

GLÖTZL Baumeßtechnik

Accessories for Pressure Cells – Measuring Tubings

Measuring Tubings

Art. No.: 30. . .

Technical data of measuring line tubings of Polyamide-11

Measuring line tubings of Polyamide-11 can be used for cells up to a load limit of max. 120 bars.

The measuring line tubings of Polyamide-11 are well-proved for an application on site since many years.

The assembly is very easy: Quick cut to length, no subsequent treatment of coupling joints, no corrosion protection necessary.

The manufactured length is 100 up to 300 m, whereby also in case of longer tubing lengths only a small quantity of couplings are necessary for the tubing joints.

Available dimensions

Outer Ø	Inner Ø	Models	Operating pressures	Smallest bending radius
6 mm	3 mm	flexible	46 bars	30 mm
6 mm	3 mm	semi-rigid	75 bars	30 mm
6 mm	2 mm	semi-rigid	120 bars	30 mm

The operating pressures are valid for operating temperatures up to +20 °C with a threefold security in relation to the space pressure.

Pressure utilization in dependence of temperatures

Models	Up to +20°C	+30 °C	+40 °C	+60 °C	+80 °C
Flexible	100%	83%	72%	57%	47%
Semi-rigid	100%	83%	66%	54%	43%

Mechanical characteristics:

	Flexible	Semi-rigid
Tensile strength	480 bars	550 bars
Tensile strain (fracture strain at +20 °C)	250%	280%
Elastic expansion	3.7%	4.2%
Shear strength (ASTM D 732-46)	370 bars	430 bars
Pressure strength (ASTM D 695-54)	500 bars	550 bars

During measurement, the operating pressures can be exceeded by 50% for a short time. In this case, the tubing must immediately be discharged after measurement by opening of the red discharge cock resp. of the rotary cock at the hand pump or motor pump.

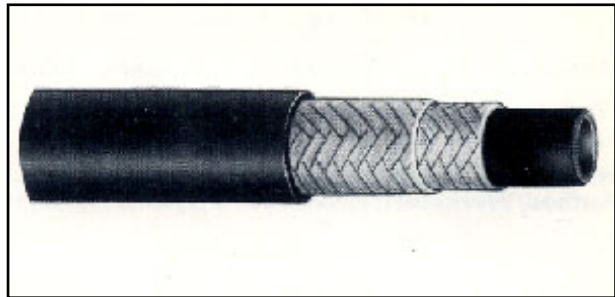
The measuring points should only be switched at the change-over manifold after discharge.

If the measured values are at the limit of the operating pressure, you have to take care that after measurement the tubings are not heated up, e.g. by sun influence whereby the liquid pressure will increase and the operating pressure is reduced. In this case, the tubings have also to be discharged. If the measured values are smaller than the operating pressure, the measuring points can be switched without discharge of the tubing.

Type BF

For very high pressure hydraulic application
and as feed pipe for technical fluids

- Abrasion-proof and flexible • Small weight •
- Resistant against most technical fluids •
- Heat resistance: -60 °C up to 100 °C
(for a short time up to +120 °C) •
- Pulse strength up to more than 1 million pressure surges



Designation: Tecalán hose	DN	Clear width mm	Outer dia mm	Admissible working pressure ¹⁾ bar for shock charge			Min. bending radius ²⁾ mm	Weight kg/100 m	Pack. Unit Rolls of	Part No.
				+20 °C	+50 °C	+80 °C				
BF 1,8	2	1,8	4,9	700	615	555	18	2,5	100 m	2.522018.1
BF 4	4	4	9,2	485	425	380	40	5,5	100 m	2.522040.1
BF 6,3	6	6,3	13	455	400	360	63	11	100 m	2.523063.1
BF 8	8	8	14,9	375	330	300	80	13,5	100 m	2.523080.1
BF 10	10	10	17,8	340	300	270	100	19	100 m	2.523100.1
BF 13	12	13	21,9	280	245	220	130	27	100 m	2.523130.1
BF 19	20	19	28,1	215	190	170	190	37	25 m	2.523190.1

Assembly with Tecalemit screw fittings

Construction/material: Inside layer Polyamid 11, polyester braid, outside layer polyurethane

- The working pressures are valid for completely assembled hose lines. For pressure increase in 0.1s from 0 bar up to admissible working pressure and an operating life of min. 1 mio. pressure surges.
- The bending radii are valid for hose lines being under pressure, measured at the neutral fibre. In case of operating temperatures under -20 °C, the above mentioned values of min. bending radii have to be increased by 50%.

Flow medium	Resistance at			
	20 °C	40 °C	60 °C	90 °C
Acetone	1	1**	2	3
Ethyl alcohol, pure	1**	2	3	
Ammonia, concentrated	1	1	1	1
Ammonia, liquid, gaseous	1	1		
Formic acid	3	3	3	
Battery acid (CH ₂ SO ₄)	1	2	3	
Petrol, pure	1	1	1**	
Benzene	1	1**	2	2
Brake fluid	1	1	1	2
Butane	1	1	1	
Butyl alcohol	1**	2	3	
Chlorine	3	3	3	3
Cyclohexane	1	1	2	
Diesel oil, gas oil	1	1	1	1
Petroleum crude	1	1	1	1
Greases	1	1	1	1
Freon, R 12	1	1	1	1
Freon, R 22***	1	1	1	2
Glycerin, pure	1	1	2	3
Glycol	1	1	2	3
Fuel oil	1	1	1	1
Hydraulic oil (Ester base)	1	1	1	2
Hydraulic oil (Glycol base)	1	1	1	2
Hydraulic oil (Mineral oil base)	1	1	1	1
Kerosene	1	1	1**	
Salt solution, saturated	1	1	1	1

Explications :

- = good - absolute durability without any alterations
- = limited – durability depending on working time and working conditions
- = not recommendable - material will be attacked and its mechanical characteristics will be deteriorated

Flow medium	Resistance at			
	20 °C	40 °C	60 °C	90 °C
Carbone dioxide	1	1	1	
Cooling water with frost protection	1	1	1	2
Methane	1	1	1	
Methyl alcohol, pure	1**	2	3	
Mineral oils and motor lubricating oils	1	1	1	1
Kerosene	1	1	1**	
Vegetable fats	1	1	1	1
Propane	1	1	1	
Hydrochloric acid, 1%	1	2	3	3
Hydrochloric acid, 10%	1	2	3	3
Hydrochloric acid, 50%	3			
Oxygen	1	1	2	3
Lubricating oils and greases	1	1	1	1
Sulphuric acid, 1%	1	2	2	3
Sulphuric acid, 10%	1	2	3	
Soap suds	1	1	1	1
Scydrol (except scydrol 60)	1	1	1	1
Scydrol 60	3	3	3	3
Nitrogen	1	1	1	1
Oil of turpentine	1	1	1**	
White spirit	1	1	1**	
Carbon tetrachloride	3			
Toluol	1	1**	2	2
Trichlor ethylene	2	3		
Water (also sea water)	1	1	1	1

- * = slight discoloration of transparent material
- ** = slight swelling but no alterations of the mechanical characteristics
- *** = slight diffusion

Subject to alterations.