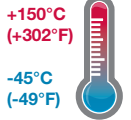


- > Port size: Ø 1/8 ... 2" nominal pipe size, BSPP and BSPT thread
- > For use in areas of vibration
- > Pre-assembled units
- > No special assembly tools or heat required
- > Can be remade without damage to tube
- > Suitable for use on seam welded as well as seamless tube or pipe
- > Thinner tube can be used; as thin as 0,03" (0,8 mm) wall thickness
- > Lower torque requirement on the tube nut than fittings which bite into the tube
- > Will cope with tube misalignment of ±4°
- > Corrosion resistant AL2 alloy
- > Approximately 65% lighter than brass or stainless steel fittings



### Technical features

**Medium:**  
Compressed air, water (plus other media suitable for use with materials of construction).

**Operating pressure:**  
Typically up to 15 bar (218 psi)  
For applications above 15 bar (218 psi) contact Norgren technical service

**Ambient temperature:**  
-45 ... +150°C (-49 ... +302°F)  
with HNBR 'O'-ring (yellow)

**Tube sizes:**  
1/8", 1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"

**Thread sizes:**  
1/8", 1/4", 3/8", 1/2", 3/4", 1", 1 1/2" (BSPT and BSPP)

**Tubing:**  
Designed for use with:  
Copper tube to BS 2871  
Nylon - PA12 (tube support required)  
Stainless Steel tube to AISI 304 and AISI 316

**Testing & approvals:**  
PED 97/23/EC  
Shock & vibration tested to EN 61373 Category 2 (Bogie mounted)  
Salt Spray tested to ISO 9227-06, data on request

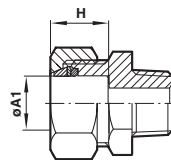
**Materials:**  
Body & Nut: AL2 Aluminium with PA20 anodic treatment to HB 175 hardness  
Washer & clamping: brass, white galvanized  
'O'-Ring: HNBR – colour coded yellow

### Technical data

#### Recommended nut torque settings

Nominal pipe size	Recommended torque	Tube Ø	Recommended torque
1/8"	20 Nm	1"	150 Nm
1/4"	30 Nm	1 1/4"	300 Nm
3/8"	40 Nm	1 1/2"	310 Nm
1/2"	45 Nm	2"	320 Nm
3/4"	90 Nm		

Torque settings based on Railway applications up to 15 bar for use with stainless steel tube

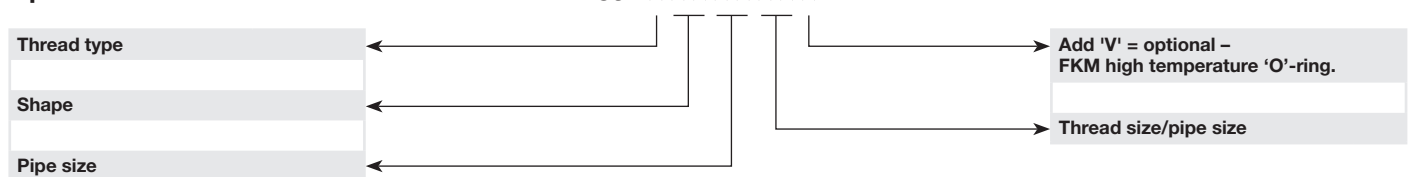


#### Tube stop position and tube outside diameter details

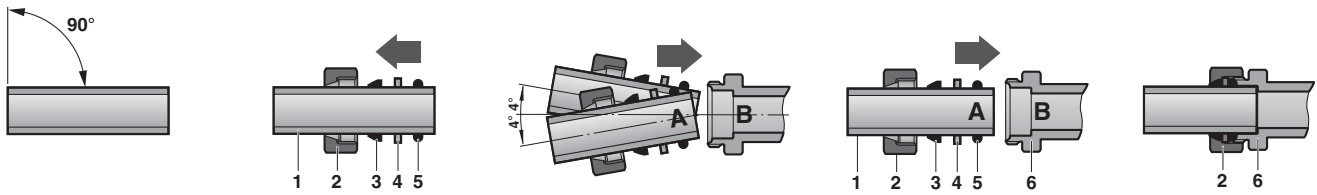
Nominal pipe size	Pipe O/D Ø A1"	Pipe O/D Ø A1 mm	H mm
1/8"	0.405	10,3 ± 0,1	18
1/4"	0.540	13,7 ± 0,2	18,5
3/8"	0.675	17,1 ± 0,13	20
1/2"	0.840	21,3 ± 0,16	20
3/4"	1.050	26,7 ± 0,2	21,5
1"	1.315	33,4 ± 0,3	22,5
1 1/4"	1.660	42,2 ± 0,3	27
1 1/2"	1.900	48,3 ± 0,3	25
2"	2.375	60,3 ± 0,3	35

The information provided in this table are typical values as dimension H will vary slightly with torque applied to the nut. For fittings without tube stops such as straight connector and bulkheads the above tube insertion depths are also applicable

### Option selector












**Method of assembly**







1. Ensure that the end of the tube is cut square and is free from burrs.
2. Slide the nut (2) onto the pipe (1) from right to left. Slide the split ring (3) onto the pipe (1) from right to left keeping the smaller edge towards the nut (2). Slide the washer (4) onto the pipe (1) from right to left. Slide the 'O'-ring (5) onto the pipe (1) from right to left. N.B. The pipe head must be deburred to ensure the 'O'-ring is not damaged.
3. Before installing the pipe fittings, check that the pipes misalignment is not higher than  $\pm 4^\circ$
4. Move the pipe head (A) with all components assembled as shown towards the casing abutment (B). In pipe fittings without abutment (B), the pipe should be inserted as per the tube stop/abutment position listed below.
5. Move the four components from left to right and screw the nut (2) onto the pipe fitting casing (6).





