

Thermowells for MiniTherm

for resistance thermometer and temperature transmitter

Type series HP1200



Application area

- Pharmaceutical industry
- Biotechnology
- Food industry

Features

- Thermowells for resistance thermometer MiniTherm, Type series GA2730 and temperature transmitter GV4 MinTherm, Type series GV4730
- Material stainless steel mat. no. 1.4404 (316L)
- Instrument connection M12 x 1 and M16 x 1.5
- Various process connections for food/pharmaceutical/biotechnology
- DIN 11851, VARIVENT® and Clamp per DIN 32676 / ISO 2852 with EHEDG certificate
- Static process pressure:
 - Thermowell: max. 60 bar at a max. temperature of 200 °C
 - Process connection: according to standard of the respective connection

Options

- Approvals/Certificates
 - Roughness height rating with inspection certificate acc. to EN 10204-3.1
- Material certificate per EN 10204-3.1
- For hygienic application:
 - Surface quality
 - Surface roughness $R_a \leq 0.8 \mu\text{m}$
 - Weld seam $\leq 1.6 \mu\text{m}$
- Thermowell with reduced tip
- Elektropolishing of wetted parts
- Calculation of thermowells upon request
- Base filled with heat sink compound

Technical data

Temperature sensor

Temperature sensor: GA2730, data sheet DB_T4-017
GV4730, data sheet DB_T4-011

Instrument connection: Union nut for M12 x 1 or
M16 x 1.5

Response
time:

