BOGE AIR. THE AIR TO WORK.

BOGE
COMPRESSED AIR SYSTEMS

Quick & Easy
BOGE EasiFit Airline Systems

The BOGE EasiFit Airline System is your advanced airline solution

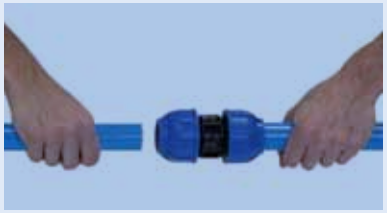
BOGE
EasiFit Airline Systems

Using only quality aluminium piping and airtight connectors, the BOGE EasiFit Airline System is quick and Easi to install with no welding required. Corrosion, fire and UV resistance are also key benefits.

It's so Easi to assemble

CUTTING
Use a tube-cutter to obtain a clean cut.

CHAMFERING
Chamfer the external part of the tube in order not to damage the sealing ring.

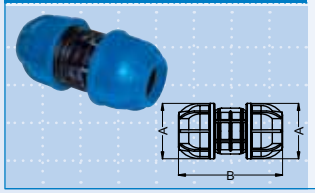


ASSEMBLY
Insert the tube and push it until it is completely home.

TIGHTENING
Tighten the coupling ring by hand or use the relevant tool.

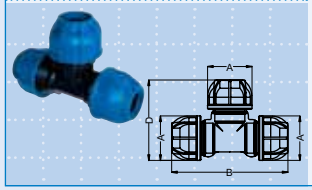
Fittings for Compressed Air

Equal Union



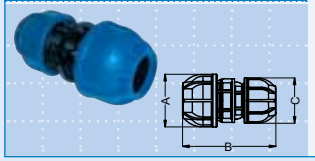
Code	Ø	A	B
R210.020.020	20 x 20	44	85
R210.025.025	25 x 25	52	97
R210.032.032	32 x 32	62	113
R210.040.040	40 x 40	72	129
R210.050.050	50 x 50	86,50	157
R210.063.063	63 x 63	105	182

Equal Tee



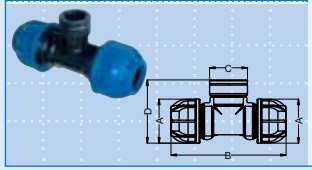
Code	Ø	A	B	C	D
R214.020.000	20 x 20 x 20	44	109,50		76,50
R214.025.000	25 x 25 x 25	52	132		93,50
R214.032.000	32 x 32 x 32	62	159,50		111
R214.040.000	40 x 40 x 40	72	182		127,50
R214.050.000	50 x 50 x 50	86,50	225		154
R214.063.000	63 x 63 x 63	105	262		182

Reducing Union



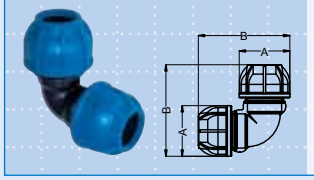
Code	Ø	A	B	C
R212.025.020	25 x 20	52	91	44
R212.032.025	32 x 25	62	103,50	52
R212.040.032	40 x 32	72	121	62
R212.050.040	50 x 40	86,50	145,50	72
R212.063.050	63 x 50	105	167	86,50

Female Tee



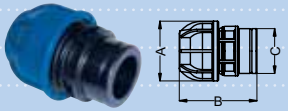
Code	Ø	A	B	C	D
R215.025.012	25 x ½" x 25	52	132	30	75
R215.032.034	32 x ¾" x 32	62	159,50	37	85
R215.040.001	40 x 1" x 40	72	182	43	103
R215.050.112	50 x 1½" x 50	86,50	225	62	121
R215.063.002	63 x 2" x 63	105	262	77	148

90° Equal Elbow



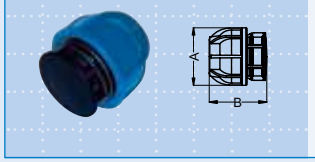
Code	Ø	A	B
R213.020.020	20 x 20	44	76
R213.025.025	25 x 25	52	92
R213.032.032	32 x 32	62	109
R213.040.040	40 x 40	72	127,50
R213.050.050	50 x 50	86,50	157,50
R213.063.063	63 x 63	105	184

Female Straight Connection



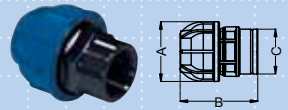
Code	Ø	A	B	C
R201.020.012	20 x ½"	44	60,50	30
R201.025.034	25 x ¾"	52	69	37
R201.032.001	32 x 1"	62	81	43
R201.040.114	40 x 1¼"	72	92	54
R201.050.112	50 x 1½"	86,50	105	62
R201.063.002	63 x 2"	105	122,5	77

