

# Technical Data MODEL R-20 [20 series]

## LIQUID LEVEL GAUGES

CT-RH-R20-02-ENGLISH

70 Kg/cm2 @ 150°C / 1015 PSI @ 302 °F

### DESCRIPTION:

Series 20 Gauges are available in nine standard visible glass lengths. Multiple windows in a single piece bar liquid chamber are used for longer lengths.

### FEATURES:

- **Liquid chamber:** One piece carbon steel or stainless steel, regardless of number of gauge sections. Standard and optional materials conform with or exceed requirements of AISI, ASTM and API-ASME for recommended pressures.
- **Covers:** Encloses glass to reduce stress and resist glass breakage.
- **Bolts and Nuts:** Alloy steel
- **Glasses:** Tempered Borosilicate glass for high strength and resistance to thermal shock.
- **Gaskets and cushions:** die cut from quality material providing a long life.

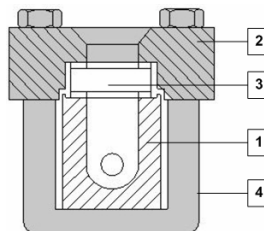
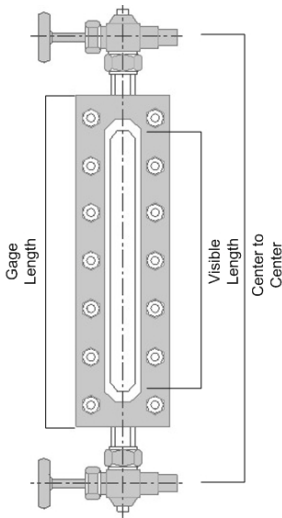
### CONNECTION TO GAUGE COCKS TYPE AND SIZE:

Con. top and bottom	S	O
Threaded 1/2" NPT H	x	
3/4" NPT H		x
Con. side/back		
Threaded 1/2" NPT H	x	
3/4" NPT H		x

S: Standard, O: Optional

### GAUGE COCKS:

Gauge Mod.	Cock Mod.
R-20	66-U / 60-A / 66-M



### STANDARD DIMENSIONS

Sections	Model	Nr. Glass	Length vision	Length chamber	Length C to C.
1	11-R-20	1	85	135	285
1	12-R-20	2	110	160	310
1	13-R-20	3	135	185	335
1	14-R-20	4	160	210	360
1	15-R-20	5	190	240	390
1	16-R-20	6	220	270	420
1	17-R-20	7	250	300	450
1	18-R-20	8	290	340	490
1	19-R-20	9	310	360	510
<b>Separator</b>					
2	24-R-20	4	370	420	570
2	25-R-20	5	430	480	630
2	26-R-20	6	490	540	690
2	27-R-20	7	550	600	750
2	28-R-20	8	630	680	830
2	29-R-20	9	670	720	870
<b>Separator</b>					
3	34-R-20	4	580	630	780
3	36-R-20	6	760	810	960
3	37-R-20	7	850	900	1050
3	38-R-20	8	970	1.020	1170
3	39-R-20	9	1.030	1.080	1230
<b>Separator</b>					
4	44-R-20	4	790	840	990
4	45-R-20	5	910	960	1110
4	47-R-20	7	1.150	1.200	1350
4	48-R-20	8	1.310	1.360	1510
4	49-R-20	9	1.390	1.440	1590
<b>Separator</b>					
5	57-R-20	7	1.450	1.500	1650
5	58-R-20	8	1.650	1.700	1850
5	59-R-20	9	1.750	1.800	1950

### PRESSURE (PSI) –TEMPERATURE (°F)

Temp	GLASS NUMBER								
	1	2	3	4	5	6	7	8	9
100	3.000	2.900	2.730	2.600	2.500	2.350	2.220	2.100	2.000
200	2.825	2.720	2.600	2.455	2.350	2.220	2.100	2.000	1.900
300	2.650	2.540	2.440	2.310	2.200	2.090	1.965	1.870	1.750
400	2.455	2.350	2.250	2.135	2.030	1.920	1.805	1.710	1.600
500	2.260	2.160	2.060	1.960	1.860	1.750	1.650	1.550	1.450
600	2.020	1.940	1.850	1.750	1.670	1.550	1.475	1.380	1.300
750	1.650	1.600	1.500	1.400	1.300	1.250	1.150	1.050	1.000

### STANDARD MATERIALS

Num	STANDARD MATERIAL	
1	Liquid Chamber	Carbon steel/Stainless steel
2	Cover	Carbon steel/Stainless steel
3	Glass	Tempered Borosilicate
4	Bolt and Nuts	ASTM A194 GR 2 O 2H.

