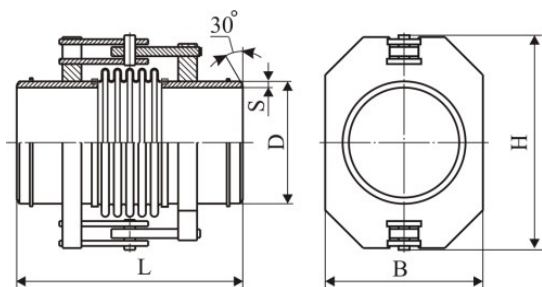


Angular, single-plane expansion joints

Expansion joints, ПОН type

ПОН type



ПОН type axial, angular single-plane expansion joints with welded neck branch pipes. These expansion joints can be installed directly in pipelines transferring (delivery and potable) water with a temperature up to 150 °C and at a velocity up to 8 m/s, oil and oil products with a temperature up to 450 °C and at a velocity up to 8 m/s, as well as steam and gaseous media not causing corrosion to the expansion joint material, with a temperature up to 500 °C and at a velocity up to 20 m/s.

Table 16*

Serial product range**

Reference designation	Nominal pressure, PN, MPa (kgf/cm ²)	Nominal diameter, DN, mm	Dimensions, mm					Angular travel amplitude, ± γ, degr. at an operation time		Stiffness at angular movement, C _γ N·m/degr.	Weight, kg
			D	s	L	H	B	Mode 1 N = 5000 cycles	Mode 2 N = 200 cycles		
ПОН.Т5-16-65	1.6 (16)	65	76	3.5	460	250	140	8	15	4	17
ПОН.Т5-16-80		80	89	3.5	470	270	150	8	15	5	19
ПОН.Т5-16-100		100	108	4	524	290	180	8	15	6	25
ПОН.Т5-16-125		125	133	4	536	320	200	8	15	12	33
ПОН.Т5-16-150		150	159	4.5	536	350	240	8	13	19	42
ПОН.Т5-16-200		200	219	6	560	430	300	8	12	44	70
ПОН.Т5-16-250		250	273	7	598	530	370	8	11	61	118
ПОН.Т5-16-300		300	325	7	628	620	430	8	10	100	176
ПОН.Т5-16-350		350	377	7	642	700	490	7	10	197	230
ПОН.Т5-16-400		400	426	8	808	740	550	5	9	304	400
ПОН.Т5-16-500		500	530	8	836	863	650	5	8	426	520
ПОН.Т5-16-600		600	630	8	892	997	770	5	8	816	780
ПОН.Т5-16-700		700	720	8	926	1100	855	5	8	1155	1002
ПОН.Т5-16-800		800	820	9	1024	1230	970	5	8	1394	1250
ПОН.Т5-16-900		900	920	10	1164	1370	1070	3	7	2377	1680
ПОН.Т5-16-1000		1000	1020	10	1218	1470	1170	3	6	2603	1985
ПОН.Т5-25-65	2.5 (25)	65	76	3.5	460	250	140	8	15	6	19
ПОН.Т5-25-80		80	89	3.5	470	270	150	8	15	7	22
ПОН.Т5-25-100		100	108	4	524	290	180	8	15	9	28
ПОН.Т5-25-125		125	133	4	536	320	200	8	15	16	35
ПОН.Т5-25-150		150	159	4.5	536	350	240	8	13	26	45
ПОН.Т5-25-200		200	219	6	560	430	300	8	12	55	73
ПОН.Т5-25-250		250	273	7	598	530	370	8	11	77	121
ПОН.Т5-25-300		300	325	7	628	620	430	8	10	120	181
ПОН.Т5-25-350		350	377	7	642	700	490	7	10	229	233
ПОН.Т5-25-400		400	426	8	814	785	550	5	9	347	370
ПОН.Т5-25-500		500	530	8	848	905	650	5	8	533	495
ПОН.Т5-25-600		600	630	8	904	1035	770	5	8	979	660
ПОН.Т5-25-700		700	720	8	932	1185	855	5	8	1251	910
ПОН.Т5-25-800		800	820	9	1036	1310	970	5	8	1626	1180
ПОН.Т5-25-900		900	920	10	1214	1460	1100	3	7	2717	1804
ПОН.Т5-25-1000		1000	1020	10	1328	1550	1200	3	6	2975	2265

* The parameters of expansion joints given in the Table are for reference only; for precise product performance please contact the factory's technical specialists;