End Cap



Code	Ø	A	B
R221.020.000	20	44	44,50
R221.025.000	25	52	53,50
R221.032.000	32	62	63
R221.040.000	40	72	68,50
R221.050.000	50	86,50	82,50
R221.063.000	63	105	94,50

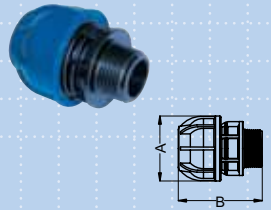
Aluminium Female Straight Connection



Code	Ø	A	B	C
R202.020.012	20 x ½"	44	60,50	30
R202.025.034	25 x ¾"	52	69	37
R202.032.001	32 x 1"	62	81	43
R202.040.114	40 x 1¼"	72	92	54
R202.050.112	50 x 1½"	86,50	105	62
R202.063.002	63 x 2"	105	122,5	77

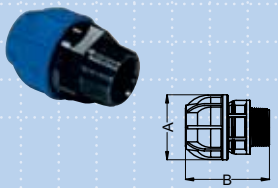
Fittings for Compressed Air

Male Straight Connection



Code	Ø	A	B
R211.020.012	20 x ½"	44	60
R211.025.012	25 x ½"	52	66,50
R211.025.034	25 x ¾"	52	68
R211.032.001	32 x 1"	62	78,50
R211.040.001	40 x 1"	72	88,50
R211.040.114	40 x 1¼"	72	90
R211.050.112	50 x 1½"	86,50	104
R211.063.002	63 x 2"	105	119

Aluminium Male Straight Connection



Code	Ø	A	B
R203.020.012	20 x ½"	44	60
R203.025.012	25 x ½"	52	66,50
R203.025.034	25 x ¾"	52	68
R203.032.001	32 x 1"	62	78,50
R203.040.001	40 x 1"	72	88,50
R203.040.114	40 x 1¼"	72	90
R203.050.112	50x 1½"	86,50	104
R203.063.002	63 x 2"	105	119

Straight Connection with Union

Code	Ø	A
R220.020.012	20 x ½"	44
R220.025.034	25 x ¾"	52
R220.032.001	32 x 1"	62
R220.040.114	40 x 1¼"	72
R220.050.112	50x 1½"	86,50
R220.063.002	63 x 2"	105

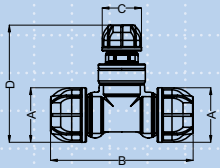
Straight Connection with Ball Valve

Code	Ø	A
R224.020.012	20 x ½"	44
R224.025.034	25 x ¾"	52
R224.032.001	32 x 1"	62
R224.040.114	40 x 1¼"	72
R224.050.112	50 x 1½"	86,5
R224.063.002	63 x 2"	105

3 Piece Connection with Ball Valve

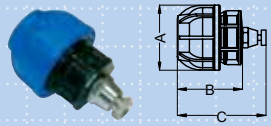
Code	Ø	A
R225.020.012	20 x ½"	44
R225.025.034	25 x ¾"	52
R225.032.001	32 x 1"	62
R225.040.114	40 x 1¼"	72
R225.050.112	50x 1½"	86,50
R225.063.002	63 x 2"	105

Reducing Tees Connection



Code	Ø	A	B	C	D
R217.025.020	25-20-25	52	132	44	121
R217.032.020	32-20-32	62	159,5	44	132
R217.032.025	32-25-32	62	159,5	52	143
R217.040.020	40-20-40	72	182	44	150
R217.040.025	40-25-40	72	182	52	161
R217.040.032	40-32-40	72	182	62	169
R217.050.020	50-20-50	86,5	225	44	168
R217.050.025	50-25-50	86,5	225	52	179
R217.050.032	50-32-50	86,5	225	62	187
R217.050.040	50-40-50	86,5	225	72	196
R217.063.020	63-20-63	105	262	44	195
R217.063.025	63-25-63	105	262	52	206
R217.063.032	63-32-63	105	262	62	214
R217.063.040	63-40-63	105	262	72	223
R217.063.050	63-50-63	105	262	86,5	235

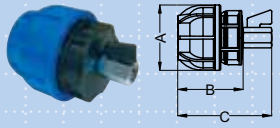
End Caps with Manual Vent Valve



Code	Ø	A	B	C
R218.020.014	20	44	44,5	64,5
R218.025.014	25	52	53,5	73,5
R218.032.014	32	62	63	83
R218.040.014	40	72	68,5	88,5
R218.050.014	50	86,50	82,5	102,5
R218.063.014	63	105	94,5	114,5

