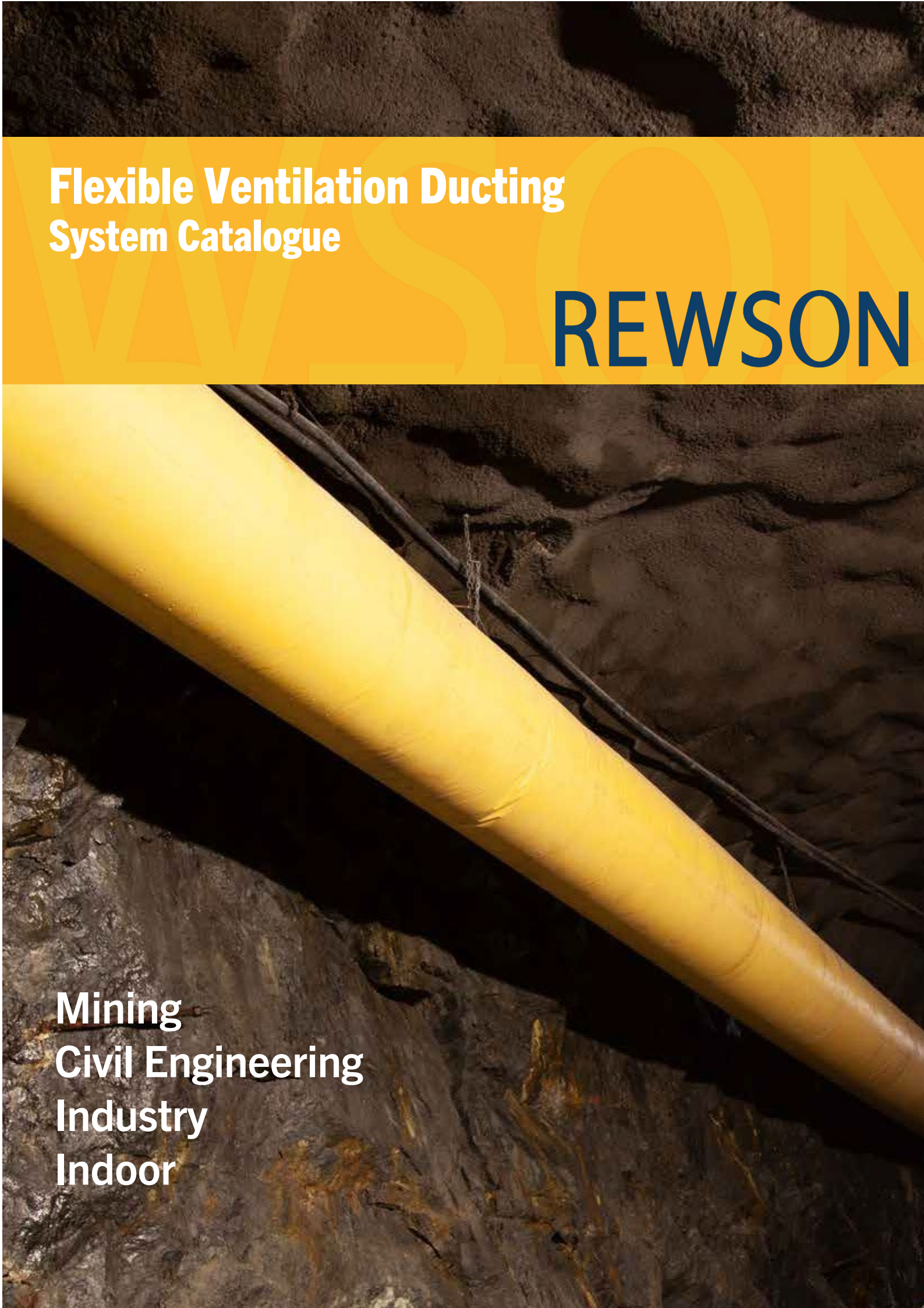


A large, yellow, flexible ventilation duct is shown running diagonally across the frame, set against a dark, textured background of rock or soil. The duct has visible joints and a slightly wrinkled surface. In the background, some dark cables or wires are visible, secured with a small metal chain link.