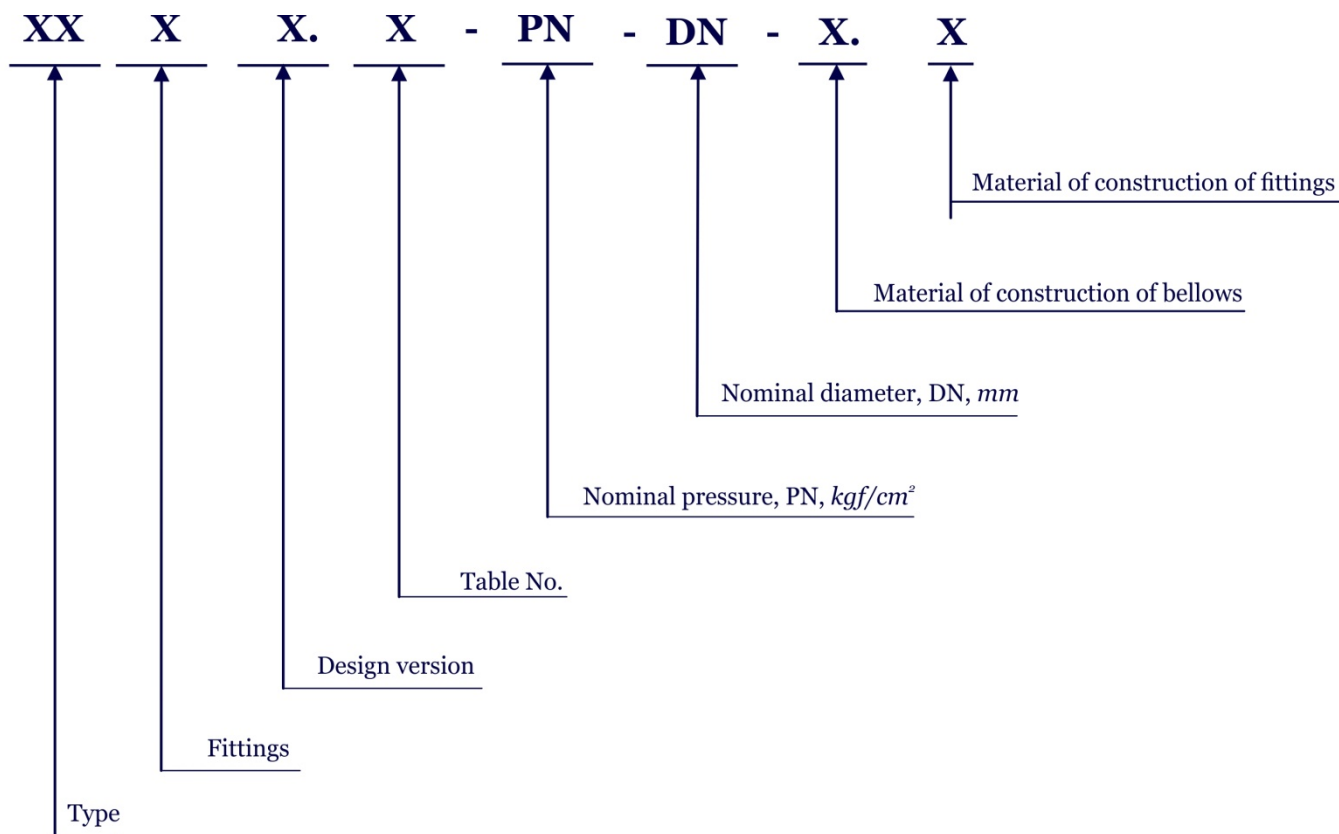
** The scientific, material and technical facilities, as well as testing equipment of the factory make it possible to supply both serial products and customized products (designed and manufactured according to the customer's ToR).

Reference designation of general purpose industrial grade angular expansion joints as per the ИРНС.300260.046ТУ specification

The reference designation of expansion joints consists of symbols and values of the main parameters:

Reference designation of expansion joint types and versions					
Type	Symbol	Fittings	Symbol	Design version	Symbol
Angular, single-plane	ИО	Weld branch pipe (on both sides)	И	Basic (bellows + 2 branch pipes or flanges)	Н
Angular, space	ИИИ	Flange (on both sides)	Φ	With a guide branch pipe	Г
Lateral, space	СИ	Flange on one side, weld branch pipe on the other side	Д	Enclosed	К
Lateral/angular					
Lateral, single-plane	СО	Weld branch pipe on one side, weld branch on the other side	ОИ	With a guide branch pipe and enclosed	М
Balanced, universal	РУ				

Expansion joint reference designation diagram



Depending on the operating conditions, the material of construction of expansion joints shall be specified at order placement in accordance with the tables below:

Bellows		
Design version	Material grade	Permissible operating temperature K (°C)
1	– Exterior layers (on the outside) and interior layers (on the side of the handled medium), steel grade 05X18H10T (08X18H10T or 12X18H10T) as per GOST 5632; – Intermediate layers, steel grade 08кп (08пс or 08ю) as per GOST 9045.	253 to 423 (–20 to 150)
2	– All layers, steel grade 05X18H10T (08X18H10T or 12X18H10T) as per GOST 5632;	20 to 773 (–253 to 500)
3	– All layers, steel grade 10X17H13M2T as per GOST 5632	20 to 773 (–253 to 500)

Fittings		
Design version	Material grade	Permissible operating temperature K (°C)
1	Steel grade 20 as per GOST 1050	253 to 698 (–20 to 425)
2	Steel grade 17Г1С as per GOST 19281	233 to 748 (–40 to 475)
3	Steel grade 09Г2С, 09Г2 as per GOST 19281	203 to 748 (–70 to 475)
4	Steel grade 08X18H10T, 12X18H10T as per GOST 5632	20 to 823 (–253 to 550)
5	Steel grade 10X17H13M2T as per GOST 5632	20 to 823 (–253 to 550)
6	Steel grade 15X5M as per GOST 20072	223 to 873 (–50 to 600)

Example of ordering information:

Example of ordering information and information to be included in other documentation on an angular space type expansion joint for welded attachment to a pipeline; nominal pressure, PN, 1.6 MPa (16 kgf/cm²); nominal diameter, DN, 500 mm; design version; material of bellows construction (all layers, steel grade 05X18H10T); material of construction of fittings (steel grade 20):

“Expansion joint ПППП.Т7-16-500-2.1 as per ИЯНШ.300260.046 ТУ”.

Basic parameters and characteristics of handled media of the products as per ИЯНШ.300260.046ТУ

Handled media	Handled medium temperature, max., K (°C)	Handled medium velocity, m/s
Fresh delivery water, potable water, crude oil, oil products	723 (450)	8 maximum
Steam, natural gas, gaseous media not causing corrosion to expansion joint material	773 (500)	80 maximum
Note: <ol style="list-style-type: none"> The permissible content of chloride ions in fresh water, the handled medium for expansion joints to be installed in heating networks, shall not exceed 250 mg/l. The expansion joints may be used for other handled media not capable of causing sulphide stress corrosion cracking. 		