# Technical Data LIQUID LEVEL GAUGES

## MODEL R-30 [30 series]

CT-RH-R30-02-ENGLISH

195 Kg/cm<sup>2</sup> @ 100°C / 2830 PSI @ 212 °F

### DESCRIPTION:

Series 30 Gauges are available in nine standard visible glass lengths. Multiple windows in a single piece bar liquid chamber are used for longer lengths.

### FEATURES:

- **Liquid chamber:** One piece carbon steel or stainless steel, regardless of number of gauge sections. Standard and optional materials conform with or exceed requirements of AISI, ASTM and API-ASME for recommended pressures.
- **Covers:** Encloses glass to reduce stress and resist glass breakage.
- **Bolts and Nuts:** Alloy steel
- **Glasses:** Tempered Borosilicate glass for high strength and resistance to thermal shock.
- **Gaskets and cushions:** die cut from quality material providing a long life.

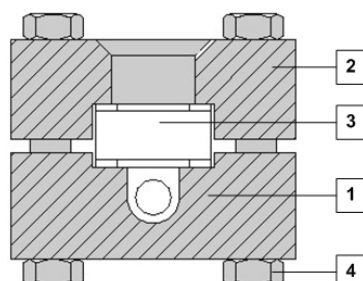
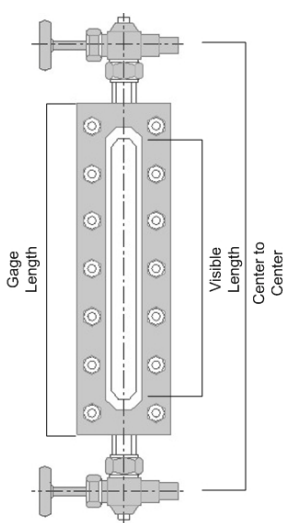
### CONNECTION TO GAUGE COCKS TYPE AND SIZE:

Con. top and bottom	S	O
Threaded 1/2" NPT H	x	
1/4" NPT H		x
Con. side/back		
Threaded 1/2" NPT H	x	
1/4" NPT H		x

S: Standard, O: Optional

### GAUGE COCKS:

Gauge Mod.	Cock Mod.
R-30	66-U / 66-M



### STANDARD DIMENSIONS

Sections	Model	Nr. Glass	Length vision	Length chamber	Length C to C.
1	11-R-30	1	85	135	285
1	12-R-30	2	110	160	310
1	13-R-30	3	135	185	335
1	14-R-30	4	160	210	360
1	15-R-30	5	190	240	390
1	16-R-30	6	220	270	420
1	17-R-30	7	250	300	450
1	18-R-30	8	290	340	490
1	19-R-30	9	310	360	510
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2	24-R-30	4	370	420	570
2	25-R-30	5	430	480	630
2	26-R-30	6	490	540	690
2	27-R-30	7	550	600	750
2	28-R-30	8	630	680	830
2	29-R-30	9	670	720	870
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3	34-R-30	4	580	630	780
3	36-R-20	6	760	810	960
3	37-R-30	7	850	900	1050
3	38-R-30	8	970	1.020	1170
3	39-R-30	9	1.030	1.080	1230
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4	44-R-30	4	790	840	990
4	45-R-30	5	910	960	1110
4	47-R-30	7	1.150	1.200	1350
4	48-R-30	8	1.310	1.360	1510
4	49-R-30	9	1.390	1.440	1590
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5	57-R-30	7	1.450	1.500	1650
5	58-R-30	8	1.650	1.700	1850
5	59-R-30	9	1.750	1.800	1950