Flexible Ventilation Ducting System Catalogue

REWSON

**Mining
Civil Engineering
Industry
Indoor**

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Flexible high quality ducting To fit every pressure need

We offer a comprehensive range of high-pressure ventilation systems for tunnelling and mining operations. Serpent's heavy-duty PVC-coated ducting can be highly customized and we can provide your project with straight ducts, adapter cones, duct cones, bends and branches. The result is a tight, lightweight system that is easy to install, repair and extend.

Order your ducting and parts from info@rewson.com

Main benefits

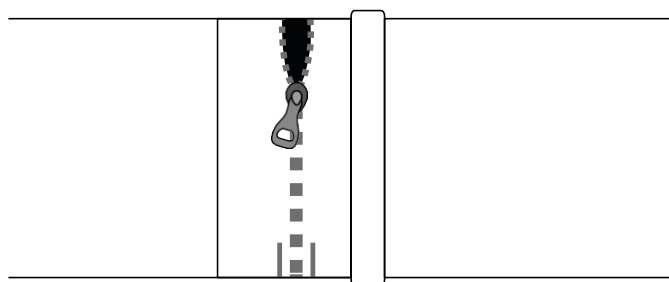
Easy to install and remove

Durable design

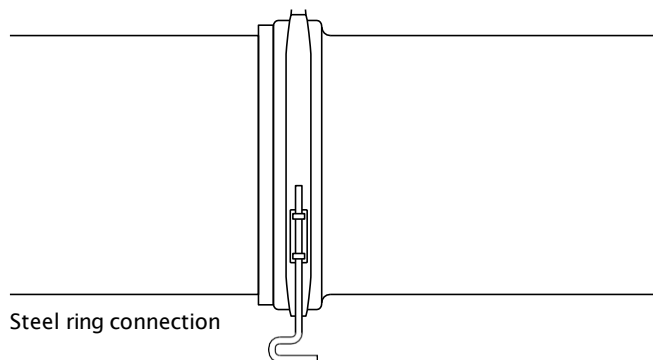
High airtightness

Easy to repair

Online ordering



Zip joint connection



Steel ring connection

Ducting

D450 and D700 ducting

We provide two duct types called D450 and D700. D450 is lightweight, yet very durable, with rip-stop thread woven into the fabric making it the optimal choice for standard installations. D700 ducting is made of a thicker fabric that is extremely durable and strong for installations with extra high-pressure requirements. Both ducting types can be delivered with or without anti-static performance. All Serpent ducting has low internal friction which helps to reduce energy consumption, leading to a lower operational cost for the whole ventilation system.

Zip joint connection

Vulcanized seams and two types of airtight connectors, zip-joints and steel rings, ensure minimal air loss throughout the Serpent system. During installation, the ducts are rolled out onto the tunnel floor. The duct ends are pulled over each other and then easily connected with shared zippers. The zippers have overlapping protective flanges that protect the zipper on the outside and seal the connection on the inside. When the high pressure is released the flanges are pushed together, making the duct almost completely airtight. This means that up to 99% of all air

