

- For use in areas of vibration
- Pre-assembled units
- No special assembly tools or heat required
- Can be remade
- Thinner tube can be used
- Will cope with some tube misalignment



### Technical Data

#### Medium:

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

#### Operating Pressure:

Typically in excess of 80 bar depending upon size, application and tube specification.

#### Temperature:

-30°C to +80°C

(-30°C to +200°C with Viton "O"-ring - add suffix V)

#### Tube Sizes:

6, 8, 10, 12, 15, 22, 28mm O/D.

#### Tubing Types:

Designed for use with copper tube to BS 2871.

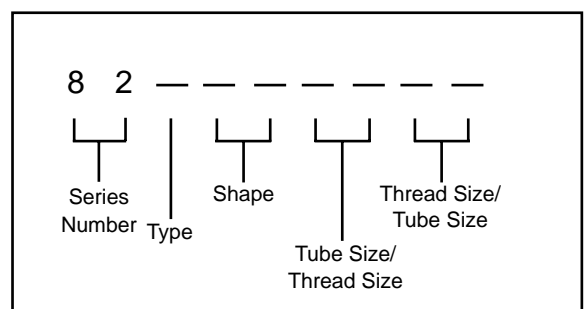
### Materials

Brass body, backing washer and tubing nut. Silicone free nitrile rubber "o"-ring (Viton optional).

### Ordering Information

To order, quote appropriate product number from the tables on the following pages.

Norgren's product numbering system is designed to make identification and selection simple:





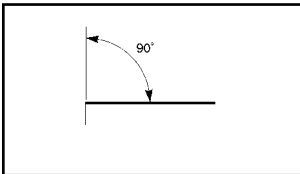
## Straight Connectors and Adaptors

STRAIGHT CONNECTOR	STRAIGHT ADAPTOR	FEMALE ADAPTOR	BULKHEAD FITTING	STEM ADAPTOR		
82020	82225	82226	82029	82215		
Page 9.6.020.03	Page 9.6.020.03	Page 9.6.020.03	Page 9.6.020.04	Page 9.6.020.04		

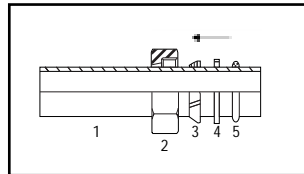
## Elbow and Tee Connectors

ELBOW EQUAL	MALE ELBOW ADAPTOR	EQUAL TEE	UNEQUAL TEE	TEE (FEMALE BSP BRANCH)	CROSS	
82040	82145	82060	8206A	82266	82266	
Page 9.6.020.03	Page 9.6.020.03	Page 9.6.020.03	Page 9.6.020.04	Page 9.6.020.04	Page 9.6.020.04	

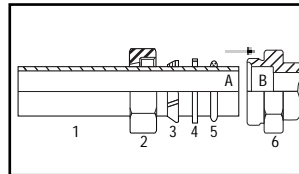
## Method of Assembly



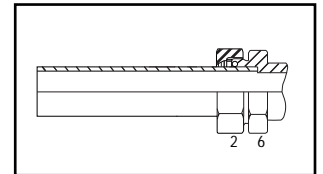
1. Ensure that the end of the tube is cut square and is free from burrs.



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. Move the pipe head (A) with all components assembled towards the casing beat (B). In pipe fittings without beat (B), the pipe should be inserted for at least 15 mm.

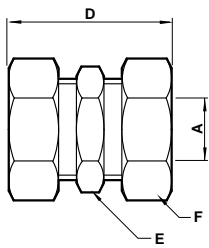


4. Move the four components from left to right and screw the nut (2) onto the pipe fitting casing (6).



**Straight Connector**

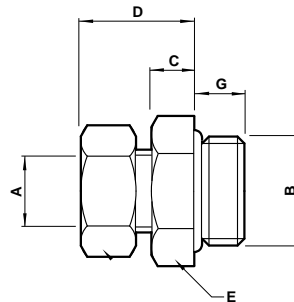
**82020**



Product number	A O/D tube	D	E A/F	F A/F
82 020 0800	8	42,0	18	20
82 020 1000	10	43,0	20	22
82 020 1200	12	46,0	23	25
82 020 1500	15	44,0	25	28
82 020 2200	22	50,0	34	37
82 020 2800	28	52,0	40	43
82 020 4200	42	58,0	60	64