### PRESSURE (PSI) –TEMPERATURE (°F)

Temp	GLASS NUMBER								
	1	2	3	4	5	6	7	8	9
100	3.000	2.900	2.730	2.600	2.500	2.350	2.220	2.100	2.000
200	2.825	2.720	2.600	2.455	2.350	2.220	2.100	2.000	1.900
300	2.650	2.540	2.440	2.310	2.200	2.090	1.965	1.870	1.750
400	2.455	2.350	2.250	2.135	2.030	1.920	1.805	1.710	1.600
500	2.260	2.160	2.060	1.960	1.860	1.750	1.650	1.550	1.450
600	2.020	1.940	1.850	1.750	1.670	1.550	1.475	1.380	1.300
750	1.650	1.600	1.500	1.400	1.300	1.250	1.150	1.050	1.000

### STANDARD MATERIALS

Num	STANDARD MATERIAL	
1	Liquid Chamber	Carbon steel/Stainless steel
2	Cover	Carbon steel/Stainless steel
3	Glass	Tempered Borosilicate
4	Bolt and Nuts	ASTM A194 GR 2 O 2H.

# Technical Data MODEL R-40 [40 series]

## LIQUID LEVEL GAUGES

CT-RH-R40-02-ENGLISH

300 Kg/cm<sup>2</sup> @ 100°C / 4350 PSI @ 212 °F

### DESCRIPTION:

Series 40 Gauges are available in nine standard visible glass lengths. Multiple windows in a single piece bar liquid chamber are used for longer lengths.

### FEATURES:

- **Liquid chamber:** One piece carbon steel or stainless steel, regardless of number of gauge sections. Standard and optional materials conform with or exceed requirements of AISI, ASTM and API-ASME for recommended pressures.
- **Covers:** Encloses glass to reduce stress and resist glass breakage.
- **Bolts and Nuts:** Alloy steel
- **Glasses:** Tempered Borosilicate glass for high strength and resistance to thermal shock.
- **Gaskets and cushions:** die cut from quality material providing a long life.

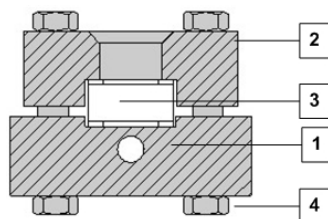
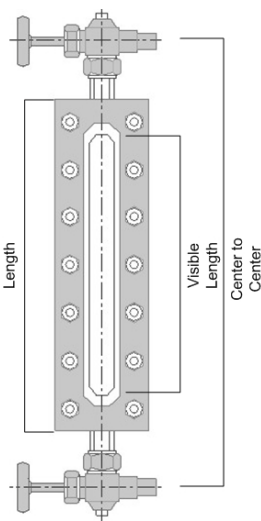
### CONNECTION TO GAUGE COCKS TYPE AND SIZE:

Con. top and bottom	S	O
Threaded 1/2" NPT H	x	
1/4" NPT H		x
Con. side/back		
Threaded 1/2" NPT H	x	
1/4" NPT H		x

S: Standard, O: Opcional

### GAUGE COCKS:

Gauge Mod.	Cock Mod.
R-40	66-U / 60-A 66-M



### STANDARD DIMENSIONS

Sections	Model	Nr. Glass	Length vision	Length chamber	Length C to C.
1	11-R-40	1	85	135	285
1	12-R-40	2	110	160	310
1	13-R-40	3	135	185	335
1	14-R-40	4	160	210	360
1	15-R-40	5	190	240	390
1	16-R-40	6	220	270	420
1	17-R-40	7	250	300	450
1	18-R-40	8	290	340	490
1	19-R-40	9	310	360	510
2	24-R-40	4	370	420	570
2	25-R-40	5	430	480	630
2	26-R-40	6	490	540	690
2	27-R-40	7	550	600	750
2	28-R-40	8	630	680	830
2	29-R-40	9	670	720	870
3	34-R-40	4	580	630	780
3	36-R-40	6	760	810	960
3	37-R-40	7	850	900	1050
3	38-R-40	8	970	1.020	1170
3	39-R-40	9	1.030	1.080	1230
4	44-R-40	4	790	840	990
4	45-R-40	5	910	960	1110
4	47-R-40	7	1.150	1.200	1350
4	48-R-40	8	1.310	1.360	1510
4	49-R-40	9	1.390	1.440	1590
5	57-R-40	7	1.450	1.500	1650
5	58-R-40	8	1.650	1.700	1850
5	59-R-40	9	1.750	1.800	1950