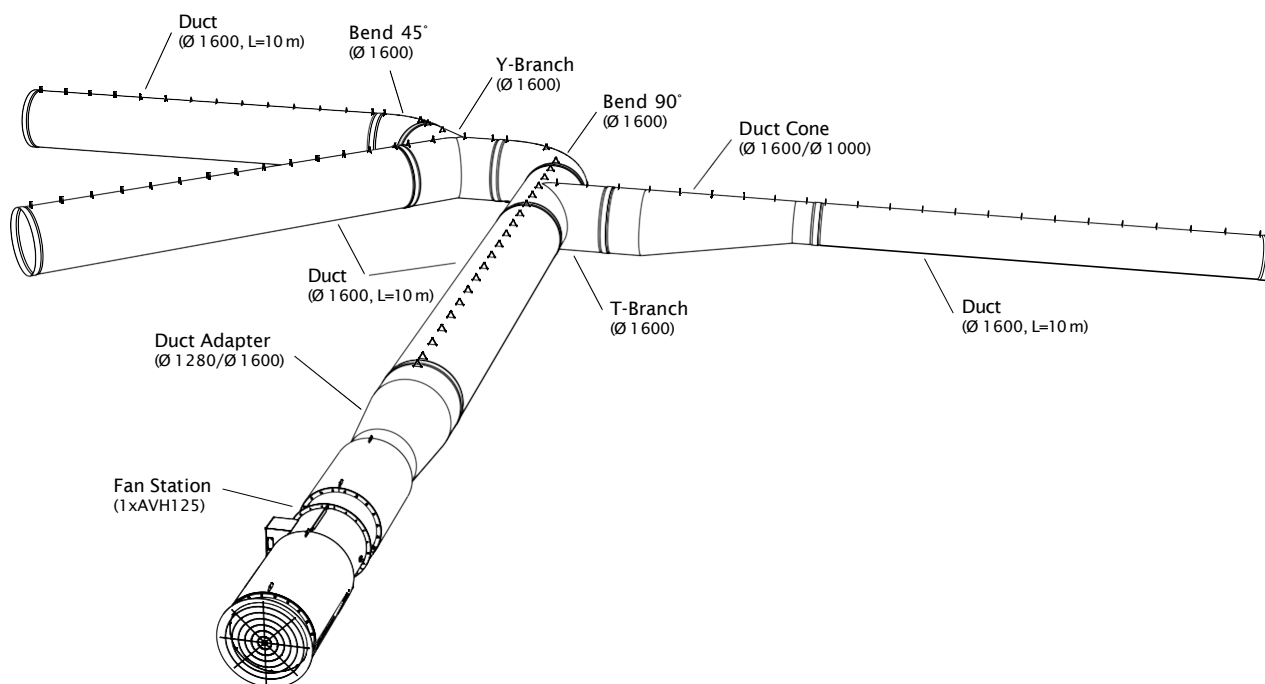
coming into the fan effectively reaches the underground workplace. Zip function can be used in all ducting diameters, from 500 mm to 3000 mm.

Steel ring connection

Alternatively, there is a standard connection system with vulcanized steel rings at one or both ends of the ducting. The ducts are connected by pulling one end over the other. The connection is sealed with a powerful galvanized steel connection clip. Steel ring connection can be provided up to diameter of 1800 mm. When ordering duct with steel ring connection remember to order steel clamps as they are not included.

Easy to install and remove

The ducts come with installations hooks fitted at regular intervals, ready to attach to the tunnel ceiling. If the installation needs to be modified or moved, it is easy to dismantle the attachments, disconnect the ducts and refit elsewhere.



System parts

Adapter cone and duct cone

The duct system is exposed to pressure and airflow by the fan. To minimize material stress, a link between the fan and duct system is needed to distribute the pressure. This part is called an adapter cone. A duct cone is installed when the duct system changes from a bigger duct size to a smaller diameter or vice versa.

Bends

Bends are available in different angles such as 30, 45, and 90 degrees. Note that there is both left and right bends available in the product tables – as suspension hooks are installed only on one side of the ducts.

Branches

Branches are available in 30, 45, 60 and 90 degree angles. The degree refers to the angle between the straight duct flow and the branch. Note that there is both left and right bends in the product tables as suspension hooks are installed only on one side of the ducts. Branches also exist as Y and T shaped branches. The P-branch is used to distribute the flow and pressure of two parallel ducts.

