

HYDRA

6 | STANDARD RANGES

Universal expansion joint
for low pressure (exhaust-gas) with flanges

Type UBG
Type UFG

Designation

The designation consists of two parts:

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

Example:

Type UBG: HYDRA universal expansion joint with swivel flanges

Type UFG: HYDRA universal expansion joint with plain fixed flanges

Standard version/materials:

multi-ply bellows: 1.4541

flange: S 235 JRG2 (1.0038)

operating temperature: up to 550°C

Designation (example):

U	B	G	0	1	.	0	1	5	0	.	1	4	4	.	0
Type			Nominal pressure (PN1)			Nominal diameter (DN150)			Movement absorption, nominal ($2\delta = \pm 72 = 144$ mm)			Inner sleeve (0 = without)			

Order text

Please state the following with
your order:

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

The expansion joints for low pressure
(exhaust-gas) are designed for non-
pressurised applications (PS < 0.5 bar
gauge pressure).

The Pressure Equipment Directive
97/23/EC does not apply to this operat-
ing condition.

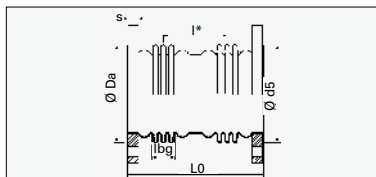
Note: Tell us the dimensions that deviate from the standard dimensions and we
can match the expansion joint to your specification.

Universal expansion joints

for low pressure with swivel lap-joint flanges

Type UBG 01...

PN 1



Type UBG

Nominal diameter	Nominal axial movement absorption	Type	Order No. standard version	Overall length	Weight approx.	Centre-to-centre spacing of bellows	Flange		
							drilling EN 1092	rim diameter	thickness
DN	$2\delta_N$	UBG 01 ...	—	L_0	G	I^*	PN	d	s
—	mm	—	—	mm	kg	mm	—	mm	mm
50	56	...0050.056.0	425669	378	2.6	257	6	90	10
65	83	...0065.083.0	425670	418	3.3	279	6	107	10
80	95	...0080.095.0	425673	427	4.5	280	6	122	10
100	119	...0100.119.0	425674	447	5.3	291	6	147	10
125	144	...0125.144.0	425675	457	6.5	286	6	178	10
150	144	...0150.144.0	423511	470	7.4	299	6	202	10
200	160	...0200.160.0	423512	490	13.9	292	6	258	16
250	168	...0250.168.0	423513	500	16.9	293	6	312	16
300	196	...0300.196.0	423514	490	21.9	269	6	365	16
350	180	...0350.180.0	423515	510	27.1	302	6	410	16
400	156	...0400.156.0	423516	490	34.9	266	6	465	16
450	140	...0450.140.0	423517	490	39.5	282	6	520	16
500	136	...0500.136.0	423518	500	42.3	310	6	570	16

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%.

Universal expansion joints

for low pressure with swivel lap-joint flanges

Type UBG 01...

PN 1

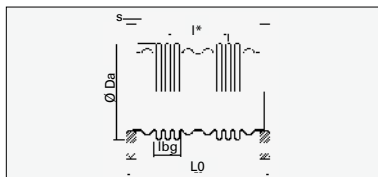
Bellows			Nominal movement absorption ¹⁾ for 1000 loading cycles		Adjusting force rate rate		
outside diameter	corrugated length	effective cross-section	angular	lateral	axial	lateral	
Da	lbg	A	$2\alpha_N$	$2\lambda_N$	c_a	c_L	c_p
mm	mm	cm ²	degrees	mm	N/mm	N/mm	N/mm bar
89	63	45	41	154	45	1.9	0.2
107	81	68	49	195	34	1.9	0.4
121	90	88	49	196	34	2.3	0.7
148	99	136	50	202	32	3.2	1.2
174	104	186	51	204	36	5	1.5
203	104	263	43	181	34	6.2	2.3
255	120	430	37	149	34	11	4.2
312	119	658	32	127	37	19	5.5
365	133	913	31	112	36	29	8.6
400	120	1101	26	109	41	31	8.1
458	126	1439	20	71	78	100	9.6
513	110	1817	16	62	88	128	12
569	92	2244	14	62	105	156	13

Universal expansion joints

for low pressure with plain fixed flanges

Type UFG 01...

PN 1



Type UFG

Nominal diameter	Nominal axial movement absorption	Type	Order No. standard version	Overall length	Weight approx.	Centre-to-centre spacing of bellows	Flange	
							drilling EN 1092	thickness
DN	2δ _N	UFG 01 ...	—	L ₀	G	I*	PN	s
—	mm	—	—	mm	kg	mm	—	mm
50	56	..0050.056.0	425685	398	2.5	257	6	10
65	83	..0065.083.0	425686	438	3.2	279	6	10
80	95	..0080.095.0	425687	448	4	280	6	10
100	119	..0100.119.0	425688	468	5	291	6	10
125	144	..0125.144.0	425689	478	6	286	6	10
150	144	..0150.144.0	423527	491	7	299	6	10
200	160	..0200.160.0	423528	506	13	292	6	16
250	168	..0250.168.0	423529	516	16	293	6	16
300	196	..0300.196.0	423530	506	22	269	6	16
350	180	..0350.180.0	423531	526	26	302	6	16
400	156	..0400.156.0	423532	506	33	266	6	16
450	140	..0450.140.0	423533	506	38	282	6	16
500	136	..0500.136.0	423534	516	40	310	6	16

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%.

Universal expansion joints

for low pressure with plain fixed flanges

Type UFG 01...

PN 1

Bellows			Nominal movement absorption ¹⁾ for 1000 loading cycles		Adjusting force rate		
outside diameter	corrugated length	effective cross-section	angular	lateral	axial	lateral	
Da	lbg	A	2α _N	2λ _N	c _D	c _L	c _P
mm	mm	cm ²	degrees	mm	N/mm	N/mm	N/mm bar
89	81	45	41	154	45	1.9	0.2
107	81	68	49	195	33	1.9	0.4
121	90	88	49	196	33	2.3	0.7
148	99	136	49	202	32	3.2	1.2
174	104	186	51	204	35	5	1.5
203	104	263	43	181	33	6.2	2.3
255	120	430	37	149	33	11	4.2
312	119	658	32	127	37	19	5.5
365	133	913	31	112	36	29	8.6
400	120	1101	26	109	40	31	8.1
458	126	1439	20	71	77	100	9.6
513	110	1817	16	62	88	128	12
569	92	2244	14	62	105	156	13