

Type URN

Designation

The designation consists of two parts:

1. the series, defined by 3 letters
2. the nominal size, defined by 10 digits

Example:

Type URN: HYDRA universal expansion joint with weld ends

Standard version/materials:

multi-ply bellows: 1.4541
 weld ends up to DN 300: P 235GH (1.0345), from DN 350: P 265GH (1.0425)
 operating temperature: up to 400°C

Designation (example):

U	R	N	0	6	.	0	1	5	0	.	0	9	6	.	0
Type			Nominal pressure (PN6)			Nominal diameter (DN150)					Movement absorption, nominal (2δ = ±48 = 96 mm)				Inner sleeve (0 = without)

Order text to Pressure Equipment Directive 97/23/EC

Please state the following with your order:

- for standard versions
-> order number
- for different materials
-> designation
-> details of materials

According to the Pressure Equipment Directive 97/23/EC, the following information is required for testing and documentation:

Type of pressure equipment according to Art. 1:

- vessel volume V [l]

- piping – nominal size DN

Medium property according to Art. 9:

- group 1 – dangerous
- group 2 – all other fluids

State of medium:

- gaseous or liquid, if pD > 0.5 bar
- liquid, if pD < 0.5 bar

Design data:

max. allowable pressure PS [bar]

max./min. allowable temperature TS [°C]

test pressure PT [bar]

Optional:

category _____

Note: Tell us the dimensions that deviate from the standard dimensions and we can match the expansion joint to your specification.

Universal expansion joints

with weld ends

Type URN 06...

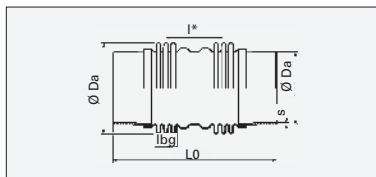
PN 06

Universal expansion joints

with weld ends

Type URN 06...

PN 06



Type URN

Nominal diameter	Nominal axial movement absorption	Type URN 06 ...	Order No., standard version	Overall length	Weight approx.	Centre-to-centre spacing of bellows	Weld ends	
							outside diameter	wall thickness
DN	$2\delta_N$	—	—	L_0	G	l^*	D	s
—	mm	—	—	mm	kg	mm	mm	mm
50	44	.0050.044.0	425701	430	1.6	216	60.3	4
65	55	.0065.055.0	425702	430	2.3	210	76.1	4
80	61	.0080.061.0	425703	450	2.7	224	88.9	4
100	73	.0100.073.0	425704	470	4.7	232	114.3	4
125	84	.0125.084.0	425705	500	5.9	240	139.7	4
150	96	.0150.096.0	423552	517	7.5	251	168.3	4.5
200	100	.0200.100.0	423553	558	11.5	293	219.1	6.3
250	120	.0250.120.0	423554	484	14.9	214	273	7.1
300	100	.0300.100.0	423555	509	16.6	230	323.9	8
350	110	.0350.110.0	423557	515	15.6	231	355.6	6
400	130	.0400.130.0	423558	521	22.8	227	406.4	6
450	140	.0450.140.0	423559	541	26.3	242	457	6
500	132	.0500.132.0	423560	594	37.1	266	508	6

¹⁾ Movement absorption: The movements (axial, angular, lateral) are to be regarded as alternatives, i.e. the sum of their proportions in percentages should not exceed 100%.

Bellows			Nominal movement absorption ¹⁾ for 1000 loading cycles		Adjusting force rate		
outside diameter	corrugated length	effective cross-section	angular ¹⁾	lateral ¹⁾	axial	lateral	
Da	lbg	A	$2\alpha_N$	$2\lambda_N$	c_D	c_L	c_P
mm	mm	cm ²	degrees	mm	N/mm	N/mm	N/mm bar
89	54	45	33	101	81	5.2	0.5
108	60	68	33	98	78	7.8	1
121	66	88	32	102	76	8.7	1.4
150	78	136	31	99	125	20	1.7
172	84	181	31	101	122	26	2.6
203	90	260	30	101	120	33	3.6
257	85	430	24	99	136	44	4.3
316	90	663	23	66	129	120	10
371	95	927	16	50	96	108	16.9
405	100	1113	17	50	95	127	21.3
461	110	1445	17	50	138	249	22.5
514	115	1817	16	51	135	268	28.2
572	100	2248	14	50	216	441	18.1