### PRESSURE (PSI) –TEMPERATURE (°F)

Temp	GLASS NUMBER								
	1	2	3	4	5	6	7	8	9
100	5000	5000	5000	5000	5000	5000	5000	5000	5000
200	4685	4685	4685	4685	4685	4685	4685	4685	4685
300	4370	4370	4370	4370	4370	4370	4370	4370	4370
400	4055	4055	4055	4055	4055	4055	4055	4055	4055
500	3740	3740	3740	3740	3740	3740	3740	3740	3740
600	3425	3425	3425	3425	3425	3425	3425	3425	3425
750	2950	2950	2950	2950	2950	2950	2950	2950	2950

### STANDARD MATERIALS

Num	STANDARD MATERIAL	
1	Liquid Chamber	Carbon steel/Stainless steel
2	Cover	Carbon steel/Stainless steel
3	Glass	Tempered Borosilicate
4	Bolt and Nuts	ASTM A194 GR 2 O 2H.

**Technical Data** **LIQUID LEVEL GAUGES**  
**MODEL R-45 [40 series] High Pressure** CT-RH-R45-02-ENGLISH

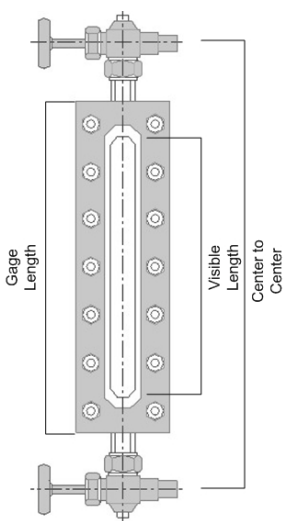
600 Kg/cm<sup>2</sup> @ 121°C / 8500 PSI @ 250 °F

**DESCRIPTION:**

In this design the Gauge covers are bolted directly to the liquid chamber with solid metal to metal contact between these parts. All clamping forces are withstood by the steel components of the gauge. Since the glass is not clamped between the cover and liquid chamber, it is relieved of stress concentrations for reliability at higher pressures.

**FEATURES:**

- **Liquid chamber:** One piece steel regardless of number of gauge sections. Reinforcement bars tie sides of chamber together for added strength. Standard and optional materials conform with or exceed requirements of AISI, ASTM and API-ASME for recommended pressures.
- **Covers:** Fully encloses glass to reduce stress and resist glass breakage.
- **Bolts and Nuts:** Alloy steel
- **Glasses:** Tempered Borosilicate glass for high strength and resistance to thermal shock.
- **Gaskets and cushions:** die cut from quality material providing a long life.
- **Gaskets Retainers:** Shaped to prevent gasket extrusion and assure effective seal at high pressures.



**STANDARD DIMENSIONS**

Sections	Model	Nr. Glass	Length vision	Length chamber	Length C to C.
1	11-R-45	1	85	135	285
1	12-R-45	2	110	160	310
1	13-R-45	3	135	185	335
1	14-R-45	4	160	210	360
1	15-R-45	5	190	240	390
1	16-R-45	6	220	270	420
1	17-R-45	7	250	300	450
<b>STANDARD DIMENSIONS</b>					
2	24-R-45	4	370	420	570
2	25-R-45	5	430	480	630
2	26-R-45	6	490	540	690
2	27-R-45	7	550	600	750

**CONNECTION TO GAUGE COCKS TYPE AND SIZE:**

Con. Top and Bottom	Threaded	1/2" NPT H	S	O
		1/4" NPT H	x	x
Con. Side/Back	Threaded	1/2" NPT H	x	
		3/4" NPT H		x