**Straight adaptors and connectors**

Straight adaptor (taper)	Straight adaptor (parallel)	Female adaptor (parallel)	Straight union (equal)	Straight union (unequal)	Bulkhead union	Cap	Straight stem connector (taper)	Straight stem connector (parallel)
83A125	83A225	83A226	83A020	83A020	83A029	83A012	83A115	83A215
								
Page 3	Page 3	Page 4	Page 4	Page 5	Page 5	Page 5	Page 5	Page 6






**Elbow connectors and adaptors**

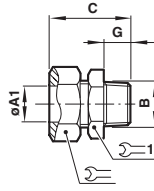
Union elbow (equal)	Union elbow (unequal)	90° Elbow adaptor (taper)	90° Elbow adaptor female (taper)
83A040	83A040	83A145	83A246
			
Page 6	Page 6	Page 7	Page 7



**Tee connectors and adaptors**

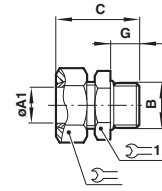
Union tee (equal)	Union tee (unequal)	Tee adaptor (taper)	Tee adaptor female (taper)
83A060	83A060	83A165	83A266
			
Page 8	Page 8	Page 8	Page 9



**Accessories**

Tubing nut	Split ring	Tubing washer	Tubing 'O'-ring	Thread 'O'-ring
83A0F4	83A0J1	83A0E7	8000K	ISO G parallel thread 8000K
				
Page 10	Page 10	Page 10	Page 10	Page 10

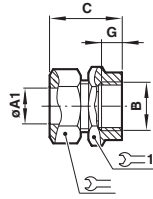
**Straight adaptor (taper)**  
**83A125**


Ø A1 nominal pipe size	Ø A1 mm	B	C	G			Weight (g)	Model
1/8"	10,3	R 1/8	35	10	24	20	25	83A1250118
1/8"	10,3	R 1/4	37	12	24	20	26	83A1250128
1/8"	10,3	R 3/8	37	12	24	20	26	83A1250138
1/8"	10,3	R 1/2	38	13	24	22	30	83A1250148
1/4"	13,7	R 1/8	37	10	28	25	40	83A1250418
1/4"	13,7	R 1/4	39	12	28	25	40	83A1250428
1/4"	13,7	R 3/8	39	12	28	25	40	83A1250438
1/4"	13,7	R 1/2	40	13	28	25	42	83A1250448
1/4"	13,7	R 3/4	42	15	28	28	45	83A1250468
1/4"	13,7	R 1	45	18	28	34	63	83A1250488
3/8"	17,1	R 1/4	40	12	32	27	40	83A1250628
3/8"	17,1	R 3/8	40	12	32	27	42	83A1250638
3/8"	17,1	R 1/2	41	13	32	27	45	83A1250648
3/8"	17,1	R 3/4	43	15	32	28	47	83A1250668
3/8"	17,1	R 1	46	18	32	45	60	83A1250688
1/2"	21,3	R 1/4	41	12	38	34	60	83A1250728
1/2"	21,3	R 3/8	41	12	38	34	63	83A1250738
1/2"	21,3	R 1/2	42	13	38	34	65	83A1250748
1/2"	21,3	R 3/4	44	15	38	34	67	83A1250768
1/2"	21,3	R 1	47	18	38	34	72	83A1250788
3/4"	26,7	R 3/8	42,5	12	45	40	83	83A1250938
3/4"	26,7	R 1/2	43,5	13	45	40	90	83A1250948
3/4"	26,7	R 3/4	45,5	15	45	40	83	83A1250968
3/4"	26,7	R 1	48,5	18	45	40	95	83A1250988
3/4"	26,7	R 1 1/4	48,5	18	45	45	120	83A12509A8
1"	33,4	R 1/2	47,5	13	55	50	130	83A1251048
1"	33,4	R 3/4	49,5	15	55	50	140	83A1251068
1"	33,4	R 1	52,5	18	55	50	145	83A1251088
1"	33,4	R 1 1/4	52,5	18	55	50	145	83A12510A8
1"	33,4	R 1 1/2	54,5	20	55	50	155	83A12510B8
1 1/4"	42,2	R 3/4	50,5	15	70	60	200	83A1251168
1 1/4"	42,2	R 1	53,5	18	70	60	195	83A1251188
1 1/4"	42,2	R 1 1/4	53,5	18	70	60	210	83A12511A8
1 1/4"	42,2	R 1 1/2	58	20	70	60	210	83A12511B8
1 1/4"	42,2	R 2	62,5	20	70	60	220	83A12511C8
1 1/2"	48,3	R 1	54,5	18	70	70	215	83A1251288
1 1/2"	48,3	R 1 1/4	54,5	18	70	70	230	83A12512A8
1 1/2"	48,3	R 1 1/2	56,5	20	70	70	220	83A12512B8
1 1/2"	48,3	R 2	61,5	20	70	70	255	83A12512C8
2"	60,3	R 1 1/4	60,5	18	84	80	280	83A12513A8
2"	60,3	R 1 1/2	62,5	20	84	80	310	83A12513B8
2"	60,3	R 2	62,5	20	84	80	325	83A12513C8

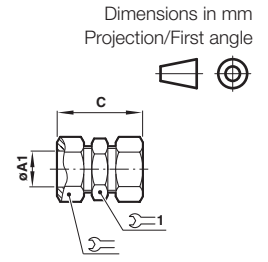
**Straight adaptor (parallel)**  
**83A225**

 Dimensions in mm  
 Projection/First angle




Ø A1 nominal pipe size	Ø A1 mm	B	C	G			Weight (g)	Model
1/8"	10,3	G 1/8	30,5	6	24	22	23	83A2250118
1/8"	10,3	G 1/4	33,5	8	24	22	25	83A2250128
1/8"	10,3	G 3/8	34,5	8	24	24	32	83A2250138
1/8"	10,3	G 1/2	38,5	10	24	32	36	83A2250148
1/4"	13,7	G 1/8	33	6	28	24	39	83A2250418
1/4"	13,7	G 1/4	35	8	28	24	40	83A2250428
1/4"	13,7	G 3/8	35	8	28	24	40	83A2250438
1/4"	13,7	G 1/2	39	10	28	32	45	83A2250448
1/4"	13,7	G 3/4	45	14	28	38	65	83A2250468
1/4"	13,7	G 1	47	14	28	45	80	83A2250488
3/8"	17,1	G 1/4	34,5	8	32	27	40	83A2250628
3/8"	17,1	G 3/8	35	8	32	27	40	83A2250638
3/8"	17,1	G 1/2	39	10	32	32	48	83A2250648
3/8"	17,1	G 3/4	45	14	32	38	60	83A2250668
3/8"	17,1	G 1	45	14	32	45	95	83A2250688
1/2"	21,3	G 1/4	38	8	38	32	60	83A2250728
1/2"	21,3	G 3/8	38	8	38	32	60	83A2250738
1/2"	21,3	G 1/2	40	10	38	32	62	83A2250748
1/2"	21,3	G 3/4	45	14	38	38	70	83A2250768
1/2"	21,3	G 1	46	14	38	45	105	83A2250788
3/4"	26,7	G 1/4	35	8	45	38	83	83A2250928
3/4"	26,7	G 3/8	36,5	8	45	38	85	83A2250938
3/4"	26,7	G 1/2	41	10	45	38	85	83A2250948
3/4"	26,7	G 3/4	45	14	45	38	90	83A2250968
3/4"	26,7	G 1	47	14	45	45	115	83A2250988
3/4"	26,7	G 1 1/4	49	16	45	60	170	83A22509A8
1"	33,4	G 1/2	43,5	10	55	50	135	83A2251048
1"	33,4	G 3/4	49,5	14	55	50	140	83A2251068
1"	33,4	G 1	49,5	14	55	50	145	83A2251088
1"	33,4	G 1 1/4	53,5	16	55	60	190	83A22510A8
1"	33,4	G 1 1/2	54	16	55	70	200	83A22510B8
1 1/4"	42,2	G 3/4	48,5	14	70	60	210	83A2251168
1 1/4"	42,2	G 1	50,5	14	70	60	200	83A2251188
1 1/4"	42,2	G 1 1/4	51,5	16	70	60	200	83A22511A8
1 1/4"	42,2	G 1 1/2	51,5	16	70	70	230	83A22511B8
1 1/2"	48,3	G 1	51,5	14	70	70	235	83A2251288
1 1/2"	48,3	G 1 1/4	58,5	16	70	70	235	83A22512A8
1 1/2"	48,3	G 1 1/2	58,5	16	70	70	240	83A22512B8
1 1/2"	48,3	G 2	60,5	18	70	75	340	83A22512C8
2"	60,3	G 1 1/4	62,5	16	84	80	420	83A22513A8
2"	60,3	G 1 1/2	62,5	16	84	80	420	83A22513B8
2"	60,3	G 2	64,5	18	84	80	430	83A22513C8



