

Weld connection according to DIN EN 10357  
Thread connection according to DIN 11851  
Socket connection according to DIN 11851

## USAGE

For observing filling and flow in pipelines. The sight glass allows for reliable 360° monitoring of the function and performance of individual devices as well as whole systems. Tubular sight glasses of type 650 are suitable for installation in pipelines according to DIN 11851 at up to 10 barg working pressure. Aside from the connections, type 650 is free of dead space.

### Operating condition

Temperature: (depending on glass and gasket)	≤ 130 °C (EPDM) ≤ 80 °C (NBR)
Pressure:	≤ 10 <sup>1</sup> barg

1) Depending on the nominal width

### Materials

Flange:	1.4301/7; 1.4404
Glass:	Borosilicate glass
Gasket:	NBR; EPDM

## INSTALLATION NOTE

Pipe sight glasses must be installed in such a way that no pipe forces (tension, pressure, torsion), vibrations, or pressure shocks can affect the fitting.

## IMPACT PROTECTION COVER (OPTIONAL)

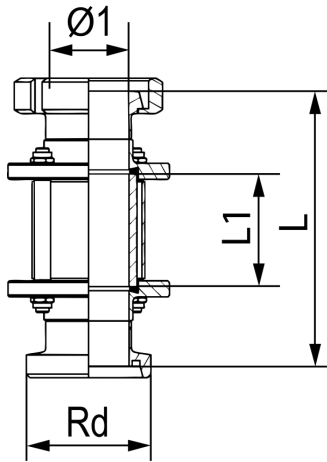
The tube sight glasses type 650 are supplied exclusively with an impact protection cover. The impact protection cover is made of either perforated sheet metal or polycarbonate (up to approximately 120 °C short-term loadable).

DN	10	15	20	25	32	40	50	65	80	100	125	150
Ø 1 (Form A-D)	10	16	20	26	32	38	50	66	81	100	125	150
Ø 2 (Form D)	15	21	25	31	37	43	55	72	87	106	132	157
L (Form A-C)	122	122	124	142	154	164	168	191	209	257	270	290
L (Form D)	88	88	88	98	104	112	112	127	135	169	202	216
L1 (Form A-D)	60	60	60	70	70	70	70	85	85	115	160	170
Rd (Form A-C)	28 x 1/8"	34 x 1/8"	44 x 1/6"	52 x 1/6"	58 x 1/6"	65 x 1/6"	78 x 1/6"	95 x 1/6"	110 x 1/4"	130 x 1/4"	160 x 1/4"	190 x 1/4"
PS [barg]	10	10	10	10	10	10	10	10	9	8	7	7

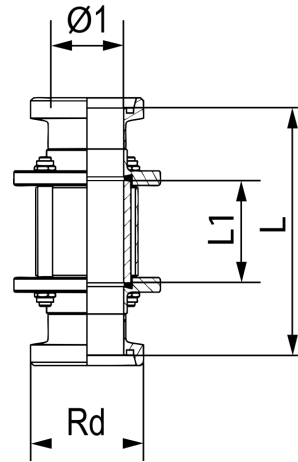
**CONNECTIONS**

The connections to the flanges can be made optionally with welding ends, double-sided threaded connections, double-sided tapered connections or combined with threaded and tapered connections.

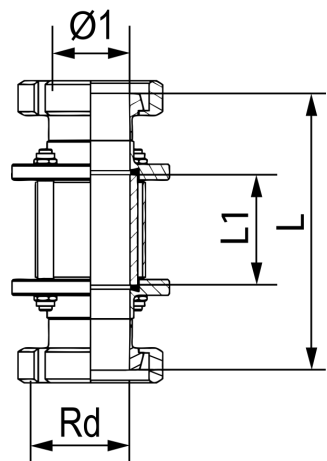
**FORM A**



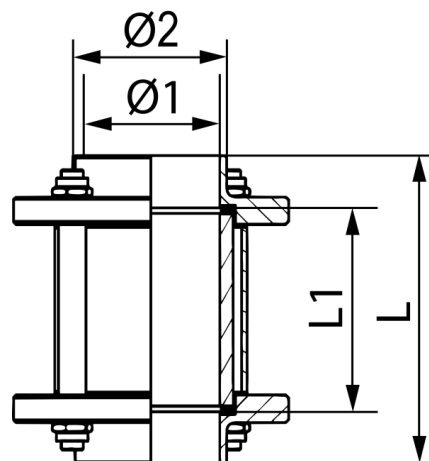
**FORM B**



**FORM C**



**FORM D**



**PRODUCT CODE**

Example for Explaining the Code Composition

**11 - 650 - A - 100 - 1 - 3 - 3 - 0**

GROUP	TYPE	CONNECTION	NOMINAL SIZE	FLANGE	IMPACT PROTECTION	GASKET	VARIANT
11	650	A) Thread / Cone	DN 10	1) 1.4404	2) Perforated Sheet	3) NBR	0) Standard
		B) Thread / Thread	DN 15	2) 1.4301/7	3) Polycarbonate	6) EPDM	
		C) Cone / Cone	DN 20				
		D) Welded Ends	DN 25				
			DN 32				
			DN 40				
			DN 50				
			DN 65				
			DN 80				
			DN 100				
			DN 125				
			DN 150				

**EXAMPLE**

The product code **11-650-A-100-1-1-3-0**

corresponds to the standard version:

ACI Type 650

Form A

DN 100

PS max. 8 barg

Flange 1.4404

with impact protection made of

polycarbonate

Gasket NBR

**QUICK OVERVIEW**



max. 10 barg



heat resistant up to 130  
°C



for liquid media



for gaseous media



Nominal sizes  
DN 10 - 150

**OPERATING CONDITIONS**

Operating conditions depend on the choice of glass and seals:

		Sight glass	Gaskets	
		Borosilicate glass 3.3	NBR max. 80 °C	EPDM max. 130 °C
TEMPERATURE	up to 80 °C	✓	✓	✓
	up to 130 °C	✓	✗	✓
	up to 10 barg	✓	✓	✓
TEMPERATURE				
PRESSURE				

✓ suitable    ✗ unsuitable