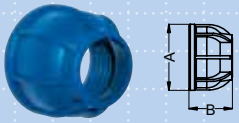
Fittings for Compressed Air

End Caps With Mini Ball Valve



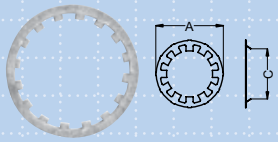
Code	Ø	A	B	C
R219.020.014	20 x ¼"	44	44,5	74,5
R219.025.014	25 x ¼"	52	53,5	83,5
R219.032.038	32 x ⅜"	62	63	93
R219.040.038	40 x ⅜"	72	68,5	98,5
R219.050.038	50 x ⅜"	86,5	82,5	112,5
R219.063.038	63 x ⅜"	105	94,5	124,5

Coupling Ring



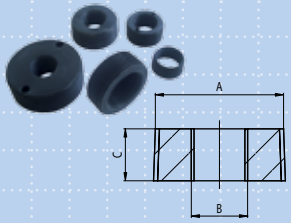
Code	Ø	A
R209.020.000	20	44
R209.025.000	25	52
R209.032.000	32	62
R209.040.000	40	72
R209.050.000	50	86,50
R209.063.000	63	105

O-Ring



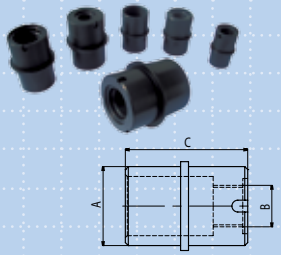
Code	Ø	A	B	C
R216.020.000		31		20,2
R216.025.000		38,8		25,2
R216.032.000		48,2		32,5
R216.040.000		56,3		40,5
R216.050.000		69		50,5
R216.063.000		85,1		63,2

Aluminium Reduction



Code	Ø	A	B	C
R232.034.012		¾"	½"	14.5
R232.001.012		1"	½"	17
R232.114.012		1 ¼	½"	19
R232.112.012		1 ½"	½"	19
R232.112.001		1 ½"	1"	19
R232.002.012		2"	½"	23
R232.002.001		2"	1"	23
R232.002.112		2"	1 ½"	23

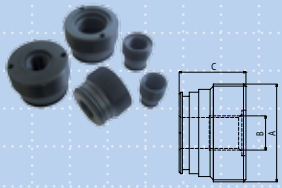
Nylon And Aluminium Fitting Reduction



Code	Ø	A	B	C
R237.025.012*		25	1 ½"	65
R237.032.012		32	½"	57
R237.040.012		40	½"	62
R237.025.001		40	1"	62
R237.050.012		50	½"	74
R237.050.001		50	1"	74
R237.063.012		63	½"	77
R237.063.001		63	1	77
R237.063.112		63	1 ½"	77

*Aluminium reduction.

Screwed Nylon Fitting Reduction (With O-Ring)



Code	Ø	A	B	C
R238.034.012		¾"	½"	30
R238.001.012		1"	½"	32
R238.112.012		1 ¼	½"	35
R238.112.001		1 ½"	1"	35
R238.002.012		1 ½"	½"	41
R238.002.001		2"	½"	41
R238.002.112		2"	1½"	41

G female thread.

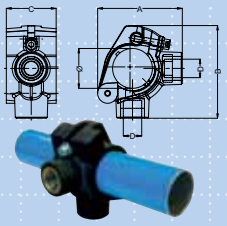
½" BSP Threaded Take off Saddles

Code	Ø
QSB2512	25
QSB3212	32
QSB4012	40
QSB5012	50
QSB6312	63

¾" BSP Threaded Take off Saddles

Code	Ø
QSB2534	25
QSB3234	32
QSB4034	40
QSB5034	50
QSB6334	63

BSP Twin Take off Coupling

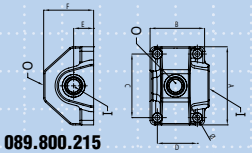


Code	Ø	A	B	C	D
R208.025.040	25	85	93	50	½"
R208.032.040	32	85	93	50	½"
R208.040.040	40	85	93	50	½"
R208.050.063	50	134	146,5	80	1"
R208.063.063	63	134	146,5	80	1"

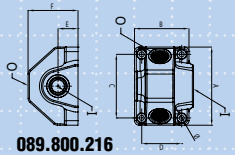
Terminal Blocks For Compressed Air (Max 16 Bar)