**Female adaptor (parallel)**  
**83A226**

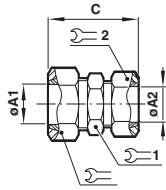


**Straight union (equal)**  
**83A020**

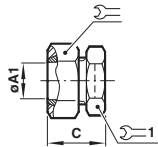
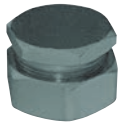


Ø A1 nominal pipe size	Ø A1 mm	B	C	G		 1	Weight (g)	Model
1/8"	10,3	G 1/8	28,5	11	18	24	25	83A2260118
1/8"	10,3	G 1/4	30,5	12	22	24	30	83A2260128
1/8"	10,3	G 3/8	31,5	12,5	25	24	35	83A2260138
1/8"	10,3	G 1/2	32,5	13	32	24	40	83A2260148
1/4"	13,7	G 1/8	34	11	23	28	40	83A2260418
1/4"	13,7	G 1/4	34	12	23	28	45	83A2260428
1/4"	13,7	G 3/8	34	12,5	25	28	45	83A2260438
1/4"	13,7	G 1/2	37	13	30	28	55	83A2260448
1/4"	13,7	G 3/4	38	15	38	28	60	83A2260468
1/4"	13,7	G 1	39	18	50	28	75	83A2260488
3/8"	17,1	G 1/4	33	12	27	32	45	83A2260628
3/8"	17,1	G 3/8	34,5	12,5	27	32	45	83A2260638
3/8"	17,1	G 1/2	35,5	13	30	32	50	83A2260648
3/8"	17,1	G 3/4	39,5	15	38	32	55	83A2260668
3/8"	17,1	G 1	40,5	18	50	32	75	83A2260688
1/2"	21,3	G 1/4	32,5	12	32	38	55	83A2260728
1/2"	21,3	G 3/8	34,5	12,5	32	38	65	83A2260738
1/2"	21,3	G 1/2	36	13	32	38	60	83A2260748
1/2"	21,3	G 3/4	40	15	38	38	70	83A2260768
1/2"	21,3	G 1	43	18	50	38	100	83A2260788
3/4"	26,7	G 1/4	34,5	12	38	45	85	83A2260928
3/4"	26,7	G 3/8	34,5	12,5	38	45	85	83A2260938
3/4"	26,7	G 1/2	35	13	38	45	88	83A2260948
3/4"	26,7	G 3/4	37,5	15	38	45	85	83A2260968
3/4"	26,7	G 1	42,5	18	50	45	120	83A2260988
3/4"	26,7	G 1 1/4	44,5	20	60	45	140	83A22609A8
3/4"	26,7	G 1 1/2	45,5	20	70	45	170	83A22609B8
1"	33,4	G 1/2	38,5	13	50	55	140	83A2261048
1"	33,4	G 3/4	41,5	15	50	55	140	83A2261068
1"	33,4	G 1	43,5	18	50	55	145	83A2261088
1"	33,4	G 1 1/4	44,5	20	60	55	155	83A22610A8
1"	33,4	G 1 1/2	47,5	20	70	55	180	83A22610B8
1 1/4"	42,2	G 3/4	46	15	60	70	225	83A2261168
1 1/4"	42,2	G 1	47	18	60	70	230	83A2261188
1 1/4"	42,2	G 1 1/4	47	20	60	70	240	83A22611A8
1 1/4"	42,2	G 1 1/2	48	20	70	70	245	83A22611B8
1 1/4"	42,2	G 2	48	22	80	70	280	83A22611C8
1 1/2"	48,3	G 1	47,5	18	70	70	225	83A2261288
1 1/2"	48,3	G 1 1/4	47,5	20	70	70	230	83A22612A8
1 1/2"	48,3	G 1 1/2	48	20	70	70	235	83A22612B8
1 1/2"	48,3	G 2	51	22	80	70	290	83A22612C8
2"	60,3	G 1 1/4	51,5	20	80	84	330	83A22613A8
2"	60,3	G 1 1/2	53,5	20	80	84	340	83A22613B8
2"	60,3	G 2	54,5	22	80	84	360	83A22613C8

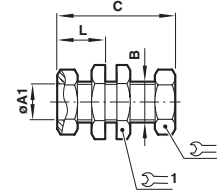
Ø A1 nominal pipe size	Ø A1 mm	C		 1	Weight (g)	Model
1/8"	10,3	44	24	20	32	83A0200100
1/4"	13,7	47	28	25	53	83A0200400
3/8"	17,1	48	32	28	55	83A0200600
1/2"	21,3	50	38	34	82	83A0200700
3/4"	26,7	53	45	45	120	83A0200900
1"	33,4	57	55	50	190	83A0201000
1 1/4"	42,2	62	70	60	270	83A0201100
1 1/2"	48,3	63	70	70	300	83A0201200
2"	60,3	72	84	80	470	83A0201300