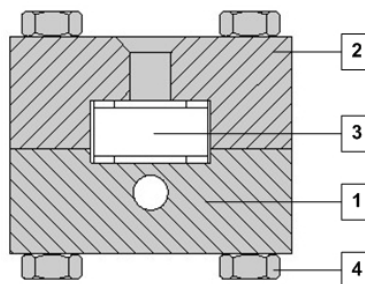
S: Standard, O: Optional

**GAUGE COCKS:**

Gauge Mod.	Cock Mod.
R-45	66-U / 66-M

**STANDARD MATERIALS**

N		STANDARD/OPTIONAL MATERIALS
1	Liquid Chamber	AISI 4140 alloy steel ASTM A36 Carbon steel ASTM A240 316 STS
2	Cover	AISI 4140 alloy steel AISI 4130 alloy steel ASTM A276 316L STS
3	Glass	Tempered Borosilicate Glass
4	Bolt and Nuts	ASTM A193 B7 Carbon Steel Gr 2 or 2H AISI 4140 or 4142 Alloy steel per ASTM AISI193 Gr B7



# Technical Data MODEL RW [Welding Pad]

## LIQUID LEVEL GAUGES

CT-RH-RW-02-ENGLISH

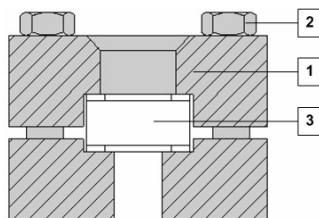
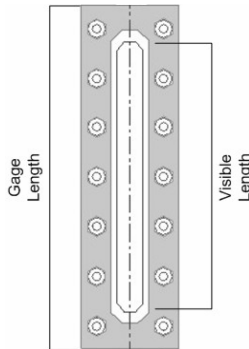
130 Kg/cm<sup>2</sup> @ 37 °C / 2000 PSI @ 100 °F

### DESCRIPTION:

These gauges are used where conventional Gauge and Valve construction is impractical because of solid matter in suspension or where space requirements suggest their use.

### FEATURES:

- **Covers:** Encloses glass to reduce stress and resist glass breakage.
- **Bolts and Nuts:** Alloy steel
- **Glasses:** Tempered Borosilicate glass for high strength and resistance to thermal shock.
- **Gaskets and cushions:** die cut from quality material providing a long life.



### STANDARD DIMENSIONS

Sections	Model	Nr. Glass	Length vision	Length chamber	Length C to C.
1	11-RW-20	1	85	135	285
1	12-RW-20	2	110	160	310
1	13-RW-20	3	135	185	335
1	14-RW-20	4	160	210	360
1	15-RW-20	5	190	240	390
1	16-RW-20	6	220	270	420
1	17-RW-20	7	250	300	450
1	18-RW-20	8	290	340	490
1	19-RW-20	9	310	360	510
<b>Separator</b>					
2	24-RW-20	4	370	420	570
2	25-RW-20	5	430	480	630
2	26-RW-20	6	490	540	690
2	27-RW-20	7	550	600	750
2	28-RW-20	8	630	680	830
2	29-RW-20	9	670	720	870
<b>Separator</b>					
3	34-RW-20	4	580	630	780
3	36-RW-20	6	760	810	960
3	37-RW-20	7	850	900	1050
3	38-RW-20	8	970	1.020	1170
3	39-RW-20	9	1.030	1.080	1230
<b>Separator</b>					
4	44-RW-20	4	790	840	990
4	45-RW-20	5	910	960	1110
4	47-RW-20	7	1.150	1.200	1350
4	48-RW-20	8	1.310	1.360	1510
4	49-RW-20	9	1.390	1.440	1590
<b>Separator</b>					
5	57-RW-20	7	1.450	1.500	1650
5	58-RW-20	8	1.650	1.700	1850
5	59-RW-20	9	1.750	1.800	1950

### PRESIÓN (PSI) –TEMPERATURA (°F)

Temp	GLASS NUMBER								
	1	2	3	4	5	6	7	8	9
100	1990	1785	1645	1539	1395	1254	1160	856	800
200	1870	1695	1573	1400	1300	1187	1000	835	760
300	1600	1430	1376	1200	1110	1000	840	790	600

### STANDARD MATERIALS

Num	STANDARD MATERIAL	
1	Cover	Carbon steel/Stainless steel
2	Bolt and Nuts	ASTM A194 GR 2 O 2H.
3	Glass	Tempered Borosilicate

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# Technical Data MODEL RA [Large Chamber]

## LIQUID LEVEL GAUGES

CT-RH-RA-02-ENGLISH

165 Kg/cm<sup>2</sup> @ 37 °C / 2400 PSI @ 100 °F

### DESCRIPTION:

This model is designed to indicate the level of liquids whose tendency is to boil or surge makes an accurate reading impossible with a Gauge of standard chamber dimensions.