Code	Use		Size		Drilling			Volume	
	I	O	A	B	C	D	Ø	E	F
089.800.215	G ½"	G ½"	85,5	60	70	44	5,5	22	51
089.800.216	2xG ½"	G ½"	85,5	60	70	44	5,5	22	51
089.800.217	3xG ½"	G ½"	85,5	60	70	44	5,5	22	51
089.800.400			85,5	60	20	70	6	44	
R231.012.012	G ½"	4 x ½"	105	70	91	56	7	35	81,5
R231.034.012	G ¾"	4 x ½"	105	70	91	56	7	35	81,5

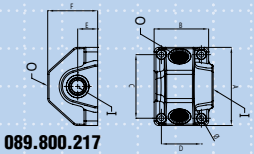
089.800.300
Manual condensation drain
available on request on the following models:
089.800. 215 / 216 / 217



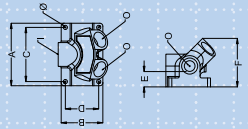
089.800.215



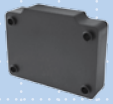
089.800.216

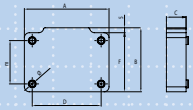


089.800.217



R231.012.012/R231.034.012



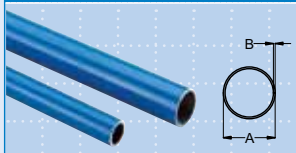


089.800.400 Spacer usable with the models:
089.800. 215 / 216 / 217

089.800.350 Manual condensation drain available on request on the following models:
R231.012.012 / R231.034.012

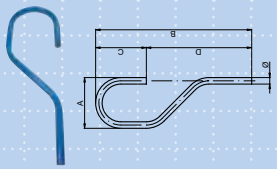
Tubes For Compressed Air

Aluminium Tube



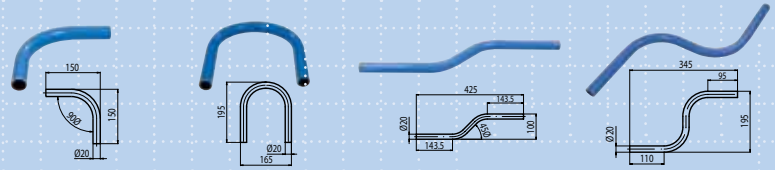
Code	A	B	Length
059.020.017	20	1,5	4 m
059.025.022	25	1,5	4 m
059.032.029	32	1,5	4 m
059.040.037	40	1,5	4 m
059.050.046	50	2	4 m
059.063.059	63	2	4 m

Drop Bends



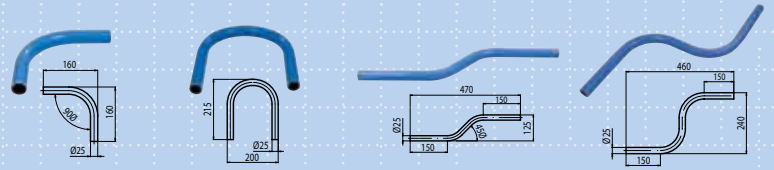
Code	Ø	A	B	C	D
059.015.100	15	110	435	102,5	332,5
059.020.100	20	160	500	160	340
059.022.100	22	160	550	155	395
059.025.100	25	195	600	195	405

Special Bends Ø 20



Code	059.020.101	059.020.102	059.020.103	059.020.104

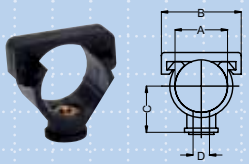
Special Bends Ø 25



Code	059.025.101	059.025.102	059.025.103	059.025.104

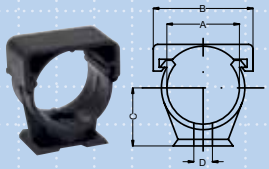
Accessories For Compressed Air

Monoklip Brackets



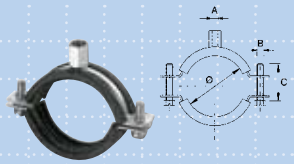
Code	A	B	C	D
HCKM6020	20	32	22	M6
HCKM6025	25	39	22	M6
HCK20/8	20	32	22	M8
HCK25/8	25	39	22	M8
HCKP020	20	32	22	Ø5,5
HCKP025	25	39	22	Ø5,5