**Straight union (unequal)**  
**83A020**


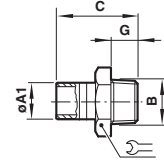
Ø A1 nominal pipe size	Ø A1 mm	Ø A2 nominal pipe size	Ø A2 mm	C			Weight (g)	Model	
1/4"	13,7	1/8"	10,3	45	28	24	25	48	83A0200401
3/8"	17,1	1/8"	10,3	45,5	32	24	27	50	83A0200601
3/8"	17,1	1/4"	13,7	45,5	32	28	27	60	83A0200604
1/2"	21,3	1/4"	13,7	47	38	28	34	75	83A0200704
1/2"	21,3	3/8"	17,1	47,5	38	32	34	75	83A0200706
3/4"	26,7	1/4"	13,7	48,5	45	28	40	95	83A0200904
3/4"	26,7	3/8"	17,1	49	45	32	40	95	83A0200906
3/4"	26,7	1/2"	21,3	50,5	45	38	40	105	83A0200907
1"	33,4	3/8"	17,1	54,5	55	32	50	145	83A0201006
1"	33,4	1/2"	21,3	55	55	38	50	155	83A0201007
1"	33,4	3/4"	26,7	56,5	55	45	50	165	83A0201009
1 1/4"	42,2	1/2"	21,3	54	70	38	60	220	83A0201107
1 1/4"	42,2	3/4"	26,7	55,5	70	45	60	230	83A0201109
1 1/4"	42,2	1"	33,4	59	70	55	60	245	83A0201110
1 1/2"	48,3	1"	33,4	60	70	55	70	280	83A0201210
1 1/2"	48,3	1 1/4"	42,2	60	70	70	70	300	83A0201211
2"	60,3	1"	33,4	65	84	55	80	370	83A0201310
2"	60,3	1 1/4"	42,2	65	84	70	80	390	83A0201311
2"	60,3	1 1/2"	48,3	68	84	70	80	410	83A0201312

**Cap**  
**83A012**


Ø A1 nominal pipe size	Ø A1 mm	C			Weight (g)	Model
1/8"	10,3	24,5	24	22	25	83A0120100
1/4"	13,7	24,5	28	24	35	83A0120400
3/8"	17,1	27	32	27	40	83A0120600
1/2"	21,3	26,5	38	34	55	83A0120700
3/4"	26,7	30	45	40	80	83A0120900
1"	33,4	33,5	55	50	130	83A0121000
1 1/4"	42,2	34,5	70	60	200	83A0121100
1 1/2"	48,3	36,5	70	70	230	83A0121200
2"	60,3	41,5	84	75	300	83A0121300

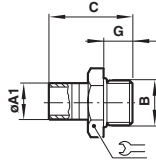
**Bulkhead union**  
**83A029**

 Dimensions in mm  
 Projection/First angle



Ø A1 nominal pipe size	Ø A1 mm	Ø B	C	L			Weight (g)	Model
1/8"	10,3	19	59	24,5	24	23	55	83A0290100
1/4"	13,7	24	64	26,5	28	30	115	83A0290400
3/8"	17,1	27	64	27	32	32	120	83A0290600
1/2"	21,3	33	67	28,5	38	38	130	83A0290700
3/4"	26,7	39	69	30	45	45	170	83A0290900
1"	33,4	47	77	34,5	55	55	290	83A0291000
1 1/4"	42,2	59	83	34,5	70	70	390	83A0291100
1 1/2"	48,3	64	83	35,5	70	75	460	83A0291200
2"	60,3	77	99	41,5	84	90	690	83A0291300

**Straight stem connector (taper)**  
**83A115**


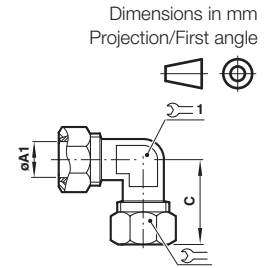
Ø A1 nominal pipe size	Ø A1 mm	B	C	G		Weight (g)	Model
1/8"	10,3	R 1/8	34,5	10	12	10	83A1150118
1/8"	10,3	R 1/4	36,5	12	14	12	83A1150128
1/4"	13,7	R 1/4	38	12	14	12	83A1150428
1/4"	13,7	R 3/8	38	12	18	15	83A1150438
1/4"	13,7	R 1/2	39	12	22	20	83A1150448
3/8"	17,1	R 3/8	39	12	18	18	83A1150638
3/8"	17,1	R 1/2	40	13	22	23	83A1150648
3/8"	17,1	R 3/4	42	15	28	32	83A1150668
1/2"	21,3	R 3/8	40	12	23	23	83A1150738
1/2"	21,3	R 1/2	41	13	23	25	83A1150748
1/2"	21,3	R 3/4	43	15	28	30	83A1150768
1/2"	21,3	R 1	46	18	34	45	83A1150788
3/4"	26,7	R 3/8	43	12	28	32	83A1150938
3/4"	26,7	R 1/2	44	13	28	35	83A1150948
3/4"	26,7	R 3/4	46	15	28	40	83A1150968
3/4"	26,7	R 1	49	18	34	55	83A1150988
1"	33,4	R 1/2	46	13	38	53	83A1151048
1"	33,4	R 3/4	48	15	38	55	83A1151068
1"	33,4	R 1	51	18	38	65	83A1151088
1"	33,4	R 1 1/4	51	18	45	80	83A11510A8
1"	33,4	R 1 1/2	55	20	50	85	83A11510B8
1 1/4"	42,2	R 1	56,5	18	45	95	83A1151188
1 1/4"	42,2	R 1 1/4	56,5	18	45	100	83A11511A8
1 1/4"	42,2	R 1 1/2	58,5	20	50	110	83A11511B8
1 1/4"	42,2	R 2	58,5	20	70	140	83A11511C8
1 1/2"	48,3	R 1	57,5	18	50	110	83A1151288
1 1/2"	48,3	R 1 1/4	57,5	18	50	115	83A11512A8
1 1/2"	48,3	R 1 1/2	59,5	20	50	120	83A11512B8
1 1/2"	48,3	R 2	59,5	20	70	150	83A11512C8
2"	60,3	R 1	65	18	70	180	83A1151388
2"	60,3	R 1 1/4	65	18	70	185	83A11513A8
2"	60,3	R 1 1/2	67	20	70	190	83A11513B8
2"	60,3	R 2	67	20	70	200	83A11513C8