### FEATURES:

- **Liquid chamber:** One piece carbon steel or stainless steel, regardless of number of gauge sections. Standard and optional materials conform with or exceed requirements of AISI, ASTM and API-ASME for recommended pressures.
- **Covers:** Encloses glass to reduce stress and resist glass breakage.
- **Bolts and Nuts:** Alloy steel
- **Glasses:** Tempered Borosilicate glass for high strength and resistance to thermal shock.
- **Gaskets and cushions:** die cut from quality material providing a long life.

### CONNECTION TO GAUGE COCKS TYPE AND SIZE:

Con. Top and Bottom	S	O
Threaded 1/2" NPT H	X	
1/4" NPT H		x
Con. Side/Back		
Threaded 1/2" NPT H	X	
1/4" NPT H		x

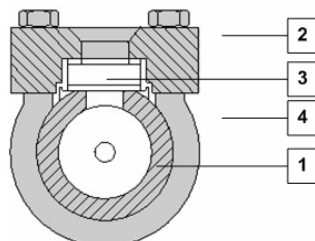
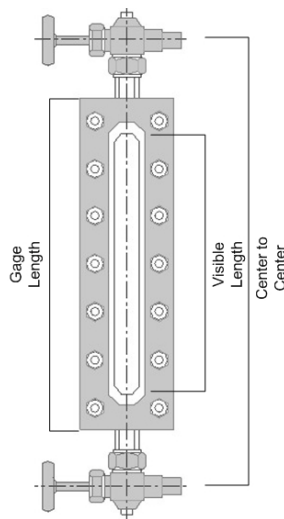
S: Standard, O: Optional

### GAUGE COCKS:

Gauge Mod.	Cock Mod.
RA	66-U / 60-A 66-M

### STANDARD DIMENSIONS

Sections	Model	Nr. Glass	Length vision	Length chamber	Length C to C.
1	11-RA-20	1	85	135	285
1	12-RA-20	2	110	160	310
1	13-RA-20	3	135	185	335
1	14-RA-20	4	160	210	360
1	15-RA-20	5	190	240	390
1	16-RA-20	6	220	270	420
1	17-RA-20	7	250	300	450
1	18-RA-20	8	290	340	490
1	19-RA-20	9	310	360	510
<b>2</b>					
2	24-RA-20	4	370	420	570
2	25-RA-20	5	430	480	630
2	26-RA-20	6	490	540	690
2	27-RA-20	7	550	600	750
2	28-RA-20	8	630	680	830
2	29-RA-20	9	670	720	870
<b>3</b>					
3	34-RA-20	4	580	630	780
3	36-RA-20	6	760	810	960
3	37-RA-20	7	850	900	1050
3	38-RA-20	8	970	1.020	1170
3	39-RA-20	9	1.030	1.080	1230
<b>4</b>					
4	44-RA-20	4	790	840	990
4	45-RA-20	5	910	960	1110
4	47-RA-20	7	1.150	1.200	1350
4	48-RA-20	8	1.310	1.360	1510
4	49-RA-20	9	1.390	1.440	1590
<b>5</b>					
5	57-RA-20	7	1.450	1.500	1650
5	58-RA-20	8	1.650	1.700	1850
5	59-RA-20	9	1.750	1.800	1950



### PRESSURE (PSI) –TEMPERATURE (°F)

Temp.	GLASS NUMBER								
	1	2	3	4	5	6	7	8	9
100	2325	2325	2325	2325	2325	2325	2325	2325	2325
200	2260	2260	2260	2260	2260	2260	2260	2260	2260
300	1970	1970	1970	1970	1970	1970	1970	1970	1970

### STANDARD MATERIALS

Num	STANDARD MATERIAL	
1	Tubular Liquid Chamber	Carbon steel/Stainless steel
2	Cover	Carbon steel/Stainless steel
3	Glass	Tempered Borosilicate
4	Bolt and Nuts	ASTM A194 GR 2 O 2H.