Monoklip Brackets



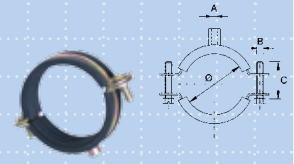
Code	A	B	C	D
HCKM6032	32	45	28	M6
HCKM6040	40	55	32	M6
HCKM6050	50	68	36	M6
HCKM6063	63	82	40	M6
HCKM8032	32	45	28	M8
HCKM8040	40	55	32	M8
HCKM8050	50	68	36	M8
HCKM8063	63	82	40	M8

Collar for Tube Fixation



Code	Ø	A	B	C
R230.020.000	20	M8/M10	M6	20
R230.025.000	25	M8/M10	M6	20
R230.032.000	32	M8/M10	M6	20
R230.040.000	40	M8/M10	M6	25
R230.050.000	50	M8/M10	M6	25
R230.063.000	63	M8/M10	M6	25

Collar for Tube Fixation

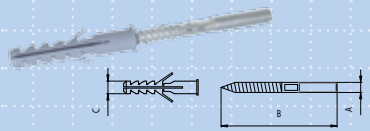


Code	Ø	A	B	C
R239.020.000	20	M6	M5	20
R239.025.000	25	M6	M5	20
R239.032.000	32	M6	M5	20
R239.040.000	40	M6	M5	25
R239.050.000	50	M6	M5	25
R239.063.000	63	M6	M5	25

Collar for Tube fixation with Screw

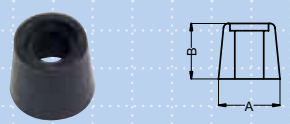
Code	Ø	A	B	C
R240.020.000	20	M8/M10	M6	20
R240.025.000	25	M8/M10	M6	20
R240.032.000	32	M8/M10	M6	20
R240.040.000	40	M8/M10	M6	25
R240.050.000	50	M8/M10	M6	25
R240.063.000	63	M8/M10	M6	25

Fixing Screws



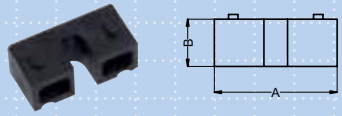
Code	A	B	C
R230.000.002	M8	90	10

Wedges for Monoklip Brackets



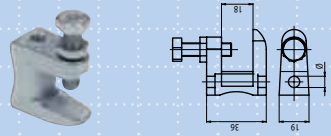
Code	A	B
CALE1225	26	23

Wedges for Monoklip Brackets



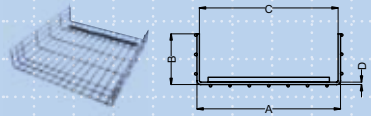
Code	A	B
CALE3263	**52**	**20**

Clip Strirrup on Beams



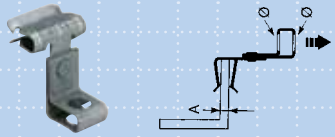
Code	Ø
R234.000.001	9
R234.000.002	M8

Pipe through (L=1965)



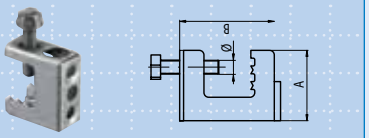
Code	A	B	C	D
090.305.000	306	104,5	286	5
090.505.000	546	104,5	526	5

Beam Clips



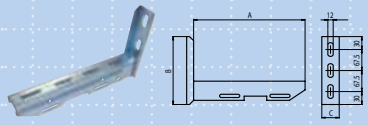
Code	A	B
R233.000.001	11	3/8
R233.000.002	11	8/14
R233.000.003	11	14/20

Beam Clamps



Code	Ø	A	B
R230.000.001	M6	30	34

Wall Mounting Bracket



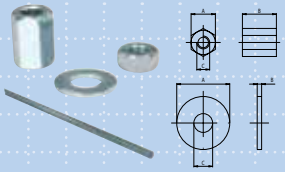
Code	A	B	C
R228.170.000	170	195	50
R228.320.000	320	195	50
R228.520.000	520	195	50

Coupling Kit For Pipe Tray

Code
090.080.100

Assembly Accessories

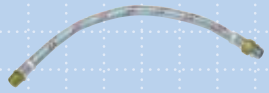
Connection Accessories



Code	A	B	C
R230.000.003	11	30	M8
R230.000.004	13	6,5	M8
R230.000.005	24	8,5	2

Plated iron studding M8 L=1000 galvanised. Code R230.000.006

Flexible Tube L. 500mm



Tubes not-suitable for the compressor outlet connection.

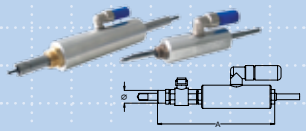
Code	Ø	A	Length
R226.012.500	½"	½"	500
R226.034.500	¾"	¾"	500
R226.001.500	1"	1"	500
R226.114.500	1 ¼"	1 ¼"	500
R226.112.500	1 ½"	1 ½"	500
R226.002.500	2"	2"	500

Flexible Tube L. 1500m

Tubes not-suitable for the compressor outlet connection.