**Straight stem connector (parallel)**  
**83A215**



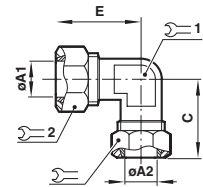
Ø A1 nominal pipe size	Ø A1 mm	B	C	G		Weight (g)	Model
1/8"	10,3	G 1/8	18	6	30,5	8	83A2150118
1/8"	10,3	G 1/4	22	8	33,5	10	83A2150128
1/4"	13,7	G 1/4	22	8	34	15	83A2150428
1/4"	13,7	G 3/8	24	8	34	20	83A2150438
1/4"	13,7	G 1/2	32	10	38	25	83A2150448
3/8"	17,1	G 3/8	24	8	35	20	83A2150638
3/8"	17,1	G 1/2	32	10	39	30	83A2150648
3/8"	17,1	G 3/4	38	14	43	42	83A2150668
1/2"	21,3	G 3/8	24	8	36	23	83A2150738
1/2"	21,3	G 1/2	32	10	40	35	83A2150748
1/2"	21,3	G 3/4	38	14	44	42	83A2150768
1/2"	21,3	G 1	50	14	46	80	83A2150788
3/4"	26,7	G 3/8	24	8	38	30	83A2150938
3/4"	26,7	G 1/2	32	10	42	40	83A2150948
3/4"	26,7	G 3/4	38	14	46	50	83A2150968
3/4"	26,7	G 1	50	14	48	75	83A2150988
1"	33,4	G 1/2	32	10	44	48	83A2151048
1"	33,4	G 3/4	38	14	48	60	83A2151068
1"	33,4	G 1	50	14	50	70	83A2151088
1"	33,4	G 1 1/4	60	16	54	130	83A21510A8
1"	33,4	G 1 1/2	70	16	57	190	83A21510B8
1 1/4"	42,2	G 1	50	14	53,5	75	83A2151188
1 1/4"	42,2	G 1 1/4	60	16	57,5	165	83A21511A8
1 1/4"	42,2	G 1 1/2	70	16	60,5	210	83A21511B8
1 1/4"	42,2	G 2	75	18	64,5	220	83A21511C8
1 1/2"	48,3	G 1	50	14	54,5	140	83A2151288
1 1/2"	48,3	G 1 1/4	60	16	61,5	180	83A21512A8
1 1/2"	48,3	G 1 1/2	70	16	61,5	220	83A21512B8
1 1/2"	48,3	G 2	75	18	65,5	230	83A21512C8
2"	60,3	G 1	60	14	61	180	83A2151388
2"	60,3	G 1 1/4	60	16	68	195	83A21513A8
2"	60,3	G 1 1/2	70	16	68	235	83A21513B8
2"	60,3	G 2	75	18	70	240	83A21513C8



**Union elbow (equal)**  
**83A040**

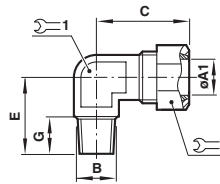


Ø A1 nominal pipe size	Ø A1 mm	C		 1	Weight (g)	Model
1/8"	10,3	33	24	14	45	83A0400100
1/4"	13,7	33	28	18	60	83A0400400
3/8"	17,1	39	32	22	65	83A0400600
1/2"	21,3	39,5	38	28	100	83A0400700
3/4"	26,7	43	45	32	135	83A0400900
1"	33,4	51,5	55	40	225	83A0401000
1 1/4"	42,2	58,5	70	50	345	83A0401100
1 1/2"	48,3	61,5	70	55	370	83A0401200
2"	60,3	65,5	84	67	585	83A0401300

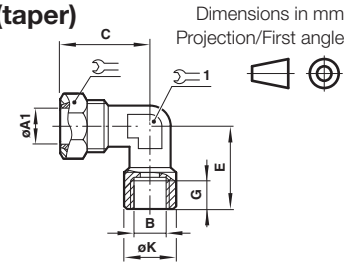
**Union elbow (unequal)**  
**83A040**



Ø A1 nominal pipe size	Ø A1 mm	Ø A2 nominal pipe size	Ø A2 mm	C	E	 1	 2	Weight (g)	Model	
1/4"	13,7	1/8"	10,3	34	38	24	28	18	60	83A0400401
3/8"	17,1	1/8"	10,3	35,5	39,5	24	32	20	62	83A0400601
3/8"	17,1	1/4"	13,7	39	30,5	28	32	20	70	83A0400604
1/2"	23,3	1/4"	13,7	40	39	28	38	27	95	83A0400704
1/2"	23,3	3/8"	17,1	41	38	32	38	27	95	83A0400706
3/4"	26,7	1/4"	13,7	42,5	42	28	45	32	125	83A0400904
3/4"	26,7	3/8"	17,1	42,5	42	32	45	32	125	83A0400906
3/4"	26,7	1/2"	23,3	41	44	38	45	32	130	83A0400907
1"	33,4	1/4"	13,7	48	52	28	55	41	190	83A0401004
1"	33,4	3/8"	17,1	49,5	52	32	55	41	195	83A0401006
1"	33,4	1/2"	23,3	48,5	50,5	38	55	41	210	83A0401007
1"	33,4	3/4"	26,7	50,5	52	45	55	41	220	83A0401009
1 1/4"	42,2	3/4"	26,7	55,5	57,5	45	70	50	260	83A0401109
1 1/4"	42,2	1"	33,4	57,5	57	55	70	50	350	83A0401110
1 1/2"	48,3	1"	33,4	62	61,5	55	70	55	420	83A0401210
1 1/2"	48,3	1 1/4"	42,2	61,5	62	70	70	55	410	83A0401211
2"	60,3	1 1/4"	42,2	67,5	76	70	84	67	650	83A0401311
2"	60,3	1 1/2"	48,3	68,5	76	70	84	67	610	83A0401312

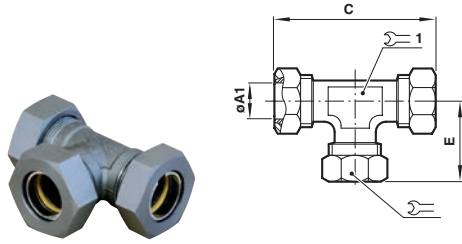
**90° Elbow adaptor (taper)**  
**83A145**