**Straight Adaptor**

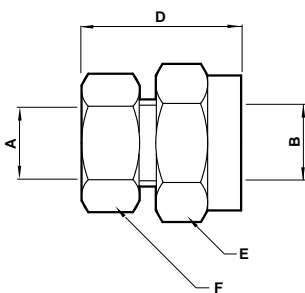
**82225**



Product number	A O/D tube	B Thread BSPP	C	D	E A/F	F A/F	G
82 225 0828	8	1/4"	8,5	25	22	20	8
82 225 0838	8	3/8"	8,5	25	24	20	8
82 225 1028	10	1/4"	9	25,5	22	22	8
82 225 1038	10	3/8"	9	25,5	24	22	8
82 225 1048	10	1/2"	11	27,5	32	22	10
82 225 1228	12	1/4"	8,5	26,5	22	25	8
82 225 1238	12	3/8"	8,5	26,5	24	25	8
82 225 1248	12	1/2"	8,5	28,5	32	25	10
82 225 1528	15	1/4"	8,5	26	22	28	8
82 225 1538	15	3/8"	8,5	26	24	28	8
82 225 1548	15	1/2"	10,5	28	32	28	10
82 225 1568	15	3/4"	10,5	28	36	28	14
82 225 2248	22	1/2"	9,5	30	32	37	10
82 225 2268	22	3/4"	9,5	30	36	37	14
82 225 2888	28	1"	11	32,5	46	43	14

**Female Adaptor**

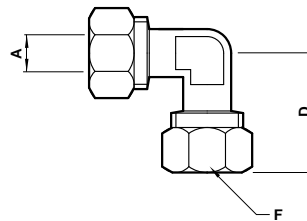
**82226**



Product number	A O/D tube	B Thread BSPP	D	E A/F	F A/F
82 226 0828	8	1/4"	32	23	20
82 226 1028	10	1/4"	32,5	23	22
82 226 1038	10	3/8"	33,5	25	22
82 226 1238	12	3/8"	33,5	25	25
82 226 1248	12	1/2"	34,5	32	25
82 226 1548	15	1/2"	33	32	28
82 226 1568	15	3/4"	33	36	28
82 226 2248	22	1/2"	36	32	37
82 226 2268	22	3/4"	38,5	36	37
82 226 2888	28	1"	41,5	46	43

**Elbow (Equal)**

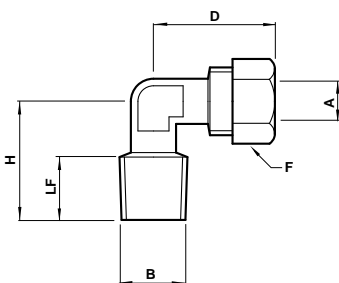
**82040**



Product number	A O/D tube	D	F A/F
82 040 0800	8	30,5	20
82 040 1000	10	31,5	22
82 040 1200	12	36,5	25
82 040 1500	15	36	28
82 040 2200	22	39,5	37
82 040 2800	28	44	43

**Male Elbow Adaptor**

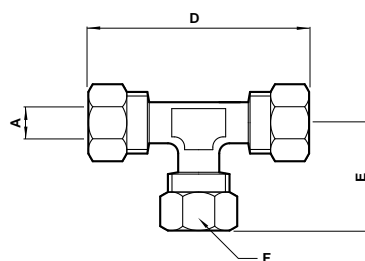
**82145**



Product number	A O/D tube	B Thread BSPT	D	F A/F	H	LF
82 145 0628	6	1/4"	29	18	21,5	12
82 145 0828	8	1/4"	30,5	20	23,5	12
82 145 0838	8	3/8"	30,5	20	25,5	12
82 145 1028	10	1/4"	31,5	22	24,5	12
82 145 1038	10	3/8"	31,5	22	25,5	12
82 145 1238	12	3/8"	36,5	25	28	12
82 145 1248	12	1/2"	36,5	25	29	13
82 145 1538	15	3/8"	36	28	27,5	12
82 145 1548	15	1/2"	36	28	29,5	13
82 145 2268	22	3/4"	39,5	37	35	15
82 145 2888	28	1"	41,5	43	39	18

**Equal Tee**

**82060**



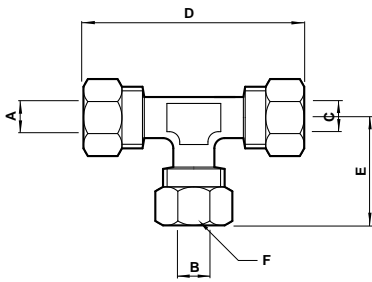
Product number	A O/D tube	D	E	F A/F
82 060 0800	8	61	30,5	20
82 060 1000	10	62	31	22
82 060 1200	12	69	34,5	25
82 060 1500	15	71	35,5	28
82 060 2200	22	79	39,5	37
82 060 2800	28	83	41,5	43



