



#### Application area

- Pharmaceutical industry
- Biotechnology
- Food industry

## Technical data

#### Temperature sensor

Temperature sensor: see Type series GA2730, data sheet T4-017

Screwing: Union nut M12 x 1 with spring contact system for best heat transfer

Accuracy:

**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

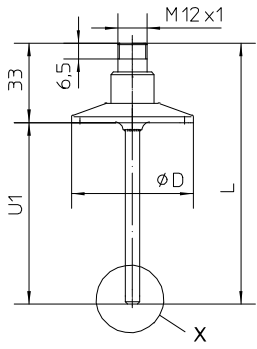
## Features

- Thermowells for resistance thermometer MiniTherm, Type series GA2730
- Material stainless steel mat. no. 1.4404 (316L)
- Instrument connection M12 x 1
- Various process connections for food/pharmaceutical/biotechnology
- Static process pressure:
  - Thermowell: max. 60 bar at a max. temperature of 200 °C
  - Process connection: according to standard of the respective connection

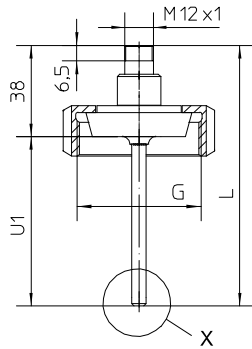
## Options

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

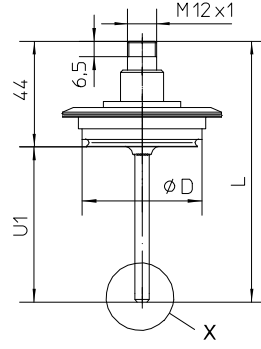
# Thermowell dimensions



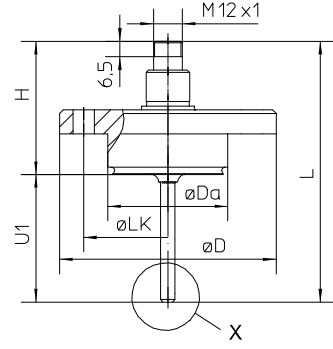
clamp connection



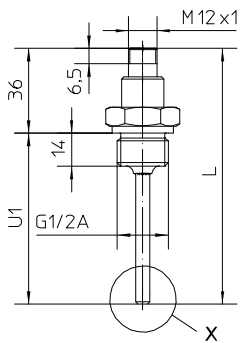
tapered coupling  
with union nut  
DIN 11851



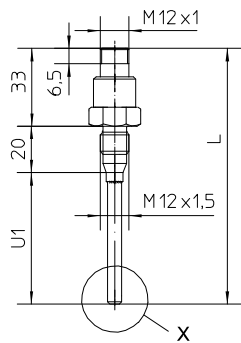
Varivent connection



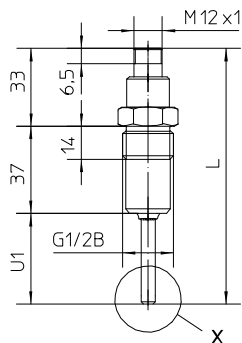
NEUMO BioControl connection



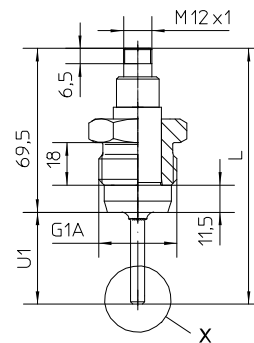
G1/2A DIN 3852



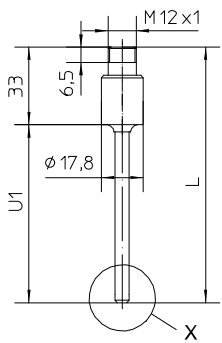
M12x1,5 dead-zone free  
(conical taper of metal)



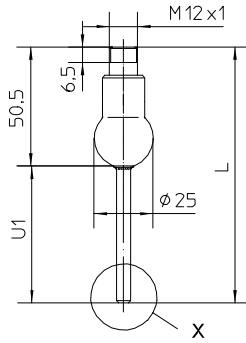
G1/2B dead-zone free  
(conical taper of metal)



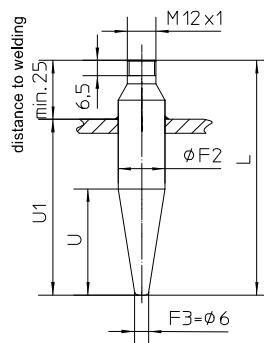
G1A dead-zone free  
(conical taper of metal)



