3 | Installation kits

General notes on heating-air ducting:

Heating-air-conducting parts can also be mounted onto the heater. Each part has a line guide number that indicates the reduction in the heating-air throughput. In order to give you the opportunity to check that the installation you have planned does not reduce the heating-air throughput to an impermissible level, we have calculated a heater guide number for each heater and a line guide number for the heating-air-conducting parts; see information in the guide number tables:
0 = no temperature increase,
– = no line guide number.

The total of the line guide numbers of the heating-air-conducting parts connected to the heater must not be greater than the heater guide number, as otherwise the air outlet temperature would be impermissibly high, the heat distribution would be uneven and the overheating sensor would respond. If the total of the line guide numbers is greater than the heater guide number, the total can be reduced by selecting a larger diameter for the air ducts or switching from a one-duct to a two-duct system.

1-duct means:
One heating-air duct leads to or from the heater. The line guide numbers under "1-duct" apply.

2-duct means:
Behind the heater, the heating-air line divides into two ducts. Up until this branch, the line guide numbers specified under "1-duct" apply, from the branch onwards the line guide numbers under "2-duct" apply. Note the information on air ducting and calculating the total of the line guide numbers starting on page 40.

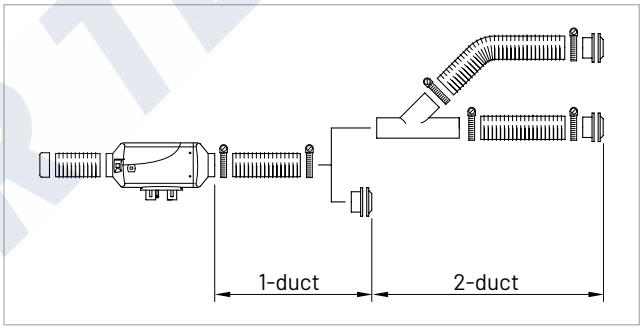
When using two air ducts or multiple air outlets, at least one of the ducts must be permanently open.

The branch that can be closed must not be taken into account when calculating the total of the line guide numbers.

Rule of thumb:

Double the cross-section or two identical parts installed in parallel =
1/4 of the guide number.
Example:
Hose Ø 60,
Cross-section area A = 19.6 cm^2, guide number 1.0
Hose Ø 75,
Cross-section area A = 44.2 cm^2, guide number 0.25

With smooth welded pipes, the line guide number is only half of the flexible hose with the same diameter (i.e. double pipe length).



With innovative air flow regulating elements:

In order to counteract the non-uniform distribution of warm air in multi-duct systems with several air outlets, we have developed innovative air flow regulating elements that are simply clipped into the hose connection fitting of the air outlet. These regulating elements, which are registered for patent protection, reduce the flow cross section as needed and thereby decrease the emerging air flow. Available for fitting diameters 60, 75 and 90 mm.

The new range of air outlets:

Particularly colorfast and durable even at high temperatures, the covers of our completely re-designed range of air outlets are impressive, featuring a streamlined and high-quality design that allows for a variety of flow directions. They are available in white and black, allowing seamless integration into any interior.

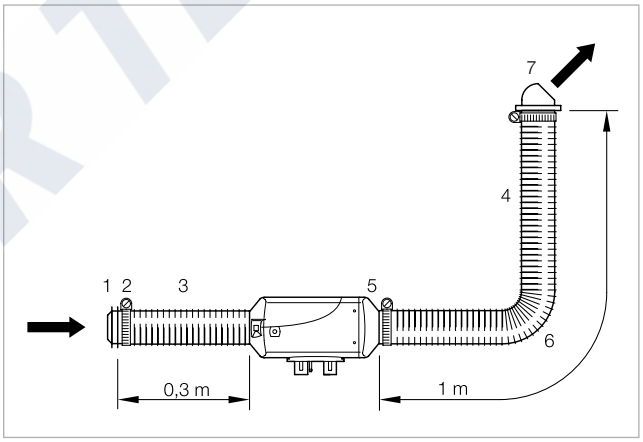
- Clear, simple system thanks to the modular design.
- Plug-in connections between the cover and fitting or fitting and air hose for easy assembly.
- Fittings available in 50, 60, 75 and 90 mm.

Example calculation for heating-air ducting:

Airtronic: Heater guide number = 6

NO.	DESIGNATION	LINE GUIDE NUMBER
1	Protective grille	0
2	Connectors Ø 60	0
3	Flex. pipe Ø 60, 0.3 m long	0.3
4	Flex. pipe Ø 60, 1.0 m long	1.0
5	Straight scoop Ø 60	0
6	1 x 90° elbow, flex. pipe	0.6
7	Rotating air outlet	1.4
Total of the line guide numbers		3.3

Total of line guide numbers, 3.3, does not exceed the heater guide number 6, so the installation is permissible.



