

The W3 series of Gefran, are pressure transducers for using in High temperature environment.

The main characteristic of this series is the capability to read temperature of the media up to 315°C.

The constructive principle is based on the hydraulic transmission of the pressure.

The fluid-filled system assures the temperature stability. The physical measure is transformed in a electrical measure by means the strain-gauge technology.

### MAIN FEATURES

- Pressure ranges from:  
0-35 to 0-1000 bar / 0-500 to 0-15000 psi
- Accuracy:  $\leq \pm 0.25\%$  FSO (H);  $\leq \pm 0.5\%$  FSO (M)
- Fluid-filled system for temperature stability
- Oil filling meets FDA requirements CFR 178.3620 and CFR 172.878
- Oil filling volume:  
W30 (30mm<sup>3</sup>); W31-W32-W33 (40mm<sup>3</sup>)
- 1/2-20UNF, M18x1.5, standard threads; other types available on request
- Standard diaphragm is a 17-7 PH stainless steel GTP+ coating corrugated diaphragm

*GTP+ (advanced protection)*

*Coating with high resistance against corrosion, abrasion and high temperature*

### TECHNICAL SPECIFICATIONS

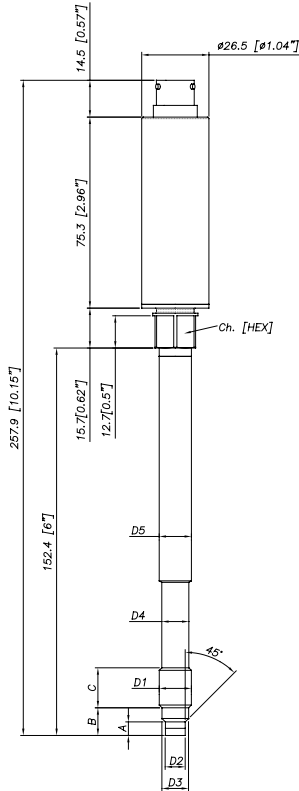
Accuracy (1)	<b>H</b> $\leq \pm 0.25\%$ FSO (350...1000 bar) <b>M</b> $\leq \pm 0.5\%$ FSO (35...1000 bar)
Resolution	Infinite
Measurement range	0..35 to 0..1000bar 0..500 to 0..15000psi
Maximum overpressure	2 x FS 1.5 x FS above 500bar/7500psi
Measurement principle	Strain gage Wheatstone bridge
Supply voltage	6..12Vdc (10Vdc typical)
Strain gage bridge resistance	350 Ohm (550 Ohm below 100bar - 1500psi)
Isolation resistance (at 50Vdc)	>1000 MOhm
Full Scale Output (FSO) (toll. 0.5% FSO)	2.5 mV/V (option 2) 3.33 mV/V (option 3)
Zero balance	$\pm 0.5\%$
Calibration signal	80% FSO
Strain gauge housing compensated temperature range	0...+100°C 32...212°F
Maximum housing temperature range	-30...+120°C -22...250°F
Thermal drift in compensated range Zero/Calibr./Sens.	< 0.02% FSO/°C < 0.01% FSO/°F
Diaphragm maximum temperature	315°C 600°F
Zero drift due to change in process temperature	0.04 bar/°C 30 psi/100°F
Standard Material in contact with process medium	Diaphragm: • 17-7PH corrugated diaphragm with GTP+ Stem • 17-4 PH
Thermocouple (model W32)	STD : type "J" (isolated junction)
Protection degree (with 6-pin mating connector)	IP65
Electrical connections	6-pin Conn. VPT07RA10-6PT (PT02A-10-6P) 8-pin Conn. PC02E-12-8P

FSO = Full Scale Output

(1) BFSL method (Best Fit Straight Line): includes combined effects of Non-Linearity, Hysteresis and Repeatability