## 82 Series Fittings Metric

### Unequal Tee

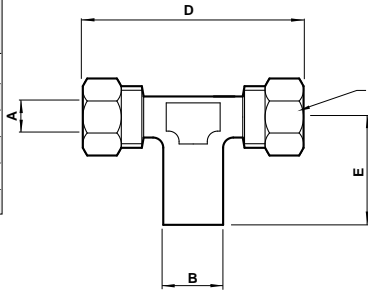
### 8206A



Product number	A O/D tube	B	C	D	E	F A/F	G A/F
82 06A 0806	8	6	8	61	30,5	20	18
82 06A 1008	10	8	10	62	31	22	20
82 06A 1210	12	10	12	69	34,5	25	22
82 06A 1510	15	10	15	71	35,5	28	22
82 06A 1015	10	15	10	71	35,5	22	28
82 06A 2215	22	15	22	79	39,5	37	28

### Tee (Female BSP Branch)

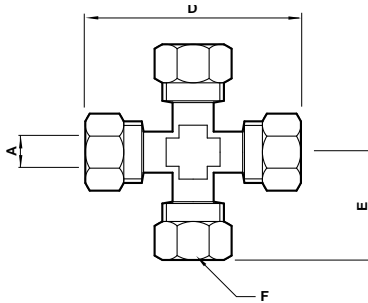
### 82266



Product number	A O/D tube	B Thread BSPP	D	E	F A/F
82 266 1028	10	1/4"	67	27	22
82 266 1038	10	3/8"	67	30	22
82 266 1048	10	1/2"	76	30	22
82 266 1238	12	3/8"	68	30	25
82 266 1248	12	1/2"	77	31	25
82 266 1538	15	3/8"	71	33	28
82 266 1548	15	1/2"	77	36	28
82 266 2238	22	3/8"	77	30	37
82 266 2248	22	1/2"	79	31	37
82 266 2268	22	3/4"	83	33	37
82 266 2588	28	1"	99	41	43

### Cross

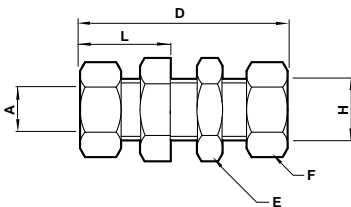
### 82090



Product number	A O/D tube	D	E	F A/F
82 090 0800	8	60	30	20
82 090 1000	10	62,5	31,25	22
82 090 1200	12	73	36,5	25
82 090 1500	15	69	34,5	28
82 090 2200	22	80	40	37
82 090 2800	28	88	44	43

### Bulkhead Fitting

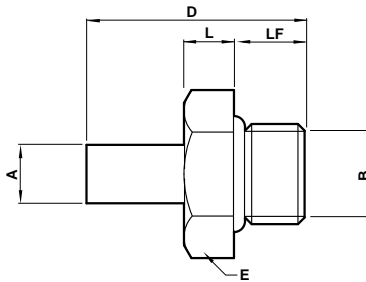
### 82029



Product number	A O/D tube	D	E A/F	F A/F	H	L
82 029 0800	8	58	21	20	17	24
82 029 1000	10	59	23	22	19	24,5
82 029 1200	12	63	27	25	22	26,5
82 029 1500	15	62	30	28	25	26
82 029 2200	22	68	40	37	34	29
82 029 2800	28	71	42	43	39	42

### Stem Adaptor

### 82215



Product number	A O/D tube	B	E A/F	D	E	L
82 215 0828	8	1/4"	22	32,5	22	7
82 215 0838	8	3/8"	24	32,5	24	7
82 215 1028	10	1/4"	22	33,5	22	7
82 215 1038	10	3/8"	24	33,5	24	7
82 215 1048	10	1/2"	32	37,5	32	9
82 215 1228	12	1/4"	22	33,5	22	7
82 215 1238	12	3/8"	24	33,5	24	7
82 215 1248	12	1/2"	32	37,5	32	9
82 215 1528	15	1/4"	22	34	22	7
82 215 1538	15	3/8"	24	34	24	7
82 215 1548	15	1/2"	32	38	32	9
82 215 1568	15	3/4"	36	42	36	9
82 215 2248	22	1/2"	32	40,5	32	10
82 215 2268	22	3/4"	36	44,5	36	9
82 215 2888	28	1"	46	48	46	11

## Warning

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