Code	Ø	A	Length
R227.012.150	½"	½"	1500
R227.034.150	¾"	¾"	1500
R227.001.150	1"	1"	1500
R227.114.150	1 ¼"	1 ¼"	1500
R227.112.150	1 ½"	1 ½"	1500
R227.002.150	2"	2"	1500

Pressurised Drilling Tool



Code	Ø	A
R208.012.040	½"	202
R208.001.063	1"	294

Adjustable Reamer

For tubes from 50 to 160

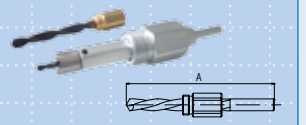
Code	Ø
TEMPE50315	50 to 63

Deburring Cone up to Ø 50

For the external bevelling and the internal smoothing of tubes up to Ø 50 mm

Code
CONE050

Drilling Tool



Code	Ø	A	Length
R208.012.000	½"	150	Bush+tool
R208.012.012	½"	40	Bush only
R208.012.020	1"	205	Bush+tool

Tube Cutter

with deburring tool

Code	Ø
CT1240	12 to 35
CT1263	12 to 63

Deburring Tool

Code	Ø
R230.000.007	All

Specifications

Tubes

- Material: **EN AW-6060 T6 Aluminium**
- Treatment: **Chrome finish, internal & external**
- Paint: **RAL 5015 Electrostatic Painting**
- Use: **Compressed Air/Vacuum distribution**
- Tube Length: **4 M (Standard) – 6 M (on request)**
- Tube Quality: **Calibrated Extrusion**
- Temperature: **From -20°c to +70°c**
- Pressure: **From -0.8 to +15 Bar**
- Compatible Fluids: **Compressed Air – Vacuum – Water**

Fittings

- Body: **Black Nylon**
- Coupling Ring: **Blue Nylon**
- Cutting Ring: **AISI 301 Stainless Steel**
- Sealing: **NBR O-ring**
- Temperature: **From -20°c to +70°c**
- Pressure: **From -0.6 to +12.5 Bar**
- Compatible Fluids: **Compressed Air – Vacuum – Water**

Your EasiFit benefits

- **Easi and rapid to install**
- **Reduced pressure drop**
- **Corrosion resistance**
- **Reusable**
- **Fire-resistance**
- **UV-resistant**
- **Good shock resistance**
- **No welding required**
- **Modern design**

Aluminium Tubes For Compressed Air

Primary aluminium extruded tubes EN AW-6060 T6 (AL Mg Si 0.5). Electrostatic painting RAL 5015.

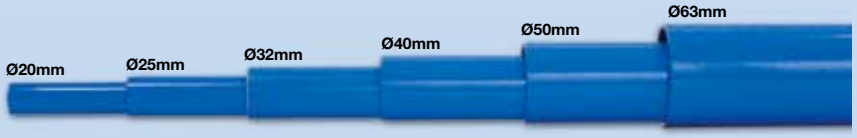
Chemical Composition									
ALLOY	**Cu**	**Fe**	**Mn**	**Mg**	**Si**	**Zn**	**Cr**	**Ti**	**Al**
6060	0.10	0.10-0.30	0.10	0.35-0.6	0.3-0.6	0.15	0.05	0.10	Rest

Minimum Mechanical Specifications				
ALLOY	**Ultimate tensile stress**	**Yield point**	**A % Stretch**	**HB Hardness**
6060	R_m 215 N/mm²	$R_{p0,2}$ 160 N/mm²	8	75

Specific weight 2,70 Kg/dm³

Elastic Modulus:	**69.000 N/mm²**
Expansivity:	**20÷100°cx10-⁶/°c**
Electrical Resistance:	**0.033 Ωmm²/m**
Thermal Conductivity:	**210 W/mK**
Melting Temperature:	**615°C-655°C**
Calibrated Extrusion	
Internal Chrome Finish	

Pipe Diameter



Calibrated

Size	7 bar delivery	Code
Ø20 x 17	1.477 L/min.	**059020017**
Ø25 x 22	2.727 L/min.	**059025022**
Ø32 x 29	5.504 L/min.	**059032029**
Ø40 x 37	10.054 L/min.	**059040037**
Ø50 x 46	16.538 L/min.	**059050046**
Ø63 x 59	30.214 L/min.	**059063059**