Accessories

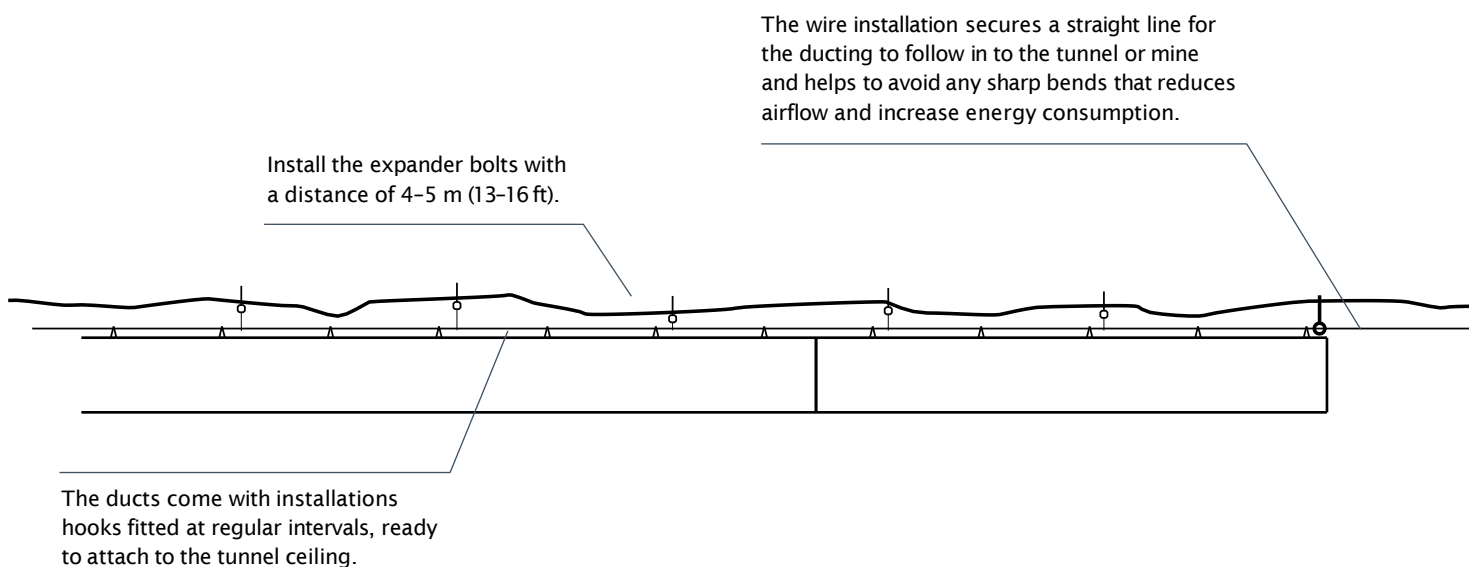
The duct system can be mixed in both duct and connection types. All accessories are constructed in D700 quality to be strong enough to manage all possible pressure variations.

Repair kit

The repair kit is a fast safe tool for repairing holes and tears in the duct. The kit consists of a repair cloth in ducting material with an extra strong longitudinal zipper. The cloth is placed over the damaged area, the zipper is done up, and when the air pressure is released again the repair cloth automatically makes a tight seal. The whole operation normally takes just a few minutes.

Key areas to a successfully Installed system

In a complete ventilation system, the fan station and ducting work in close combination and should be viewed upon as one unit. The fan station's performance largely depends on ducting size. An inappropriately chosen duct size can increase the need for pressure from the fan station, resulting in higher energy costs. A rule of thumb is that the larger the ducting diameter, the lower the running costs.



Minimize the operating costs

To minimize the cost of operation and optimize the return on the investment, it is also essential to ensure that the system is properly installed and maintained. The importance of adequate planning for installation and maintenance cannot be underestimated. The quality of the installation can minimize the risk of leakage and affect overall system performance. The better the installation of the duct, the better the fan's performance and longevity, and the lower the long-term operating costs.

Three key areas

In order to optimize the ventilation system there are three vital areas that need to be focused on: space, straightness and leakage. Fulfill these areas to minimize the system's operating costs.

The importance of space

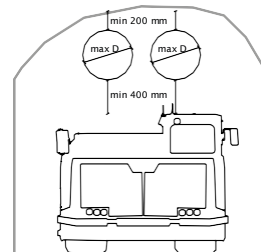
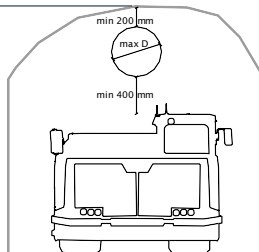
During installation it's important to install correctly and to make sure that there are enough space between the duct and the sealing as well as between the duct and the vehicles used. To make sure that there is enough of space we recommend to count 200 mm clearance between the duct and the roof and 400 mm between the duct and the top part of the vehicles.