Ø A1 nominal pipe size	Ø A1 mm	B	C	E	G	1/16"	1/16"	Weight (g)	Model
1/8"	10,3	R 1/8	33	22,5	10	24	14	30	83A1450118
1/8"	10,3	R 1/4	32	25,6	13,7	24	14	28	83A1450128
1/8"	10,3	R 3/8	33	25,2	13,7	24	14	32	83A1450138
1/8"	10,3	R 1/2	33,5	29,1	15	24	18	38	83A1450148
1/4"	13,7	R 1/8	36	25,5	10	28	18	40	83A1450418
1/4"	13,7	R 1/4	36,5	27,5	12	28	18	40	83A1450428
1/4"	13,7	R 3/8	36,5	27,5	12	28	18	42	83A1450438
1/4"	13,7	R 1/2	37	30	12,1	28	18	45	83A1450448
1/4"	13,7	R 3/4	37	33	17	28	20	53	83A1450468
1/4"	13,7	R 1	40	39,3	20,5	28	27	83	83A1450488
3/8"	17,1	R 1/4	39	29	12	32	22	50	83A1450628
3/8"	17,1	R 3/8	39	29	12	32	22	50	83A1450638
3/8"	17,1	R 1/2	39,5	29,2	15	32	22	46	83A1450648
3/8"	17,1	R 3/4	42	32,5	17	32	20	50	83A1450668
3/8"	17,1	R 1	43	40	18	32	27	50	83A1450688
1/2"	21,3	R 1/8	39,5	29,5	10	38	27	65	83A1450718
1/2"	21,3	R 1/4	39,5	31,5	12	38	27	75	83A1450728
1/2"	21,3	R 3/8	39,5	31,2	12,5	38	27	80	83A1450738
1/2"	21,3	R 1/2	38,5	32,9	13	38	27	80	83A1450748
1/2"	21,3	R 3/4	39,5	35,5	15	38	27	83	83A1450768
1/2"	21,3	R 1	38,5	39	17,5	38	27	83	83A1450788
3/4"	21,3	R 1/4	43	35	12	45	32	110	83A1450928
3/4"	21,3	R 3/8	43	35	12,5	45	32	110	83A1450938
3/4"	21,3	R 1/2	44	34,5	13,7	45	32	108	83A1450948
3/4"	21,3	R 3/4	43	37	15,5	45	32	108	83A1450968
3/4"	21,3	R 1	42	40,2	20,5	45	32	115	83A1450988
3/4"	21,3	R 1 1/4	42	42	18,8	45	32	175	83A14509A8
3/4"	21,3	R 1 1/2	43,5	52	20	45	50	250	83A14509B8
1"	33,4	R 1/2	52,5	42,3	13,7	55	41	200	83A1451048
1"	33,4	R 3/4	51,5	43,9	15	55	41	200	83A1451068
1"	33,4	R 1	53	47	18	55	41	195	83A1451088
1"	33,4	R 1 1/4	51,5	47,5	20,5	55	41	195	83A14510A8
1"	33,4	R 1 1/2	51,5	51,3	22,5	55	41	185	83A14510B8
1 1/4"	42,2	R 3/4	57	48,5	15	70	50	295	83A1451168
1 1/4"	42,2	R 1	57,5	52	18	70	50	300	83A1451188
1 1/4"	42,2	R 1 1/4	57,5	52,5	18,5	70	50	320	83A14511A8
1 1/4"	42,2	R 1 1/2	58,5	52,7	20	70	50	300	83A14511B8
1 1/4"	42,2	R 2	57	53,5	20	70	67	500	83A14511C8
1 1/2"	48,3	R 1	60,5	56,5	18	70	55	390	83A1451288
1 1/2"	48,3	R 1 1/4	57,5	52,7	18,5	70	55	390	83A14512A8
1 1/2"	48,3	R 1 1/2	61,5	57	20	70	55	370	83A14512B8
1 1/2"	48,3	R 2	62	57,5	20	70	67	500	83A14512C8
2"	60,3	R 1 1/4	71	58,9	18	84	67	600	83A14513A8
2"	60,3	R 1 1/2	70,5	58,3	20	84	67	580	83A14513B8
2"	60,3	R 2	71,5	57,8	20	84	67	570	83A14513C8

**90° Elbow adaptor female (taper)**  
**83A246**


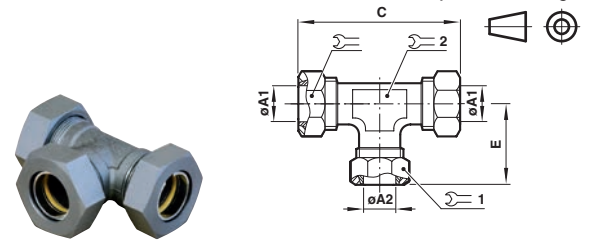
Ø A1 nominal pipe size	Ø A1 mm	B	C	E	G	Ø K	1/16"	1/16"	Weight (g)	Model
1/8"	10,3	G 1/8	32	29	11	18	24	14	35	83A2460118
1/8"	10,3	G 1/4	38	30	12	22	24	18	45	83A2460128
1/8"	10,3	G 3/8	38	33	12,5	25	24	20	53	83A2460138
1/8"	10,3	G 1/2	38	37	13	30	24	27	83	83A2460148
1/4"	13,7	G 1/8	37,5	29	11	18	28	18	48	83A2460418
1/4"	13,7	G 1/4	36,5	30	12	22	28	18	50	83A2460428
1/4"	13,7	G 3/8	37,5	32,5	12,5	25	28	20	53	83A2460438
1/4"	13,7	G 1/2	39,5	36,5	13	30	28	27	90	83A2460448
1/4"	13,7	G 3/4	39,5	39	15	37	32	27	95	83A2460468
3/8"	17,1	G 1/4	39,5	31	12	22	32	22	55	83A2460628
3/8"	17,1	G 3/8	39,5	30,5	12,5	25	32	22	55	83A2460638
3/8"	17,1	G 1/2	41	40,5	13	30	32	27	105	83A2460648
3/8"	17,1	G 3/4	40,5	39,5	15	37	32	27	90	83A2460668
1/2"	21,3	G 1/4	39	33,5	12	22	38	27	90	83A2460728
1/2"	21,3	G 3/8	39	33,5	12,5	25	38	27	85	83A2460738
1/2"	21,3	G 1/2	39,5	36,5	13	30	38	27	95	83A2460748
1/2"	21,3	G 3/4	38,5	41,5	15	37	38	27	100	83A2460768
1/2"	21,3	G 1	43	43,5	18	45	38	32	150	83A2460788
3/4"	26,7	G 3/8	43	35,5	12,5	25	45	32	120	83A2460938
3/4"	26,7	G 1/2	43,5	36	13	30	45	32	120	83A2460948
3/4"	26,7	G 3/4	42,5	44	15	37	45	32	130	83A2460968
3/4"	26,7	G 1	43,5	44	18	45	45	32	135	83A2460988
1"	33,4	G 3/8	52	47	12,5	25	55	40	200	83A2461038
1"	33,4	G 1/2	51	47	13	30	55	40	200	83A2461048
1"	33,4	G 3/4	52	45	15	37	55	40	195	83A2461068
1"	33,4	G 1	51	50,5	18	45	55	40	210	83A2461088
1"	33,4	G 1 1/4	55	53	20	55	55	50	330	83A24610A8
1"	33,4	G 1 1/2	58,5	55,5	20	63	55	50	350	83A24610B8
1 1/4"	42,2	G 1	58	53	18	45	70	50	385	83A2461188
1 1/4"	42,2	G 1 1/4	57,5	56,5	20	55	70	50	390	83A24611A8
1 1/4"	42,2	G 1 1/2	57	55	20	63	70	50	390	83A24611B8
1 1/2"	48,3	G 1	60	56	18	45	70	55	385	83A2461288
1 1/2"	48,3	G 1 1/4	62	56	20	55	70	55	380	83A24612A8
1 1/2"	48,3	G 1 1/2	61,5	51,5	20	63	70	55	370	83A24612B8
1 1/2"	48,3	G 2	65	57	22	75	70	67	530	83A24612C8
2"	60,3	G 1 1/4	72	57	20	55	84	67	580	83A24613A8
2"	60,3	G 1 1/2	73	57,5	20	63	84	67	580	83A24613B8
2"	60,3	G 2	73	58,5	22	75	84	67	600	83A24613C8

