	62,10
3 x IX	1168	1186	1078	1028	340	67,70
4 x VII	1283	1301	1193	1143	280	74,40
4 x VIII	1443	1461	1353	1303	320	83,80
4 x IX	1523	1541	1433	1383	340	88,50
5 x VII	1578	1596	1488	1438	280	91,70
5 x VIII	1778	1796	1688	1638	320	103,50
5 x IX	1878	1896	1786	1738	340	109,40
6 x VIII	2113	2131	2023	1973	320	123,20
6 x IX	2233	2261	2143	2093	340	130,30

Shorter distance on request.

Glass tube level gauges

Steam and process application

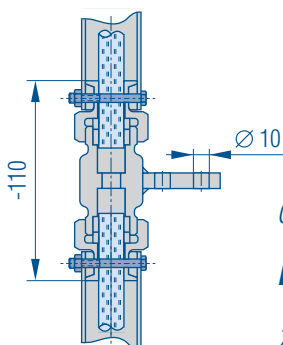
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$S = M - 125$
Sight length = centre-to-centre – 125 mm

$L = M - 25$
Glass tube length = centre-to-centre – 25 mm

Union piece



Glass tube length (with union piece):

$$L_{\text{glass}} = \frac{M - (15 \times Z) - 25}{Z + 1} \text{ mm}$$

Z = number of union pieces

Nominal pressure:
PN 16, 120 °C process
10 bar, 185 °C steam
Construction to KLINGER
material code FS/H, M/H, M

R-D
PN 16
10 bar
185 °C / 120 °C

Connection

gauge body – gauge cock

Rotatable (360°) with glass tube o. D. 16 mm.

Vessel connections

Flanged – Male threaded

Union piece

For center-to-center distances exceeding 1500 – 2000 mm and multiples thereof, one or more union pieces must be used.

Glass protection

On request, we can supply a glass tube protection in carbon steel.

Klinger R-D glass tube level gauge, suitable for shut-off fittings: soft sealed gauge cocks, model D (with silicon packing).

Safety balls top and bottom as standard.

Accessories

Vent cocks
Calibrated scale