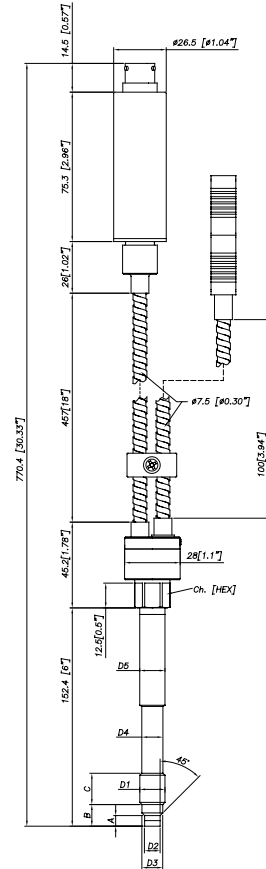
# MECHANICAL DIMENSIONS

## W30



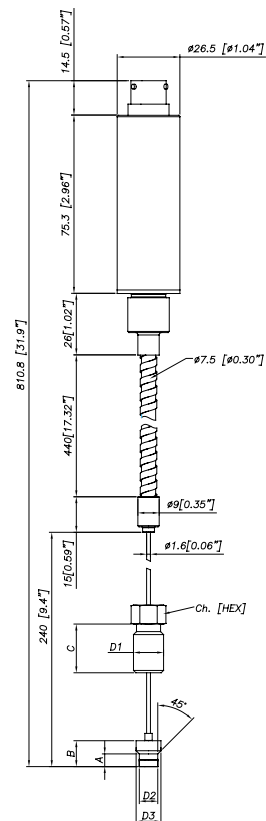
D1	<b>1/2 - 20UNF</b>
D2	$\phi 7.8 -0.05$ [ $\phi 0.31$ " -0.002 ]
D3	$\phi 10.5 -0.025$ [ $\phi 0.41$ " -0.001 ]
D4	$\phi 10.67$ [ $\phi 0.42$ " ]
D5	$\phi 12.7$ [ $\phi 0.5$ " ]
A	5.56 -0.26 [ 0.22" -0.01 ]
B	11.2 [ 0.44" ]
C	15.74 [ 0.62" ]
Ch [Hex]	16 [ 5/8" ]

## W32



D1	<b>M18x1.5</b>
D2	$\phi 10 -0.05$ [ $\phi 0.394$ " -0.002 ]
D3	$\phi 16 -0.08$ [ $\phi 0.63$ " -0.003 ]
D4	$\phi 16 -0.4$ [ $\phi 0.63$ " -0.016 ]
D5	$\phi 18$ [ $\phi 0.71$ " ]
A	6 -0.26 [ 0.24" -0.01 ]
B	14.8 -0.4 [ 0.58" -0.016 ]
C	19 [ 0.75" ]
Ch [Hex]	19 [ 3/4" ]

## W33



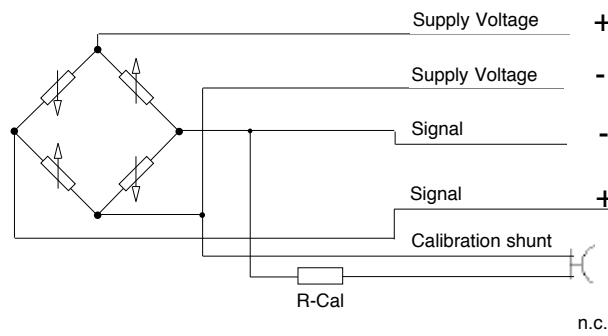
Exposed capillary	
D1	1/2-20UNF
D2	.307/.305" [ 7.80/7.75mm ]
D3	.414/.412" [ 10.52/10.46mm ]
A	.125/.120" [ 3.18/3.05mm ]
B	.318/.312" [ 8.08/7.92mm ]
C	.81" [ 20.6mm ]

**NOTE :** dimensions refer to rigid stem length option "4" (153 mm – 6")

**WARNING :** For installation use a maximum tightening torque of 56 Nm(500 in-lb)

## ELECTRICAL CONNECTIONS

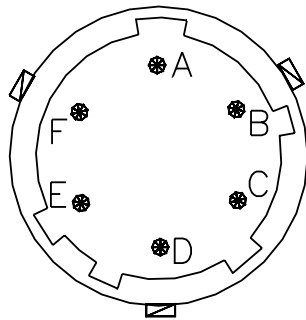
### mV/V OUTPUT



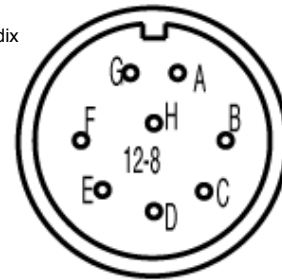
6-pin	8-pin
C	A
D	C
B	D
A	B
E - F	E - F
	G - H

Connect the cable sheathing to the side of the instrument.