Overview of air guide numbers Airtronic 3/Airtronic 2

Air heater	Scoop	Air guide number
Airtronic S3 Commercial B2L/D2L Airtronic S2 D2L	Diameter 60	6
	Diameter 75	12
	Ball 60	1.2
	Ball 75	6
Airtronic M3 Commercial D4L/B4L Airtronic M2 Commercial D4L/B4L	Diameter 75	3
	Diameter 90	10
	Ball 75	1
	Ball 90	5
Airtronic M3 Recreational D4R/B4R Airtronic M2 Recreational D4R/B4R	Diameter 75	10
	Diameter 90	15
	Ball 75	8
	Ball 90	10
Airtronic L3 Commercial D6L	Diameter 90	10
Airtronic L3 Commercial D6L	Diameter 90 with adapter solution for 100	11
Airtronic XL3 Commercial D8L	Diameter 90 with adapter solution for 100	10

3 | Guide numbers

Airtronic M3 Commercial

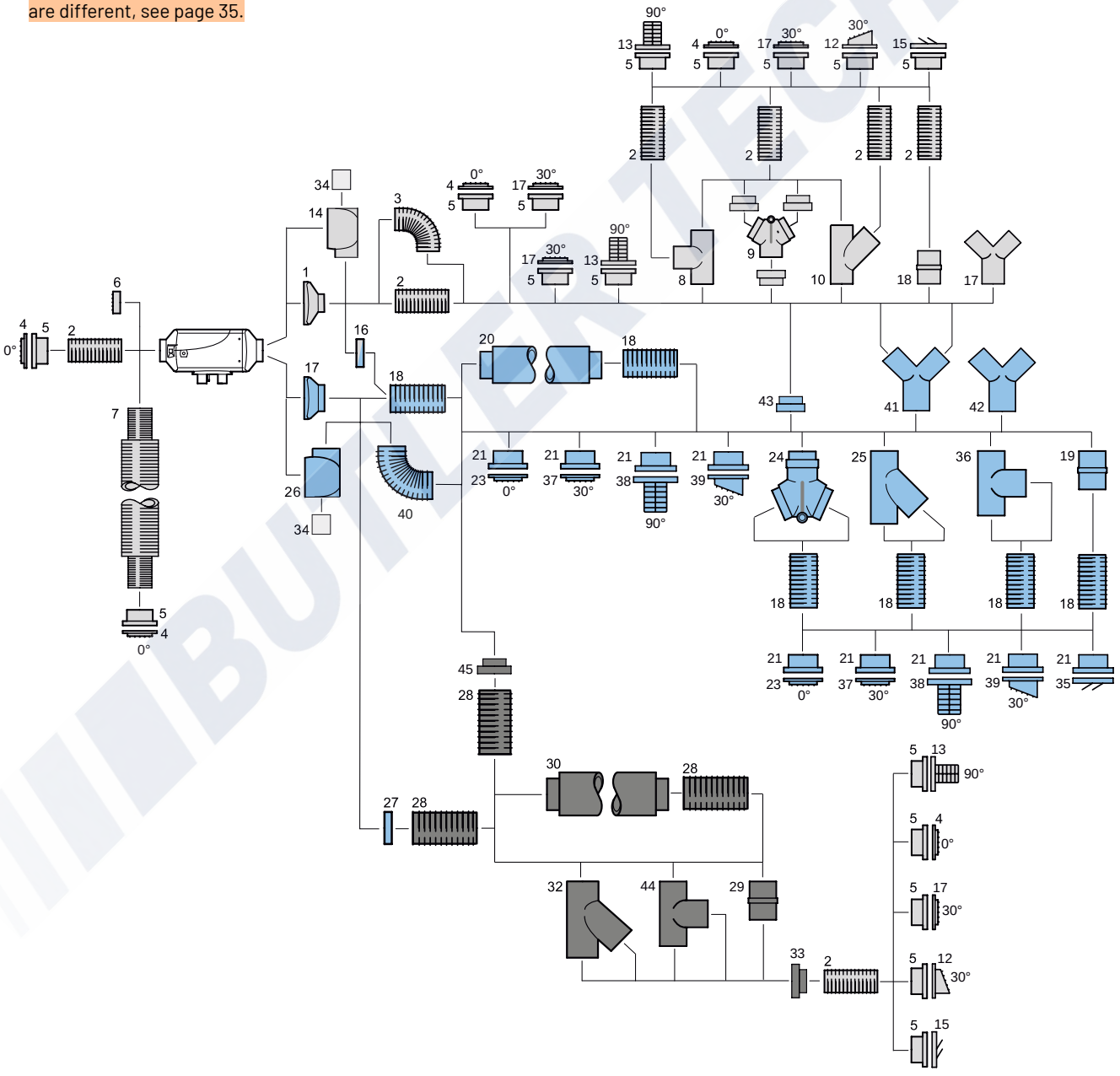
Heater guide number **3*** – with air scoop Ø 75
Heater guide number **10*** – with air scoop Ø 90

The drawing shows the application options for the main air-conducting parts. There are no installation examples.

