



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:  $<\pm 0.25\%$  FSO (H);  $<\pm 0.5\%$  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

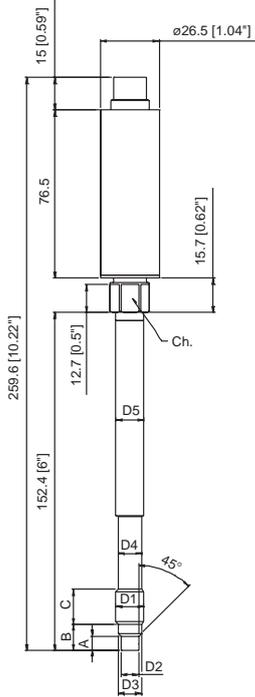
Accuracy (1)	<b>H</b> $<\pm 0.25\%$ FSO (350...1000 bar) <b>M</b> $<\pm 0.5\%$ FSO (35...1000 bar)
Resolution	Infinite
Measurement range	0..35 to 0..1000bar 0..500 to 0..15000psi
Maximum overpressure	2 x FS 1.5 x FS above 500bar/7500psi
Measurement principle	Strain gage Wheatstone bridge
Supply voltage	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

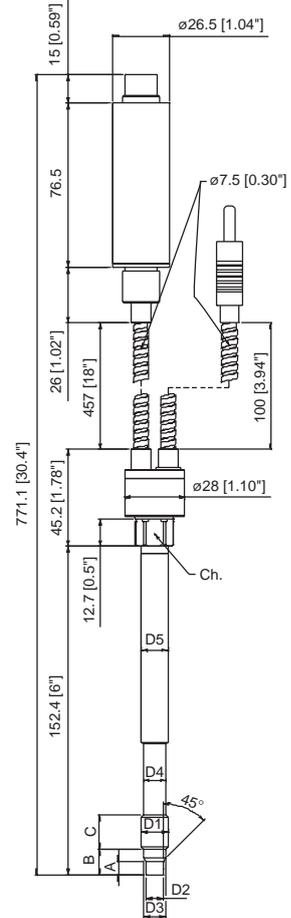
# MECHANICAL DIMENSIONS

**W30**

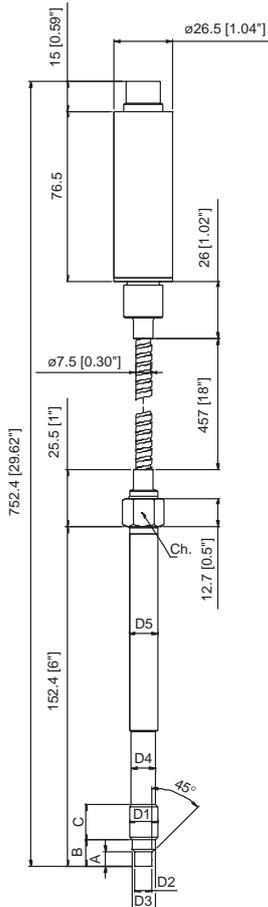


D1	<b>1/2 - 20UNF</b>
D2	$\varnothing 7.8 - 0.05$ [ $\varnothing 0.31'' - 0.002$ ]
D3	$\varnothing 10.5 - 0.025$ [ $\varnothing 0.41'' - 0.001$ ]
D4	$\varnothing 10.67$ [ $\varnothing 0.42''$ ]
D5	$\varnothing 12.7$ [ $\varnothing 0.5''$ ]
A	$5.56 - 0.26$ [ $0.22'' - 0.01$ ]
B	$11.2$ [ $0.44''$ ]
C	$15.74$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

**W32**

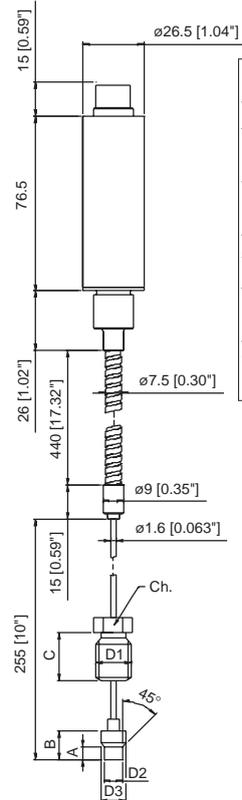


**W31**



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

**W33**



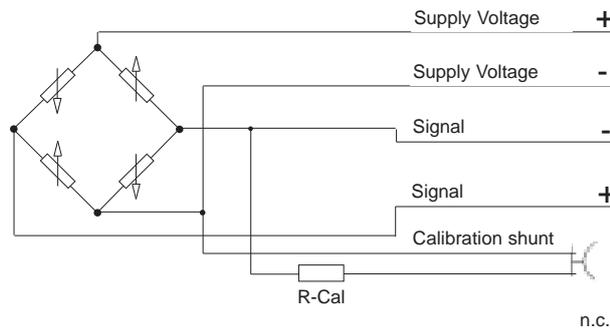
Capillare esposto Exposed capillary	
D1	1/2-20UNF
D2	.307/.305" [7.80/7.75mm]
D3	.414/.412" [10.52/10.46mm]
A	.125/.120" [3.18/3.05mm]
B	.318/.312" [8.08/7.92mm]
C	.81" [20.6mm]

**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

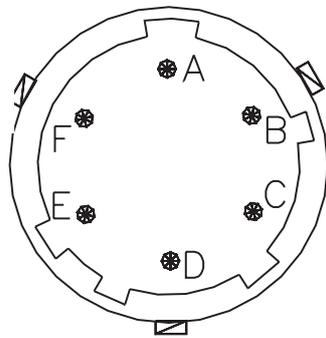
### mV/V OUTPUT



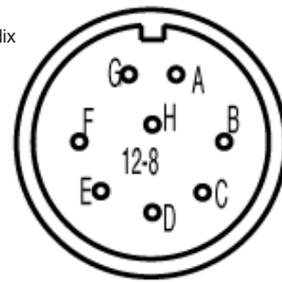
6-pin	8-pin
C	A
D	C
B	D
A	B
E - F	E - F
	G - H

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)

**CON300**

8-pin mating connector

**CON307**

### Extension cables

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

**C08W**

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

**C15W**

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

**C25W**

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

**C30W**

Other lengths

**consult factory**

### Cable color code

Conn.	Wire
A	Red
B	Black
C	White
D	Green
E	Blue
F	Orange
G	n.c.
H	n.c.

### Accessories

Mounting bracket

**SF18**

Dummy plug for 1/2-20UNF

**SC12**

Dummy plug for M18x1.5

**SC18**

Drill kit for 1/2-20UNF

**KF12**

Drill kit for M18x1.5

**KF18**

Cleaning kit for 1/2-20UNF

**CT12**

Cleaning kit for M18x1.5

**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 ≥ 350 bar/5000 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



The Melt pressure transmitter/transducer are available with GOST-R certification.  
The request of this version must be specified on the order.

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

# GEFRAN

GEFRAN spa  
via Sebina, 74  
25050 PROVAGLIO D'ISEO (BS) - ITALIA  
tel. 0309888.1 - fax. 0309839063  
Internet: <http://www.gefran.com>

DTS\_W3\_0208\_ENG