**Union tee (equal)**  
**83A060**



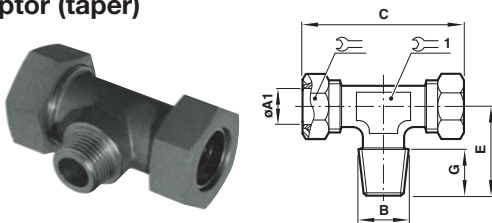
Ø A1 nominal pipe size	Ø A1 mm	C	E	1/2"	1/2"	Weight (g)	Model
1/8"	10,3	63	31,5	24	14	60	83A0600100
1/4"	13,7	73	36,5	28	18	85	83A0600400
3/8"	17,1	77	38,5	32	22	90	83A0600600
1/2"	21,3	79	39,5	38	27	140	83A0600700
3/4"	26,7	85	42,5	45	32	180	83A0600900
1"	33,4	103	51,5	55	40	285	83A0601000
1 1/4"	42,2	117	58,5	70	50	455	83A0601100
1 1/2"	48,3	122	61	70	55	495	83A0601200
2"	60,3	148	74	84	67	810	83A0601300

**Union tee (unequal)**  
**83A060**



Ø A1 nominal pipe size	Ø A1 mm	Ø A2 nominal pipe size	Ø A2 mm	C	E	1/2"	1/2"	1"	Weight (g)	Model
1/8"	10,3	1/4"	13,7	67,5	37	24	28	18	46	83A0600104
1/8"	10,3	3/8"	17,1	67,5	40,5	24	32	20	50	83A0600106
1/4"	13,7	3/8"	17,1	70	39,5	28	32	20	90	83A0600406
3/8"	17,1	1/4"	13,7	74	37,5	32	28	20	90	83A0600604
3/8"	17,1	1/2"	21,3	78	39	32	38	27	125	83A0600607
1/2"	21,3	1/4"	13,7	78,5	40	38	28	27	128	83A0600704
1/2"	21,3	3/8"	17,1	78	40,5	38	32	27	120	83A0600706
1/2"	21,3	3/4"	26,7	81	42,5	38	45	32	170	83A0600709
3/4"	26,7	1/4"	13,7	85	42	45	28	32	160	83A0600904
3/4"	26,7	3/8"	17,1	85	42,5	45	32	32	165	83A0600906
3/4"	26,7	1/2"	21,3	84,5	41,5	45	38	32	175	83A0600907
1"	33,4	3/8"	17,1	103	50	55	32	40	265	83A0601006
1"	33,4	1/2"	21,3	103	50,5	55	38	40	275	83A0601007
1"	33,4	3/4"	26,7	103	50,5	55	45	40	290	83A0601009
1 1/4"	42,2	3/4"	26,7	115	56,5	70	45	50	360	83A0601109
1 1/4"	42,2	1"	33,4	113	59	70	55	50	480	83A0601110
1 1/2"	48,3	1"	33,4	122	61,5	70	55	55	520	83A0601210
1 1/2"	48,3	1 1/4"	42,2	125	64	70	70	55	550	83A0601211
2"	60,3	1 1/4"	42,2	146	70,5	84	70	67	760	83A0601311
2"	60,3	1 1/2"	48,3	146	69,5	84	70	67	790	83A0601312

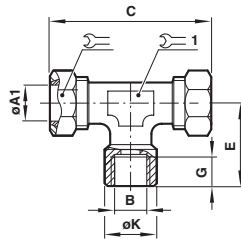
**Tee adaptor (taper)**  
**83A165**





Ø A1 nominal pipe size	Ø A1 mm	B	C	E	G	1/2"	1/2"	Weight (g)	Model
1/8"	10,3	R 1/8	62	22	10	24	14	45	83A1650118
1/4"	13,7	R 1/8	74	25	10	28	18	65	83A1650418
1/4"	13,7	R 1/4	74,5	27,5	12	28	18	70	83A1650428
1/4"	13,7	R 3/8	74	27	12	28	18	70	83A1650438
1/4"	13,7	R 1/2	72,5	29	13	28	18	70	83A1650448
3/8"	17,1	R 1/4	80	28	12	32	20	75	83A1650628
3/8"	17,1	R 3/8	76	28	12	32	20	75	83A1650638
3/8"	17,1	R 1/2	78	31	13	32	20	75	83A1650648
1/2"	21,3	R 1/4	78	32	12	38	27	110	83A1650728
1/2"	21,3	R 3/8	79,5	32,5	12	38	27	115	83A1650738
1/2"	21,3	R 1/2	79,5	33	13	38	27	120	83A1650748
1/2"	21,3	R 3/4	79	35	15	38	27	120	83A1650768
3/4"	26,7	R 1/2	86	34	13	45	32	160	83A1650948
3/4"	26,7	R 3/4	85,5	34	15	45	32	160	83A1650968
3/4"	26,7	R 1	86	34	18	45	33	165	83A1650988
1"	33,4	R 1/2	102	37	13	55	40	255	83A1651048
1"	33,4	R 3/4	102	39	15	55	40	255	83A1651068
1"	33,4	R 1	102,5	41	18	55	40	255	83A1651088
1"	33,4	R 1 1/4	102	42	18	55	40	265	83A16510A8
1 1/4"	42,2	R 1	115,5	49,5	18	70	50	430	83A1651188
1 1/4"	42,2	R 1 1/4	117	50	18	70	50	420	83A16511A8
1 1/4"	42,2	R 1 1/2	114	49	20	70	50	440	83A16511B8
1 1/2"	48,3	R 1	123	50	18	70	55	460	83A1651288
1 1/2"	48,3	R 1 1/4	123	50	18	70	55	470	83A16512A8
1 1/2"	48,3	R 1 1/2	123	51,5	20	70	55	480	83A16512B8
1 1/2"	48,3	R 2	123	52	20	70	67	480	83A16512C8
2"	60,3	R 1 1/4	145	50	18	84	67	720	83A16513A8
2"	60,3	R 1 1/2	145	52	20	84	67	790	83A16513B8
2"	60,3	R 2	145	52	20	84	67	800	83A16513C8

