Formula Air
Supporting your performance

General information-2 mm range
Pressure surge technical data

| Product | Pressure test - 1 bar | Pressure test - 3 bar |
| :---: | :---: | :---: |
| Pipes | $\varnothing 80$ up to $\varnothing 630\|1,0 \mathrm{~mm}\| \mathrm{L}=2000 \mathrm{~m}$ | Ø 100 up to $\varnothing 630$ \| 2,0 mm | L = 2000 mm |
| Segments | $\varnothing 80$ up to $\varnothing 630\|1,0 \mathrm{~mm}\| 5^{\circ}$ to $45^{\circ}$ | $\varnothing 100$ up to $\varnothing 630\|2,0 \mathrm{~mm}\| 5^{\circ}$ to $45^{\circ}$ |
| Bends | $\varnothing 80$ up to $\varnothing 300\|1,0 \mathrm{~mm}\| 30^{\circ}$ to $90^{\circ}$ | $\varnothing 100$ up to $\varnothing 300\|2,0 \mathrm{~mm}\| 30^{\circ}$ to $90^{\circ}$ |
| Segment bends | $\varnothing 315$ up to $\varnothing 630\|1,5 \mathrm{~mm}\| 30^{\circ}$ to $90^{\circ}$ $\varnothing 710\|1,5 \mathrm{~mm}\| 30^{\circ}$ to $90^{\circ}$ | $\varnothing 315$ up to $\varnothing 630\|2,0 \mathrm{~mm}\| 30^{\circ}$ to $90^{\circ}$ $\varnothing 710\|3,0 \mathrm{~mm}\| 30^{\circ}$ to $90^{\circ}$ |
| Trousers | $\varnothing 80$ up to $\varnothing 500\|1,0 \mathrm{~mm}\| 60^{\circ}$ and $90^{\circ}$ $\varnothing 550$ up to $\varnothing 630\|1,5 \mathrm{~mm}\| 60^{\circ}$ and $90^{\circ}$ | $\begin{aligned} & \varnothing 100 \text { up to } \varnothing 500\|2,0 \mathrm{~mm}\| 60^{\circ} \text { and } 90^{\circ} \\ & \varnothing 550 \text { up to } \varnothing 630\|3,0 \mathrm{~mm}\| 60^{\circ} \text { and } 90^{\circ} \end{aligned}$ |
| Conical trousers | $\varnothing 80$ up to $\varnothing 500\|1,0 \mathrm{~mm}\| 60^{\circ}$ and $90^{\circ}$ $\varnothing 550$ up to $\varnothing 630\|1,5 \mathrm{~mm}\| 60^{\circ}$ and $90^{\circ}$ | $\begin{aligned} & \varnothing 100 \text { up to } \varnothing 500\|2,0 \mathrm{~mm}\| 60^{\circ} \text { and } 90^{\circ} \\ & \varnothing 550 \text { up to } \varnothing 630\|3,0 \mathrm{~mm}\| 60^{\circ} \text { and } 90^{\circ} \end{aligned}$ |
| Branches | $\varnothing 80$ up to $\varnothing 500\|1,0 \mathrm{~mm}\| 30^{\circ}$ and $45^{\circ}$ <br> $\varnothing 550$ up to $\varnothing 630\|1,5 \mathrm{~mm}\| 30^{\circ}$ and $45^{\circ}$ | $\begin{aligned} & \varnothing 100 \text { up to } \varnothing 500\|2,0 \mathrm{~mm}\| 30^{\circ} \text { and } 45^{\circ} \\ & \varnothing 550 \text { up to } \varnothing 630\|3,0 \mathrm{~mm}\| 30^{\circ} \text { and } 45^{\circ} \end{aligned}$ |
| Conical branches | $\varnothing 80$ up to $\varnothing 500\|1,0 \mathrm{~mm}\| 30^{\circ}$ and $45^{\circ}$ <br> $\varnothing 550$ up to $\varnothing 630\|1,5 \mathrm{~mm}\| 30^{\circ}$ and $45^{\circ}$ <br> $\varnothing 710 / 550 / 400 \mid 1,5 \mathrm{~mm} / 30^{\circ}$ | $\varnothing 100$ up to $\varnothing 500 \mid 2,0 \mathrm{~mm} / 30^{\circ}$ and $45^{\circ}$ <br> $\varnothing 550$ up to $\varnothing 630 \mid 3,0 \mathrm{~mm} / 30^{\circ}$ and $45^{\circ}$ <br> $\varnothing 710 / 550 / 400\|3,0 \mathrm{~mm}\| 30^{\circ}$ |
| T branches | $\varnothing 80$ up to $\varnothing 500 \mid 1,0 \mathrm{~mm}$ $\varnothing 550$ up to $\varnothing 630 \mid 1,5 \mathrm{~mm}$ | $\varnothing 100$ up to $\varnothing 500 \mid 2,0 \mathrm{~mm}$ $\varnothing 550$ up to $\varnothing 630 \mid 3,0 \mathrm{~mm}$ |
| Transition pieces | $\varnothing 100$ up to $\varnothing 630$ \| 1,5 mm | straight model | at an angle $\left(45^{\circ}\right.$ and $\left.60^{\circ}\right)$ | $\varnothing 100$ up to $\varnothing 630$ \| 2,0 mm | straight model | at an angle ( $45^{\circ}$ and $60^{\circ}$ ) |
| Transition pieces with reinforced flange | 8 mm wall thickness | 8 mm wall thickness |
| Throttle valves | $\varnothing 80$ up to $\varnothing 630 \mid 1,5 \mathrm{~mm}$ | $\varnothing 100$ up to $\varnothing 630$ \| $2,0 \mathrm{~mm}$ |
| Throttle valves with seal | $\varnothing 100$ up to Ø 630 \| 1,5 mm | $\varnothing 100$ up to Ø 630 \| 2,0 mm |
| Tapers | $\varnothing 100$ up to $\varnothing 630$ | $\varnothing 100$ up to $\varnothing 630$ \| $2,0 \mathrm{~mm}$ |
| Rings | $\varnothing 80$ up to Ø 300 | $\varnothing 100$ up to $\varnothing 300$ |
| With flanges (loose execution) | $\varnothing 315$ up to $\varnothing 710 \mid 8 \mathrm{~mm}$ wall thickness | $\varnothing 315$ up to $\varnothing 710$ \| 8 mm wall thickness |