Assembly Instructions

R-RANGE FITTING SIZES DN 20 – 25 – 32 – 40 – 50 – 63

1. Check that all connection parts are correctly assembled. Check the orientation of the clip; if it is incorrectly assembled the tightness of the connection cannot be guaranteed (See Table A).
2. Before inserting the tube into the fitting rotate the light-blue coupling ring against the antiscrew tooth and no further.
3. The tube must be inserted into the fitting until the tube bottoms inside. This can be checked by previously marking on the tube the length «L» indicated in Table B.
4. Once the tube has been correctly inserted into the fitting, rotate the coupling ring completely over the antiscrew tooth. To best carry out this operation it is advisable to use the tools indicated in the present catalogue.
5. Table B illustrates the tightening force needed for each fitting size (N/m) in order to guarantee optimal pneumatic and mechanical sealing results.
6. Table C illustrates the correct installation. Misalignment of more than 5° from the horizontal line may compromise the pneumatic tightness of the fittings.
7. Carefully refer to the specifications indicated in the present catalogue as to compatibility with chemical substances that could be present in the tubes.
8. BOGE will not be responsible for any damage caused by improper use of their products and/or non-compliance with the instructions indicated in the present catalogue.

WARNING: to avoid seal damage, chamfer tube ends before inserting them into the fittings.

TABLE A

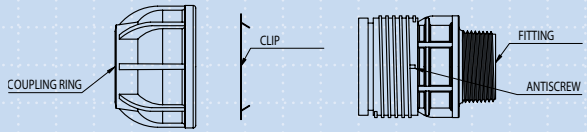
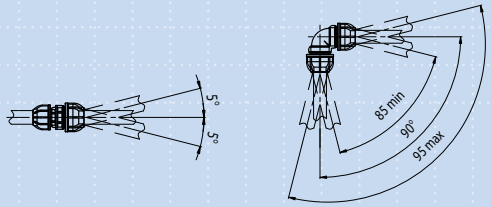


TABLE B

DN	20	25	32	40	50	63
N/m	9 ÷ 11	11 ÷ 13	12 ÷ 15	15 ÷ 17	17 ÷ 20	18 ÷ 22
L = mm	45	55	60	70	85	95

TABLE C



How to Calculate a Network Pipe Size

2.1 Fitting pressure drops

Although fittings are smooth inside and have the same tube inside diameter they nonetheless represent a resistance to air flow, particularly when tubes change direction as in the case of bends, tee-unions and reducers. Table E refers to pressure drops caused by fittings. Every fitting or change of direction corresponds to the metres of tube indicated in this table.

2.2 Network pipe sizing

Once the compressed air consumption (l/min) and the sustainable pressure drop have been calculated you can refer to Table D to identify the correct tube dimension. After having examined the plant and considered the changes of direction as well as the pressure drop of fittings you can then refer to Table E to complete and correct previous calculations.

TABLE E **Equivalent tube lengths of the same diameter (m)**

Tube outer diameter	Couplings	Elbows 90°	Tee-unions on a straight line	Tee-unions on a line deviation	Reducers
20	0,15	0,40	0,20	0,60	0,20
25	0,20	0,50	0,30	0,80	0,25
32	0,25	0,60	0,40	1,10	0,35
40	0,30	0,80	0,50	1,40	0,45
50	0,40	0,95	0,70	1,70	0,60
63	0,50	1,25	0,95	2,30	0,75

Assembly Instructions

Delivery SRA*:

actual delivery at the effective pressure (P)
x absolute pressure (P+1) in bars

air delivery at θ degrees C =
delivery 15 degrees C x $\frac{\theta \text{ degrees} + 273}{288}$