Straightness and leakage

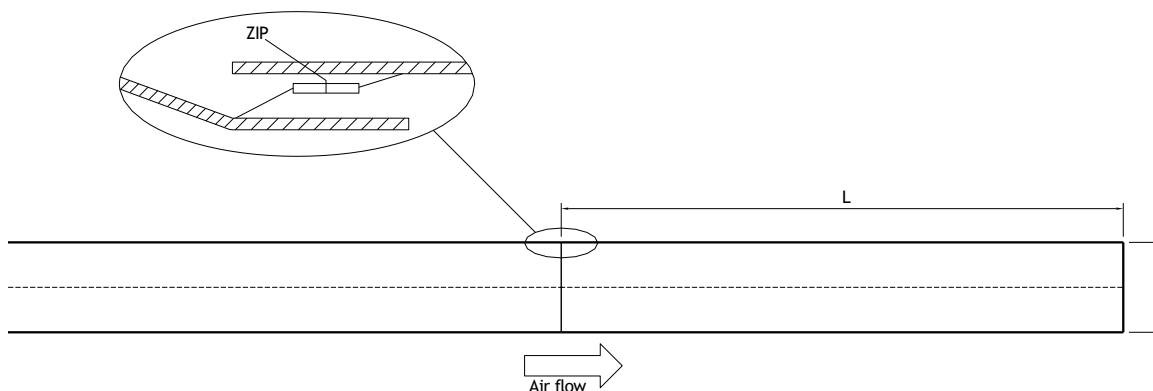
In a completely straight duct the air stream can use 100% of the cross sectional area. If the duct twists or bends in unnatural ways the air stream will be reduced, all this is due to increased pressure drop. To get the right amount of air through the system you will have to increase the pressure from the fan, which in turn will increase the running cost. So it is important to install the ducting properly. The same situation occurs if the duct leaks air. You can repair leaks by using the repair sleeve.

Mount the wire rope at a distance of 30–50 m (98–164 ft) from the end of the B duct.

Make sure that there are enough space between the duct and the ceiling (we recommend 200 mm) and between the duct and the top part of vehicles used (400 mm).



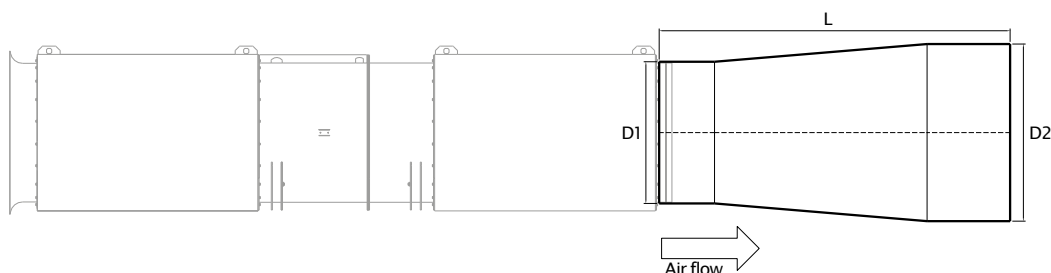
D700/zip



Straight duct (TitS)