Equivalent resistance of bends and branches in meters of straight pipes (average)

| Duct size | $90^{\circ}$ bend $\mathrm{R}=\mathrm{D}$ | $90^{\circ}$ bend $\mathrm{R}=2 \mathrm{D}$ | $30^{\circ}$ branch | $45^{\circ}$ branch |
| :---: | :---: | :---: | :---: | :---: |
| 80 | 1.5 | 0.9 | 0.5 | 0.9 |
| 100 | 2.1 | 1.3 | 0.8 | 1.3 |
| 120 | 2.7 | 1.7 | 1.1 | 1.7 |
| 140 | 3.1 | 2.0 | 1.3 | 2.0 |
| 150 | 3.4 | 2.2 | 1.4 | 2.2 |
| 160 | 3.7 | 2.4 | 1.6 | 2.4 |
| 175 | 4.1 | 2.7 | 1.8 | 2.7 |
| 200 | 4.3 | 3.1 | 2.0 | 3.1 |
| 224 | 4.7 | 3.5 | 2.3 | 3.5 |
| 250 | 6.1 | 4.0 | 2.6 | 4.0 |
| 280 | 6.9 | 4.5 | 2.9 | 4.5 |
| 300 | 7.6 | 5.0 | 3.2 | 5.0 |
| 315 | 7.8 | 5.4 | 3.4 | 5.4 |
| 350 | 9.1 | 6.0 | 3.8 | 6.0 |
| 400 | 11.0 | 7.0 | 4.5 | 7.0 |
| 450 | 12.5 | 8.1 | 5.2 | 8.1 |
| 500 | 14.4 | 9.2 | 5.9 | 9.2 |
| 550 | 15.8 | 10.0 | 6.4 | 10.0 |
| 560 | 16.0 | 10.2 | 6.5 | 10.2 |
| 600 | 17.1 | 11.0 | 6.9 | 11.1 |
| 630 | 17.9 | 11.6 | 7.2 | 11.7 |



Under-pressure resistance of $\mathbf{2 m}$ straight pipes