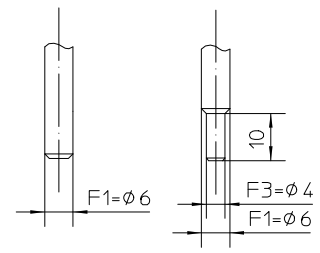
without screwing for  
sliding screwing see  
product group T6



weld-in ball Ø25



weld-in thermowell



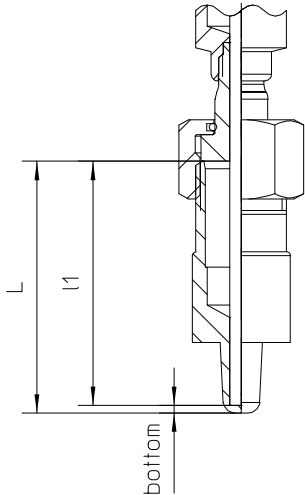
standard

reduced tip

sensor design X

All dimensions are in mm

### Design with field housing



L = Total length thermowell

$l_1$  = Insertion length measuring insert

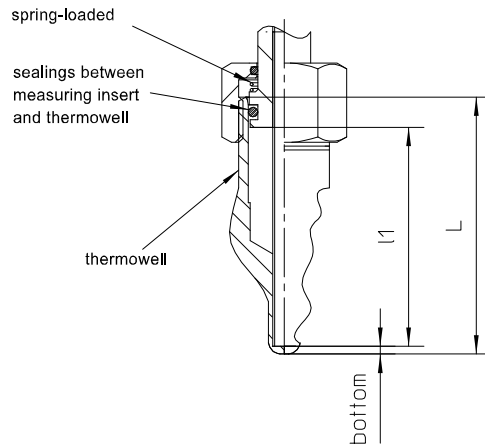
### Calculation of the insertion length of the measuring insert for:

Circular connector:  $l_1 = L - 7 \text{ mm}$

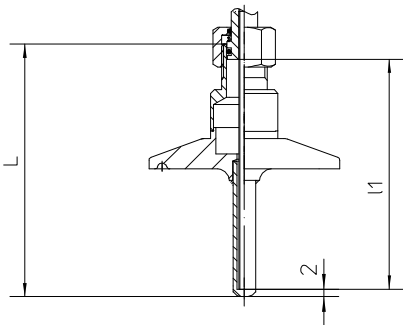
Field housing:  $l_1 = L - 2 \text{ mm}$

$l_5 = l_1 + 38 \text{ mm} + 2 \text{ mm pitch of spring}$

### Design with circular connector



### Mounting with resistance thermometer MiniTherm GA2730



L = Total length thermowell

$l_1$  = Insertion length measuring insert

## Order details

### Thermowells for resistance thermometer MiniTherm Type series HP1200

Order details thermowells, HP1200							
HP1200	Thermowells						
	surface roughness	standard					
HY		per hygienic design					
A25	Instrument connection	M12 x 1, suitable for resistance thermometer MiniTherm, Type series GA2730					
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	DN 25				
B1214			DN 32				
		clamp connection	<b>DIN 32676 model A (metric)</b>	<b>DIN 32676 model B (OD, ISO)</b>	<b>DIN 32676 model C (inch, Tri-Clamp)</b>	<b>DIN 2852</b>	<b>Plate Ø</b>
B1410			DN 6 / 8	DN 10.2 / 13.5 / 17.2	1/2" / 3/4"		25 mm
B1411			DN 10 / 15 / 20			DN 12 / 12.7 / 17.2 / 21.3	34 mm
B1412		DN 25 / 32 / 40	DN 21.3 / 26.9 / 33.7 / 42.4	1" / 1 1/2"	DN 25 / 33.7 / 38	50.5 mm	
B1710		Varivent	D = 31, for Varivent case DN 10 and DN 15				
B1711			D = 50, for Varivent case DN 25 and DN 1"				
B1712			D = 68, for Varivent case DN 40...DN 125 and 1 1/2"...6"				
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 <sup>1</sup>					
015	insertion length U1 <sup>2</sup>	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 – B1410 – E1050 - G11

<sup>1</sup> up to insertion length of 100 mm

<sup>2</sup> insertion length > 250 mm upon request