Section length (L)								
	10 m	15 m	20 m	30 m	50 m	100 m	150 m	200 m
D (mm)	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
500	8440307872	8440308277	8440307893	8440307914	8440307935	8440307956	8440307977	8440307998
600	8440307873	8440308278	8440307894	8440307915	8440307936	8440307957	8440307978	8440307999
700	8440307874	8440308279	8440307895	8440307916	8440307937	8440307958	8440307979	8440308000
800	8440307875	8440308280	8440307896	8440307917	8440307938	8440307959	8440307980	8440308001
900	8440307876	8440308281	8440307897	8440307918	8440307939	8440307960	8440307981	8440308002
1 000	8440307877	8440308282	8440307898	8440307919	8440307940	8440307961	8440307982	8440308003
1 100	8440307878	8440308283	8440307899	8440307920	8440307941	8440307962	8440307983	8440308004
1 200	8440307879	8440308284	8440307900	8440307921	8440307942	8440307963	8440307984	8440308005
1 300	8440307880	8440308285	8440307901	8440307922	8440307943	8440307964	8440307985	8440308006
1 400	8440307881	8440308286	8440307902	8440307923	8440307944	8440307965	8440307986	8440308007
1 500	8440307882	8440308287	8440307903	8440307924	8440307945	8440307966	8440307987	8440308008
1 600	8440307883	8440308288	8440307904	8440307925	8440307946	8440307967	8440307988	8440308009
1 700	8440307884	8440308289	8440307905	8440307926	8440307947	8440307968	8440307989	8440308010
1 800	8440307885	8440308290	8440307906	8440307927	8440307948	8440307969	8440307990	8440308011
2 000	8440307886	8440308291	8440307907	8440307928	8440307949	8440307970	8440307991	8440308012
2 200	8440307887	8440308292	8440307908	8440307929	8440307950	8440307971	8440307992	8440308013
2 400	8440307888	8440308293	8440307909	8440307930	8440307951	8440307972	8440307993	8440308014
2 500	8440307889	8440308294	8440307910	8440307931	8440307952	8440307973	8440307994	8440308015
2 600	8440307890	8440308295	8440307911	8440307932	8440307953	8440307974	8440307995	8440308016
2 800	8440307891	8440308296	8440307912	8440307933	8440307954	8440307975	8440307996	8440308017
3 000	8440307892	8440308297	8440307913	8440307934	8440307955	8440307976	8440307997	8440308018

D700/zip



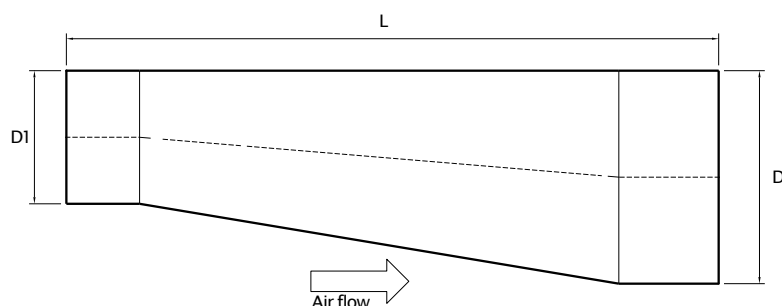
Duct adapter (DAS)

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
650/500	8440309881	1800
650/600	8440309440	1200
650/700	8440309441	1300
650/800	8440309442	1900
650/900	8440309443	2 500
650/1 000	8440309444	3 100
650/1 100	8440309726	3 700
650/1 200	8440309445	4 300
730/600	8440308747	1920
730/700	8440309446	1320
730/800	8440309447	1420
730/900	8440309448	2 020
730/1 000	8440309449	2 620
730/1 100	8440309727	3 220
730/1 200	8440309450	3 820
730/1 400	8440309451	5 020
930/800	8440309452	1780
930/900	8440309729	1320
930/1 000	8440309453	1420
930/1 100	8440309730	2 020
930/1 200	8440309454	2 620
930/1 400	8440309455	3 820
930/1 500	8440309456	4 420
930/1600	8440381150	5 020

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
1030/1 000	8440309458	1180
1030/1 100	8440309731	1420
1030/1 200	8440309459	2 020
1030/1 400	8440309460	3 220
1030/1 500	8440309461	3 820
1030/1 600	8440309462	4 420
1280/1 200	8440381211	1240
1280/1 400	8440309463	1720
1280/1 500	8440309464	2 320
1280/1 600	8440309465	2 920
1280/1 700	8440309466	3 520
1280/1 800	8440309467	4 120
1280/2 000	8440368030	5 320
1280/2 200	8440309732	5 920
1280/2 400	8440312289	6 520
1430/1 400	8440309468	1180
1430/1 500	8440309469	1420
1430/1 600	8440309470	2 020
1430/1 700	8440309471	2 620
1430/1 800	8440309472	3 220
1430/2 000	8440309473	4 420
1430/2 200	8440309474	5 620