6 pin connector  
VPT07RA10-6PT2  
(PT02A-10-6P)



8 pin connector  
PC02E-12-8P Bendix



## ACCESSORIES

### Connectors

6-pin mating connector (IP65 protection degree)

8-pin mating connector

CON300

CON307

### Extension cables

6-pin connector with 8m (25ft) cable

6-pin connector with 15m (50ft) cable

6-pin connector with 25m (75ft) cable

6-pin connector with 30m (100ft) cable

8-pin connector with 8m (25 ft) cable

8-pin connector with 15m (50 ft) cable

8-pin connector with 25m (75 ft) cable

8-pin connector with 30m (100 ft) cable

Other lengths

C08W

C15W

C25W

C30W

E08W

E15W

E25W

E30W

consult factory

Cable color code 6 wires		Cable color code 8 wires	
Conn.	Wire	Conn.	Wire
A	Red	A	White
B	Black	B	Red
C	White	C	Green
D	Green	D	Black
E	Blue	E	Blue
F	Orange	F	Orange
		G	n.c.
		H	n.c.

### Accessories

Mounting bracket

Dummy plug for 1/2-20UNF

Dummy plug for M18x1.5

Drill kit for 1/2-20UNF

Drill kit for M18x1.5

Cleaning kit for 1/2-20UNF

Cleaning kit for M18x1,5

SF18

SC12

SC18

KF12

KF18

CT12

CT18

### Thermocouple for W32 model

Type "J" (153mm - 6" stem)

TTER601

# ORDER CODE

W - - - - - - - - - - 000

OUTPUT SIGNAL	
2.5 mV/V	2
3.33 mV/V	3

VERSION	
Rigid stem	0
Rigid stem + flexible	1
With thermocouple	2
Exposed capillary	3

CONNECTOR	
Standard	
6 pin	6
8 pin	8

ACCURACY CLASS	
0.25% FSO (ranges ≥ 100 bar/1500 psi)	H
0.5% FSO	M

RANGE			
bar		psi	
35	B35U	500	P05C
50	B05D	750	P75D
70	B07D	1000	P01M
100	B01C	1500	P15C
200	B02C	3000	P03M
350	B35D	5000	P05M
500	B05C	7500	P75C
700	B07C	10000	P10M
1000	B01M	15000	P15M

000 = Standard version  
Special or customized versions available on request

FLEXIBLE LENGTH (*) (mm / inches)	
Standard (W30)	
0	none
Standard (W31, W32)	
D	457mm 18"
E	610mm 24"
F	760mm 30"
Standard (W33)	
L	711mm 28"
Available on request	
A	76mm 3"
B	152mm 6"
C	300mm 12"

RIGID STEM LENGTH (*) (mm / inches)	
Standard (W30, W31, W32)	
4	153mm 6"
5	318mm 12.5"
Standard (W33)	
0	none
Available on request	
1	38mm 1.5"
2	50mm 2"
3	76mm 3"
6	350mm 14"
7	400mm 16"
8	456mm 18"

(\*) Note : maximum combined stem/flex length is 914mm - 36"

THREAD	
Standard	
1	1/2 - 20 UNF
4	M18 x 1.5

### Examples

#### W32-6-M-B07C-1-4-D-000

Melt pressure transducer with type "J" thermocouple, 3.33 mV/V output, 6-pin connector, 1/2-20UNF thread, 700bar full scale, 0.5 % accuracy class, 153 mm (6") rigid stem, 457mm (18") flexible capillary.

#### W20-8-M-P03M-1-4-0-000

Melt pressure transducer, rigid stem, 2.5 mV/V output, 8-pin connector, 1/2-20UNF thread, 3000psi full scale, 0.5 % accuracy class, 153 mm (6") rigid stem

GEFRAN reserves the right to make any kind of design or functional modification at any moment without prior notice.