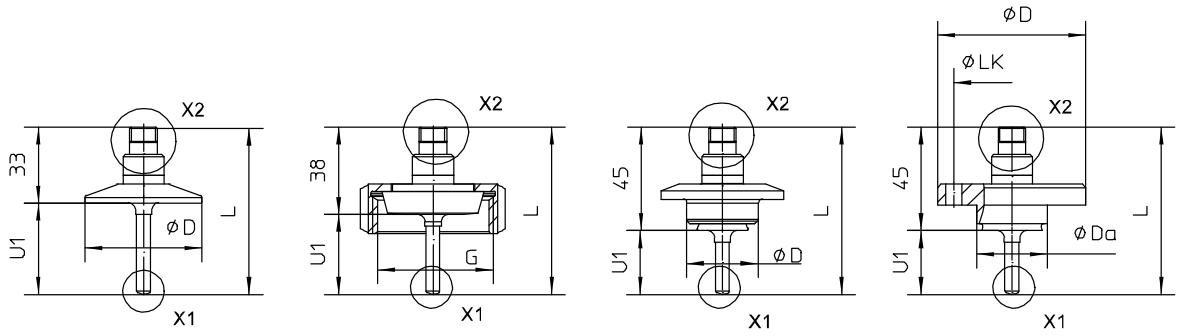
Thermowell 6 x 1 mm

- without heat sink comp. t_{90} = 15 s
- with heat sink comp. t_{90} = 6 s

Thermowell with reduced tip

- without heat sink comp. t_{90} = 8 s
- with heat sink comp. t_{90} = 4 s

Thermowell dimensions

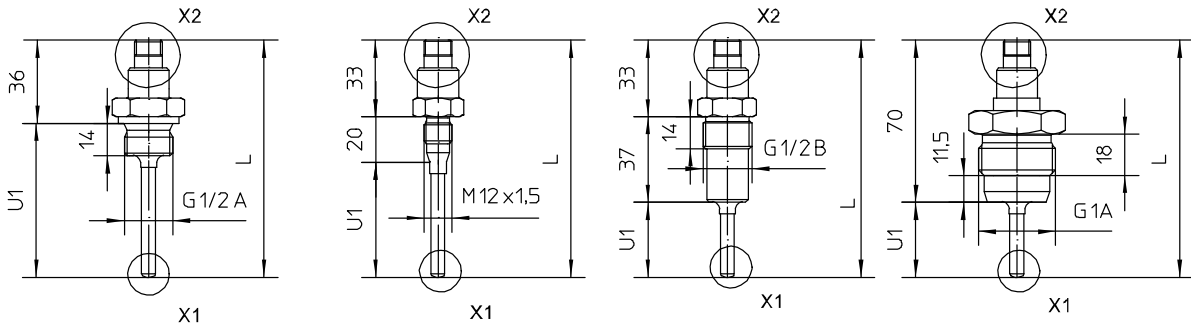


clamp connection

tapered coupling
with union nut
DIN 11851

Varivent connection

NEUMO BioControl connection

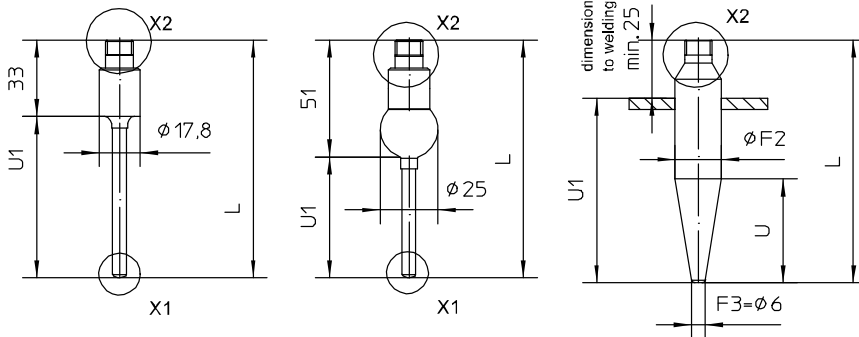


G1/2A DIN 3852

M12x1,5 dead-zone free
(conical taper of metal)

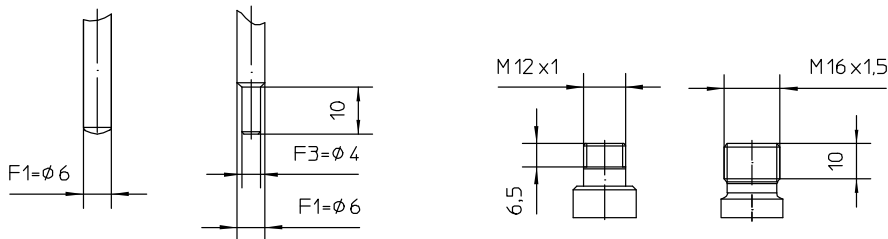
G1/2B dead-zone free
(conical taper of metal)

G1A dead-zone free
(conical taper of metal)



without screwing for
sliding screwing see
product group T6

weld-in ball ø25



standard

reduced tip

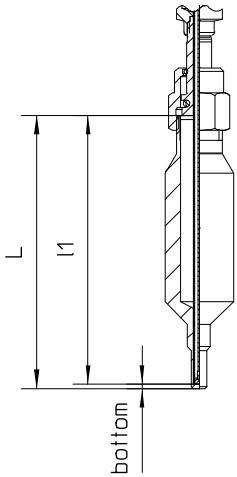
M12 x 1

M16 x 1,5

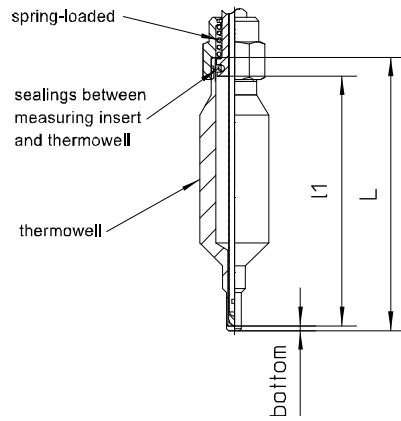
X1 sensor design

X2 design Instrument connection

Design with field housing



Design with circular connector



Calculation of the insertion length of the measuring insert

L = Total length thermowell

l_1 = Insertion length measuring insert

Resistance thermometer GA2730

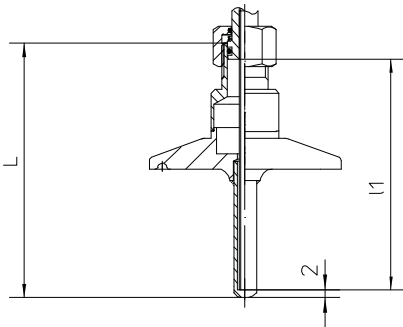
Circular connector: $l_1 = L - 8 \text{ mm}$