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
1630/1 600	8440381213	1180
1630/1 700	8440309475	1420
1630/1 800	8440309476	2 020
1630/2 000	8440368029	3 220
1630/2 200	8440309477	4 420
1630/2 400	8440309478	5 620
1630/2 500	8440381102	6 220
1630/2 600	8440309479	6 820
1840/1 800	8440369189	1720
1840/2 000	8440309480	1960
1840/2 200	8440309481	3 160
1840/2 400	8440309482	4 360
1840/2 500	8440381104	4 960
1840/2 600	8440309483	5 560
1840/2 800	8440309484	6 760
1840/3 000	8440309485	7 960
2280/2 200	8440381101	2 320
2280/2 400	8440309486	1720
2280/2 500	8440381127	2 320
2280/2 600	8440309487	2 920
2280/2 800	8440309488	4 120
2280/3 000	8440309489	5 320

D700/zip



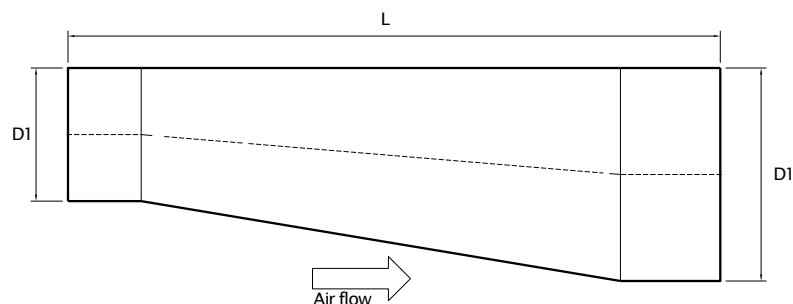
Duct cone (DCS)

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
600/700	8440368920	1 500
600/800	8440368921	2 200
600/900	8440368922	2 800
600/1 000	8440368923	3 400
600/1 100	8440309710	4 000
600/1 200	8440368924	4 600
700/600	8440309737	1 500
700/800	8440368925	1 600
700/900	8440368926	2 300
700/1 000	8440368927	2 900
700/1 100	8440309711	3 500
700/1 200	8440368928	4 100
700/1 300	8440309712	4 800
700/1 400	8440368929	5 400
800/600	8440312283	2 200
800/700	8440312284	1 600
800/900	8440368930	1 700
800/1 000	8440368931	2 400
800/1 100	8440309713	3 000
800/1 200	8440368932	3 600
800/1 300	8440368933	4 200
800/1 400	8440368934	4 800

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
900/700	8440312285	2 300
900/800	8440312288	1 700
900/1 000	8440368935	1 800
900/1 100	8440309714	2 500
900/1 200	8440368936	3 100
900/1 300	8440309715	3 700
900/1 400	8440368937	4 300
900/1 500	8440368938	4 900
900/1 600	8440368939	5 500
1000/800	8440369029	2 400
1000/900	8440369051	1 800
1000/1 100	8440311999	1 800
1000/1 200	8440368940	2 400
1000/1 300	8440309716	3 100
1000/1 400	8440368941	3 700
1000/1 500	8440368942	4 300
1000/1 600	8440368943	4 900
1100/900	8440312000	2 500
1100/1 000	8440312001	1 800
1100/1 200	8440312002	1 800
1100/1 400	8440312003	3 100
1100/1 500	8440312004	3 800
1100/1 600	8440312005	4 400

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
1200/1 000	8440369074	2 400
1200/1 100	8440369076	1 800
1200/1 300	8440368944	1 900
1200/1 400	8440368945	2 500
1200/1 500	8440368946	3 200
1200/1 600	8440368947	3 900
1200/1 700	8440368948	4 500
1200/1 800	8440368949	5 100
1400/1 100	8440369099	3 100
1400/1 200	8440369122	2 500
1400/1 500	8440368950	2 000
1400/1 600	8440368951	3 300
1400/1 700	8440368952	3 400
1400/1 800	8440368953	4 000
1400/2 000	8440368954	5 300
1400/2 200	8440368955	6 600
1500/1 200	8440381103	3 200
1500/1 400	8440308301	2 000
1500/1 600	8440368956	2 100
1500/1 700	8440368957	3 400
1500/1 800	8440368958	3 500
1500/2 000	8440368959	4 700
1500/2 200	8440368960	5 900