* Heater guide numbers for the Airtronic M3 Recreational are different, see page 35.

Please note:

For an explanation of one- and two-duct heating-air ducting, see page 34.



= Ø 50 mm
= Ø 75 mm
= Ø 90 mm
= Ø 100 mm

No.	Designation (dimensions in mm)	Line guide number 1-duct		Line guide number 2-duct		see ser. no., section 8 „Air-conducting parts“
		Ø 75	Ø 90	Ø 75	Ø 90	
	Heating-air ducting with scoop Ø 75 (heater guide number 3)					
1a	Scoop Ø 75	0	–	–	–	21
2	Flex. pipe Ø 75 per m	1	–	0.25	–	1
3	90° elbow of flex. pipe Ø 75	0.2	–	–	–	1
4	Flat air outlet 0° with fitting Ø75	0.4	–	0.1	–	13
5	Fitting Ø 75	0.0	–	0.0	–	16
6	Grille Ø 75	2.0	–	–	–	17
7	Intake silencer Ø 75	0.8	–	–	–	4
8	T-junction Ø 75	–	–	0.5	–	35
9	Butterfly valve Ø 90/90/90 with adapters 75/90	–	–	1.8	–	40
10	Plastic Y-junction Ø 75/75/75	–	–	0.6	–	43
11	Flat air outlet 30° with fitting Ø75	0.4	–	0.1	–	11
12	Upright air outlet 30° with fitting Ø75	0.6	–	0.2	–	10
13	Upright air outlet 90° with fitting Ø75	1.1	–	0.3	–	14
14	Ball-shaped scoopØ 75	2.0	–	–	–	32
15	Closable air outlet with fitting Ø75	–	–	–	–	12
16	Ring Ø 75/90	0.5	–	–	–	34
17	Symmetrical plastic Y-junction Ø 75/60/60	–	–	0.9	–	42
18	Hose connector	0.5	–	0.1	–	44
	Heating-air ducting with scoop Ø 90 (heater guide number 10)					
1b	Scoop Ø 90	–	0	–	–	21
18	Flex. pipe Ø 90 per m	–	1	–	0.25	1
19	Hose connector fitting Ø 90	–	0.5	–	0.1	44
20	Silencer Ø 90	–	0.7	–	–	3
21	Fitting Ø 90	–	0	–	0	16
23	Flat air outlet 0° with fitting Ø 90	–	1.1	–	0.3	13
24	Butterfly valve Ø 90/90/90	–	1.2	–	–	40
25	Y-junction Ø 90/90/90	–	–	–	0.3	43
26	Ball-shaped scoopØ 90*	–	5.0	–	–	32
27	Ring Ø 90/100	–	0	–	–	34
28	Flexible pipe Ø 100 per m	–	0.4	–	–	1
29	Hose connector fitting Ø 100	–	0.1	–	–	44
31	Rotating air outlet Ø 100	–	2.1	–	0.5	11.1
32	Y-junction Ø 100/100/100	–	–	–	0.5	43
33	Adapter Ø 75 – 100	–	–	–	0.8	45
34a	Connection fitting 50 for Ø 75	–	–	–	1.0	31
34b	Connection fitting 50 for Ø 90	–	–	–	2.5	31
35	Closable air outlet with fitting Ø 90	–	–	–	–	12
36	T-junction Ø 90	–	–	–	0.6	35
37	Flat air outlet 30° with fitting Ø 90	–	2.0	–	0.4	11
38	Upright air outlet 90° with fitting Ø 90	–	2.7	–	0.3	14
39	Upright air outlet 30° with fitting Ø 90	–	2.4	–	0.6	10
40	90° elbow of flex. pipe Ø 90	0.1	–	–	–	1
41	Symmetrical plastic Y-junction Ø 90/75/75	–	–	–	0.9	42
42	Symmetrical plastic Y-junction Ø 90/60/60	–	–	–	2.1	42
43	Adapter Ø 75 – 90	–	3.3	–	–	45
44	T-junction Ø 100	–	–	–	0.4	35
45	Adapter Ø 90 – 100	–	0.4	–	–	45

* Cannot be used with the Airtronic D4Plus, D4R and B4R