*SRA: Standard Reference Atmosphere

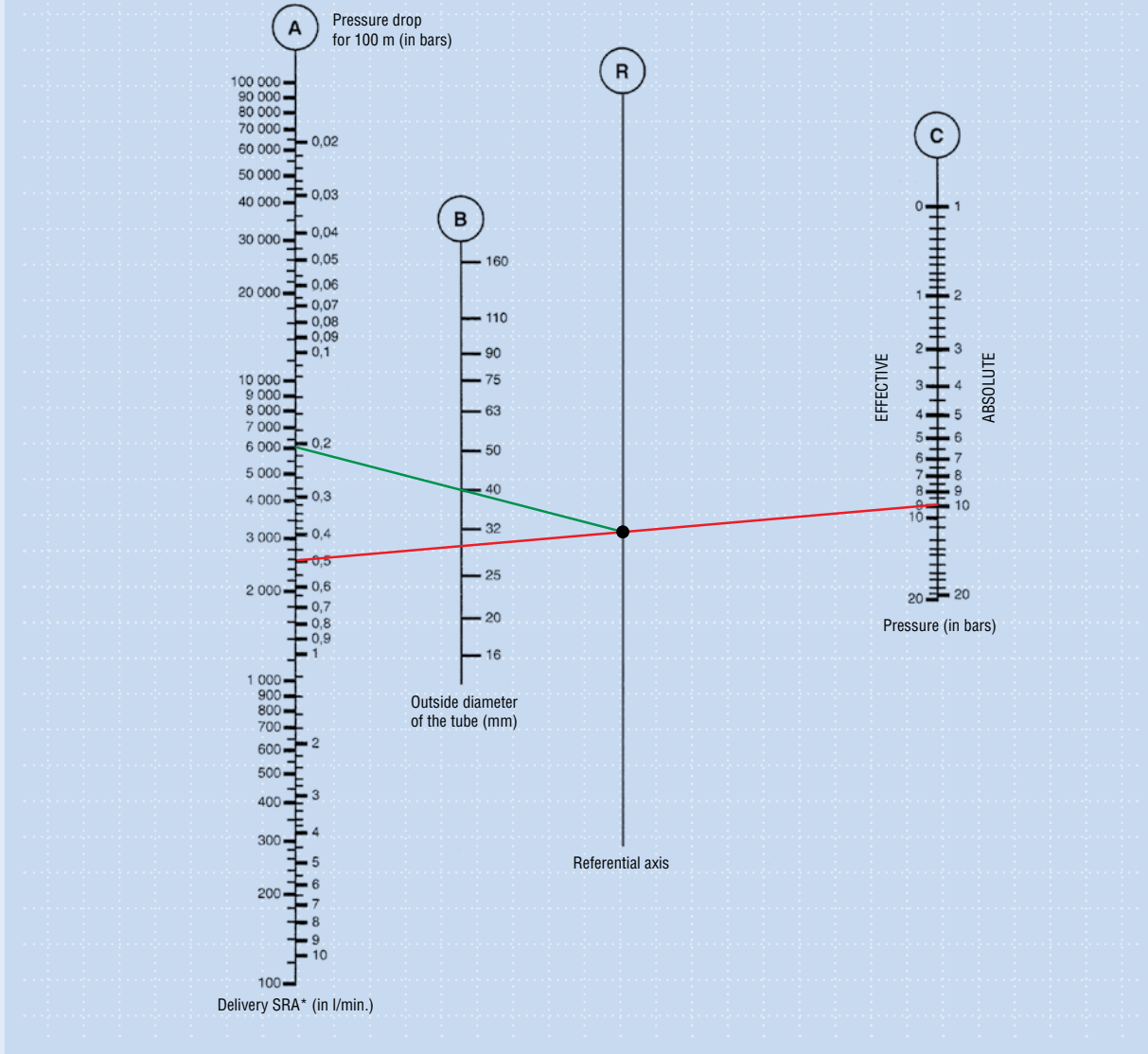
Use of the NOMOGRAM

The tube diameter can be determined after having found out the delivery in l/m and the allowed pressure drop.

a. We choose on the axis “C” the working pressure and draw a straight line, as the red one in the example, connecting the working pressure to the value on the axis “A” indicating the allowed pressure drop.
b. The drawn straight line will allow us to locate a point on the referential axis “R”.
c. We now draw a straight line as the green one in the example connecting the point we found on the referential axis “R” to the value on the axis “A” indicating the plant delivery in l/min.
d. The drawn straight line connecting the point on the axis “R” to the value of the delivery given on the axis “A” will intersect the axis “B” in a point corresponding to the value of the suitable tube diameter.

TABLE D - NONOGRAM

Pressure drop in the tube - Nomogram at 15°C



Notes

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For four generations, customers from mechanical engineering, industry and trade have relied on BOGE know-how when it comes to planning, developing and manufacturing compressed air systems. They are fully aware of the fact that BOGE AIR is more than just ordinary compressed air: utmost safety, outstanding efficiency, excellent quality, maximised flexibility along with dependable service are the ingredients to transform BOGE AIR into air to work with – in Germany, in Europe and in more than 80 countries around the world.

Our ranges of services include the following:

- Energy efficient systems development
- Plant design and engineering
- System control and visualisation
- Oil-free piston, screw and turbo compressors
- Oil injected screw compressors and oil lubricated piston compressors
- Compressed air treatment
- Compressed air distribution and storage
- Compressed air accessories
- Compressed air service

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