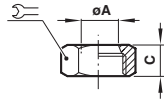



**Tee adaptor female (taper)**  
**83A266**

 Dimensions in mm  
 Projection/First angle


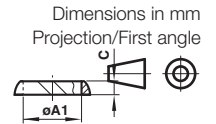
Ø A1 nominal pipe size	Ø A1 mm	B	C	E	G	Ø K		 1	Weight (g)	Model
1/8"	10,3	G 1/8	67,5	29,5	11	18	24	18	75	83A2660118
1/4"	13,7	G 1/8	71	28	11	18	28	18	85	83A2660418
1/4"	13,7	G 1/4	71,5	30	12	22	28	18	85	83A2660428
1/4"	13,7	G 3/8	74	30	12,5	25	28	20	90	83A2660438
1/4"	13,7	G 1/2	79,5	31	13	30	28	27	130	83A2660468
3/8"	17,1	G 1/4	81	32	12	22	32	20	80	83A2660628
3/8"	17,1	G 3/8	81	32	12,5	25	32	22	80	83A2660638
3/8"	17,1	G 1/2	82,5	31	13	30	32	27	110	83A2660648
1/2"	21,3	G 1/4	77	33	12	22	38	27	120	83A2660728
1/2"	21,3	G 3/8	78,5	31	12,5	25	38	27	120	83A2660738
1/2"	21,3	G 1/2	78,5	31	13	30	38	27	130	83A2660748
1/2"	21,3	G 3/4	82	33	15	37	38	32	150	83A2660768
3/4"	26,7	G 1/2	85	32	13	30	45	33	165	83A2660948
3/4"	26,7	G 3/4	86	32,5	15	37	45	32	145	83A2660968
3/4"	26,7	G 1	100,5	40	18	45	45	40	250	83A2660988
1"	33,4	G 1/2	102	41	13	30	55	40	270	83A2661048
1"	33,4	G 3/4	103	40	15	37	55	40	265	83A2661068
1"	33,4	G 1	103	41	18	45	55	40	255	83A2661088
1 1/4"	42,2	G 1	119,5	49	18	45	70	50	440	83A2661188
1 1/2"	48,3	G 1	122	50	18	45	70	55	480	83A2661288
1 1/2"	48,3	G 1 1/4	123	50	20	55	70	55	560	83A26612A8
2"	60,3	G 1 1/4	149	59	20	55	84	67	580	83A26613A8
2"	60,3	G 1 1/2	148	59	20	63	84	67	590	83A26613B8
2"	60,3	G 2	145	59	22	75	84	67	600	83A26613C8

**Tube nut**  
**83A0F4**



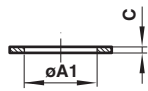
$\varnothing A$ for nominal pipe size	$\varnothing A$ mm	C		Model
1/8"	10,3	15	24	83A0F40100
1/4"	13,7	15,5	28	83A0F40400
3/8"	17,1	15,5	32	83A0F40600
1/2"	21,3	16	38	83A0F40700
3/4"	26,7	17,5	45	83A0F40900
1"	33,4	18,5	55	83A0F41000
1 1/4"	42,2	20,5	70	83A0F41100
1 1/2"	48,3	21	70	83A0F41200
2"	60,3	24,5	84	83A0F41300

**Split ring**  
**83A0J1**



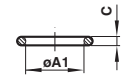
$\varnothing A$ for nominal pipe size	$\varnothing A$ 1 mm	C	Model
1/8"	10,5	5	83A0J10100
1/4"	13,9	5	83A0J10400
3/8"	17,4	5	83A0J10600
1/2"	21,6	5	83A0J10700
3/4"	27,1	5,5	83A0J10900
1"	34,3	6	83A0J11000
1 1/4"	42,6	6,5	83A0J11100
1 1/2"	48,5	6,5	83A0J11200
2"	60,4	8,5	83A0J11300

**Tube washer**  
**83A0E7**



$\varnothing A$ for nominal pipe size	$\varnothing A1$ mm	C	Model
1/8"	10,5	1,5	83A0E70100
1/4"	13,8	1,5	83A0E70400
3/8"	17,5	1,5	83A0E70600
1/2"	21,8	1,5	83A0E70700
3/4"	27,4	2	83A0E70900
1"	37,2	2	83A0E71000
1 1/4"	42,9	2	83A0E71100
1 1/2"	48,8	2	83A0E71200
2"	60,9	3	83A0E71300

**Tube 'O'-ring – HNBR (yellow)**  
**8000K**



For tube $\varnothing$	$\varnothing A1$	C	Model
1/8"	8,9	1,9	8000K21000
1/4"	12,1	2,7	8000K30400
3/8"	16,9	2,7	8000K21800
1/2"	19,8	3,6	8000K30700
3/4"	26,2	3,6	8000K30900
1"	32,5	3,6	8000K31000
1 1/4"	40,6	5,3	8000K31100
1 1/2"	43,8	5,3	8000K31200
2"	59,8	5,3	8000K31300

**Thread 'O'-ring ISO G parallel thread – HNBR (yellow)**  
**8000K**



For thread	$\varnothing A1$	C	Model
G1/8	8,9	1,9	8000K21000
G1/4	12,1	2,7	8000K30400
G3/8	15,1	2,7	8000K21600
G1/2	19,8	3,6	8000K30700
G3/4	24,6	3,6	8000K22500
G1	30,8	3,6	8000K23200
G1 1/4	37,5	5,3	8000K400A8
G1 1/2	43,8	5,3	8000K24500
G2	56,5	5,3	8000K400C8

**Warning**

These products are intended for use in industrial compressed air and rail transport systems only. Do not use these products where pressures and temperatures can exceed those listed under

»**Technical features/data**«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI NORGREN.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.