

# Techtrol Weld Pad Flat Glass Level Gauge-'WFG'



SINCE 1984

are designed for safe and positive visual indication of liquid level in vessels under high pressure and temperature conditions. They are installed on the vessel by direct welding so as to become its integral part.

## Applications :

Highly viscous liquids, liquids with suspended solids, high vibrations, limited space where thermal error due to piping not acceptable or where conventional gauge glass is impractical.

## Construction (a):

It consists of a weld pad block, reflex or transparent gauge glass, sealing gasket, cushion gasket and cover plate all held together by bolts. The gauge glass sandwiched between sealing and cushion gasket is placed on front side for viewing of liquid level and held in the recesses machined in the block and cover plate. This ensures leak proof assembly, prevents gasket slippages and avoids glass to metal contact. The weld pad block comes in different lengths from 250 to 590 mm (table 1) and its weldable side is either flat (fig a) or radius (fig b) to suit the vessel surface on which it is intended to be attached.

It is provided with an Al scale calibrated in mm (LC=10mm) As an option, frost free extension (fig c) can be provided for liquids at low temperature for prevention of 'frost formation' on out side surface of gauge glass for clear visual indication of level. Besides, for services like HF acid and dilute caustic, the inner surface of transparent gauge glass can be lined with mica shield to prevent glass corrosion.

Material of construction :The standard weld pad block is made from ASTM A 105 carbon steel or SS316 / SS316L and cover plate in ASTM A 105. However, they can be made in any other desired material on request and sufficient quantity.

## Sealing gaskets :

Several gasket materials like CAF, NCAF or PTFE are available. Their selection depends upon the process temperature and the service contents in the vessel.

## Ratings :

Is rated for pressure upto 72 Kg/cm<sup>2</sup> and max temperature upto 300C (with borosilicate glass). However, with soda ash glass the pressure rating is 20 Kg/cm<sup>2</sup> and max temperature upto 100°C.

## Installation :

They are installed Single (fig d) or Staggered (fig e) depending on required visibility to suit your application. Employ flat pad for flat tank surface and radius pad for curved tank surface.

The weld pad can be welded on to the vessel in two ways:

- 1) Cutting a slot in the tank wall equal to the vision slot of the gauge.
- 2) Drilling two holes in the tank wall located at the top and bottom of the visible range. Ensure their diameters are equivalent to the width of the vision slot of the gauge. During the welding process, replace glass with welding insert to prevent warpage.

Table 1

No	Block length BL (mm)	Visibility (mm)	No of sections
A	205	145	1
B	230	170	1
C	260	200	1
D	290	230	1
E	320	260	1
F	360	300	1
G	380	320	1



## Construction :

Fig : a

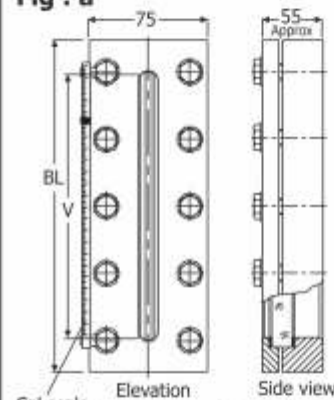


Fig : b

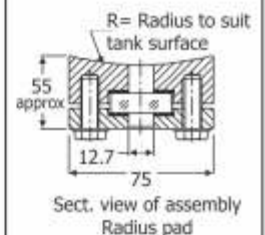
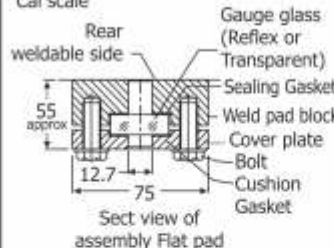
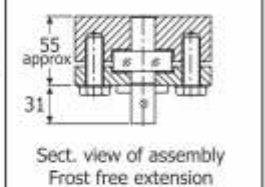


Fig : c



## Installation :

Fig : d

Single

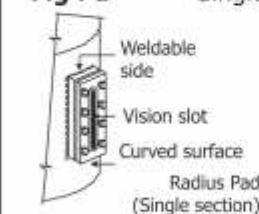
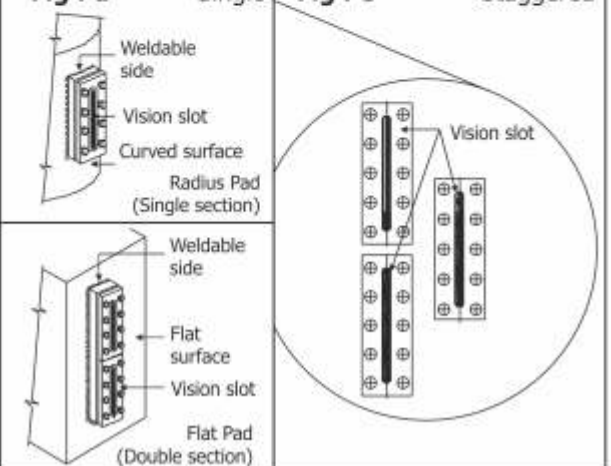


Fig : e

Staggered



**Model Identification : - 'WFG'**

**Weld Pad Block Length**

**Block Length x Visibility (mm)**

205 x 145	_____	A
230 x 170	_____	B
260 x 200	_____	C
290 x 230	_____	D
320 x 260	_____	E
360 x 300	_____	F
380 x 320	_____	G

**Weld Pad Type**

Flat	_____	S
Radius	_____	R

**Weld Pad Block**

CS	_____	M
ASTM A-105	_____	A
SS304	_____	N
SS316	_____	S
Others	_____	O

**Cover Plate**

CS	_____	M
ASTM A-105	_____	A
SS304	_____	N
SS316	_____	S

**Gauge Glass**

Tempered soda ash (30W x 17mm thk)	_____	1
Tempered borosilicate (30W x 17mm thk)	_____	2
Others	_____	0

**Sealing Gasket**

CAF	_____	1
CNAF	_____	2
PTFE	_____	3
SS304 impregnated graphite filler	_____	4
SS316 impregnated graphite filler	_____	5
Others	_____	0

**Glass Cushion**

CAF	_____	1
CNAF	_____	2
PTFE	_____	3
SS304 impregnated graphite filler	_____	4
SS316 impregnated graphite filler	_____	5
Others	_____	0

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R A T E D

NSIC-CRISIL SE-1A

AREA REPRESENTATIVE :

All dimensions in mm, except specified.