Field housing: $l_1 = L$

Temperature transmitter GV4730

$l_1 = L - 6 \text{ mm}$

Mounting with resistance thermometer MiniTherm GA2730



L = Total length thermowell

l_1 = Insertion length measuring insert

Order details

Thermowells for resistance thermometer MiniTherm temperature transmitter GV4 MiniTherm							
HP1200	thermowells						
	surface roughness	standard					
HY		per hygienic design					
A25	Instrument connection	M12 x 1, suitable for resistance thermometer MiniTherm, Type series GA2730					
A27		M16 x 1.5, suitable for temperature transmitter GV4 MiniTherm, Type series GV4730					
B3000	process connection	without screwing					
B1011		threaded connection	G1/2 A per DIN 3852				
B1041			G1/2 B conical, metal-to-metal joint				
B1043			G1 A conical, metal-to-metal joint				
B1051			M12 x 1.5, metal-to-metal joint				
B1213		union nut ^{1,2} DIN 11851	DN 25				
B1214			DN 32				
		clamp connection	DIN 32676 model A (metric)	DIN 32676 model B (OD, ISO)	DIN 32676 model C (Tri-Clamp)	ISO 2852	Plate Ø
B1410				DN 13.5 DN 17.2	1/2" 3/4"		25 mm
B1411			DN 10 DN 15 DN 20 ^{1,2}			DN 12 DN 12.7 DN 17.2 DN 21.3	34 mm
B1412			DN 25 ^{1,2} DN 32 ^{1,2} DN 40 ^{1,2}	DN 21.3 ^{1,2} DN 26.9 ^{1,2} DN 33.7 ^{1,2} DN 42.4 ^{1,2}	1" 1 1/2"	DN 25 ^{1,2} DN 33.7 ^{1,2} DN 38 ^{1,2}	50.5 mm
B1710		VARIVENT® connection	Form B (D = 31) for VARINLINE® access unit				
B1711			Form F (D = 50) for VARINLINE® access unit ^{1,2}				
B1712			Form N (D = 68) for VARINLINE® access unit ^{1,2}				
B1810		NEUMO BioControl	Gr. 25, h = 45 mm				
B1811	Gr. 50, h = 53.5 mm						
B2010	with weld-in ball	diameter 25 mm					
B2110	for welding	diameter 20 mm					
E1...	thermowell diameter	Ø 6 mm					
E2...		Ø 6 mm; reduced design to Ø 4 mm ³					
015	insertion length U1 ⁴	15 mm					
025		25 mm					
030		30 mm					
035		35 mm					
050		50 mm					
100		100 mm					
150		150 mm					
200		200 mm					
250	250 mm						
999		as per customer's specification up to 250 mm					
G11	material	stainless steel mat.-no. 1.4404 (316L)					

Additional features (to be indicated in case of need, only)	
W1020	material certificate per EN 10204-3.1, wetted parts
W1223	certification of surface roughness
W4035	electropolishing of wetted parts
Z12	base filled with heat sink compound

Order code (example): HP1200 – A25 - B1410 – E1050 - G11

¹ EHEDG certified only in connection with hygienic design (order code option HY)

² EHEDG certificate valid only if gaskets are used that are listed in the "EHEDG position paper"

³ up to insertion length of 100 mm

⁴ insertion length > 250 mm upon request