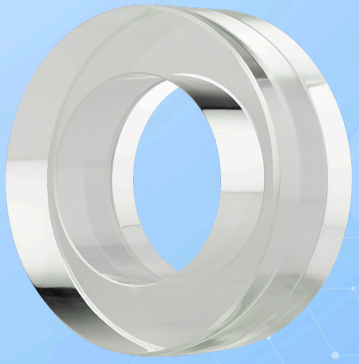
INDUSTRIEARMATUREN

Glass-ring tubular sight glass Type 640A Class 150

Between-flange design for flanges according to ASME B16.5

Type 640A



Between-flange design for flanges according to DIN EN 1092-1

USAGE

Glass-ring tubular sight glasses are used to observe fill level and flow in pipelines. The sight glass enables reliable 360° monitoring of the operation and performance of individual units as well as entire systems.
Glass-ring tubular sight glasses of type 640A are suitable for mounting between flanges in accordance with ASME B16.5 Class 150 lbs RF. The sight glass is dead-space-free when installed appropriately.

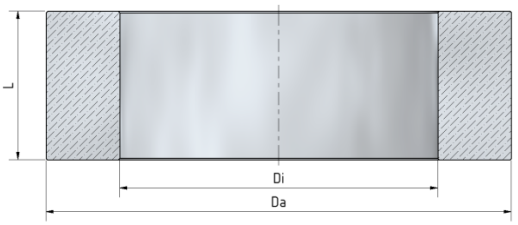
Operating conditions:	
Temperature: (depending on the glass material)	up to 80 °C with acrylic glass up to 280 °C with tempered Borosilicate glass
Pressure:	≤ 20 barg

Materials:
Tempered borosilicate glass Acrylic (PMMA)
Special materials on request

INSTALLATION NOTE

Appropriate gaskets matching the sealing surfaces should be used. The bolt material should be equivalent to or of a higher grade than the flange material. If possible, the bolt thread and the bolt head should be lubricated. The sight glasses must be mounted so that no pipe forces (tension, compression and torsion), vibrations or pressure surges can act on the glass rings!

DRAWING



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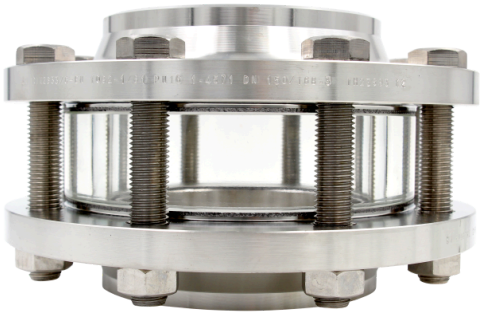
Type 640A

NPS	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"
Di [mm]	16	21	27	35	41	53	63	78	102	128	154	203	255	305	336	386	437	487
Da [mm]	35	43	51	63	73	92	105	127	157	186	216	270	324	381	413	470	534	584
Weight[1] [3]	0,09	0,13	0,18	0,26	0,34	0,53	0,77	0,95	1,34	1,72	2,16	2,99	3,77	4,91	5,2	6,5	8,5	9,4
Weight[2] [3]	0,04	0,07	0,09	0,13	0,17	0,26	0,33	0,47	0,66	0,84	1,06	1,47	1,85	2,42	2,67	3,33	4,36	4,81
PS[1] [4]	20	20	20	20	20	20	20	20	20	19	16	15	10	10	10	10	10	10
PS[2] [4]	19	18	16	16	16	16	14	14	10	10	8	8	6	6	6	6	6	6

[1]Borosilicate glass
[2]Acrylic glass
[3]Weight in [kg] for L = 50 mm
[4]max. operating pressure in [barg]
Other materials, sizes, lengths and flange standards on request

ASSEMBLY EXAMPLE



Delivery is made without screws, gaskets and flanges

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Between-flange design for flanges according to ASME B16.5

Type 640A

PRODUCT CODE

Example for Explaining the Code Composition

5 - 16 - 19 - 1 - 2 - 50 - 000

GROUP	TYPE	NPS	GLASS	TOTAL LENGTH	VARIANT
11	640A	1) -	1) Acrylic glass	100) 100 mm (acrylic only)	000) Standard
		2) 1/2"	2) Borosilicate glass tempered	050) 50 mm (Standard)	
		3) 3/4"	6) Special	030) 30 mm	
		4) 1"			
		5) 1 1/4"			
		6) 1 1/2"			
		7) 2"			
		8) 2 1/2"			
		9) 3"			
		10) 4"			
		11) 5"			
		12) 6"			
		13) 8"			
		14) 10"			
		15) 12"			
		16) 14"			
		17) 16"			
		18) 18"			
		19) 20"			

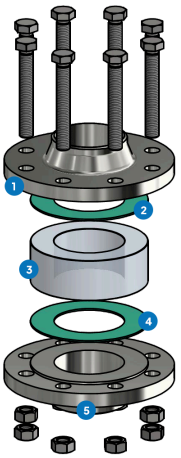
Unless otherwise specified, the highlighted factory standard will be supplied.

EXAMPLE

The product code 11-640A-10-2-050-000 corresponds to the standard version:
ACI type 640A
NPS 4"
PS max. 20 barg
Tempered borosilicate glass
Standard length 50 mm

STRUCTURE

1. V-flange Class 150 lbs RF according to ASME B16.5
2. Gasket
3. Glass-ring tubular sight glass type 640A
4. Gasket
5. V-flange Class 150 lbs RF according to ASME B16.5



For aggressive media, FEP- or Halar®-coated glass-ring tubular sight glasses can be used.

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Type 640A

QUICK OVERVIEW

max. 20 barg

heat-resistant up to 280 °C

for liquid media

for gaseous media

Custom-made designs possible

OPERATING CONDITIONS

Operating conditions depend on the choice of glass and the gaskets:

		SIGHT GLASS		GASKETS						
		Borosilicate glass tempered	Acrylic glass	PTFE max. 200 °C	FKM max. 200 °C	NBR max. 80 °C	C4400 max. 175 °C	Silicone max. 180 °C	EPDM max. 130 °C	Graphite > 300 °C
TEMPERATURE	up to 80 °C	✓	✓	✓	✓	✓	✓	✓	✓	✓
	up to 130 °C	✓	✗	✓	✓	✗	✓	✓	✓	✓
	up to 175 °C	✓	✗	✓	✓	✗	✓	✓	✗	✓
	up to 180 °C	✓	✗	✓	✓	✗	✗	✓	✗	✓
	up to 200 °C	✓	✗	✓	✓	✗	✗	✗	✗	✓
	up to 280 °C	✓	✗	✗	✗	✗	✗	✗	✗	✓
PRESSURE	up to 20 barg	✓	✓	✓	✗	✗	✓	✗	✗	✓

✓ suitable ✗ unsuitable

OPTIONAL ACCESSORIES

FEP protective screen / coating

> for high pH values

ACI Industriearmaturen GmbH

info@aci24.com
+49 (0) 2461 91634 00
www.aci24.com
+49 (0) 2461 91634 44
Königskamp 19 · 52428 Jülich · Germany