D700/zip



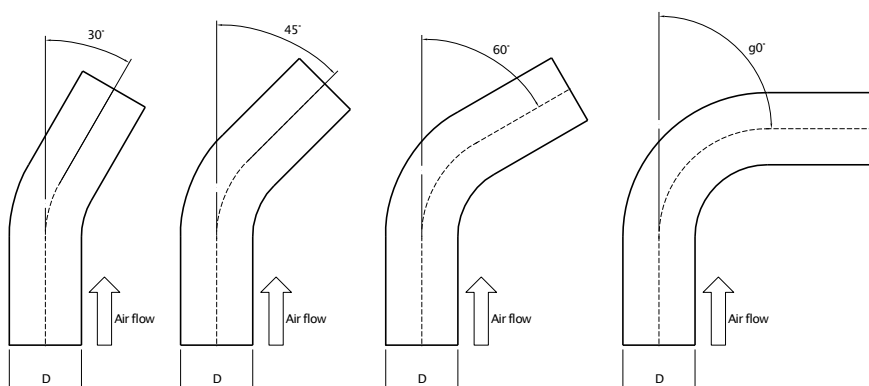
Duct cone (DCS)

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
1600/1 100	8440310072	4 400
1600/1 200	8440310073	3 900
1600/1 400	8440310074	3 300
1600/1 500	8440310075	2 100
1600/1 700	8440368961	2 200
1600/1 800	8440368962	2 900
1600/2 000	8440368963	4 200
1600/2 200	8440368964	5 600
1600/2 400	8440368965	6 800
1600/2 500	8440381172	7 400
1600/2 600	8440368966	8 000
1700/1 500	8440310076	3 400
1700/1 600	8440310077	2 200
1700/1 800	8440368967	2 300
1700/2 000	8440368968	3 700
1700/2 200	8440368969	4 900
1700/2 400	8440368970	6 100
1700/2 500	8440381174	6 700
1700/2 600	8440368971	7 300

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
1800/1 600	8440310078	2 900
1800/1 700	8440310079	2 300
1800/2 000	8440368972	3 100
1800/2 200	8440368973	4 400
1800/2 400	8440368974	5 600
1800/2 500	8440381197	6 200
1800/2 600	8440368975	6 800
1800/2 800	8440368976	8 000
1800/3 000	8440368977	9 200
2 000/1 700	8440310080	3 700
2 000/1 800	8440310081	4 400
2 000/2 200	8440368978	5 600
2 000/2 400	8440368979	6 800
2 000/2 500	8440369169	7 400
2 000/2 600	8440368980	8 000
2 000/2 800	8440368981	9 200
2 000/3 000	8440368982	10 400
2 200/2 000	8440310082	5 600
2 200/2 400	8440368983	3 400
2 200/2 500	8440369190	4 000
2 200/2 600	8440368984	4 600
2 200/2 800	8440368985	5 200
2 200/3 000	8440368986	5 800

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
2 400/2 000	8440310083	6 800
2 400/2 200	8440310084	3 400
2 400/2 500	8440369075	5 300
2 400/2 600	8440368987	5 900
2 400/2 800	8440368988	6 500
2 400/3 000	8440368989	7 100
2 500/2 200	8440310085	4 000
2 500/2 400	8440310086	5 300
2 500/2 600	8440369098	6 500
2 500/2 800	8440369121	7 800
2 500/3 000	8440369144	8 400
2 600/2 400	8440310087	5 900
2 600/2 500	8440310088	5 300
2 600/2 800	8440368990	6 500
2 600/3 000	8440368991	7 700
2 800/2 500	8440310089	7 800
2 800/2 600	8440310090	6 500
2 800/3 000	8440310091	8 300
3 000/2 500	8440310092	8 400
3 000/2 600	8440310093	7 700
3 000/2 800	8440310094	8 300

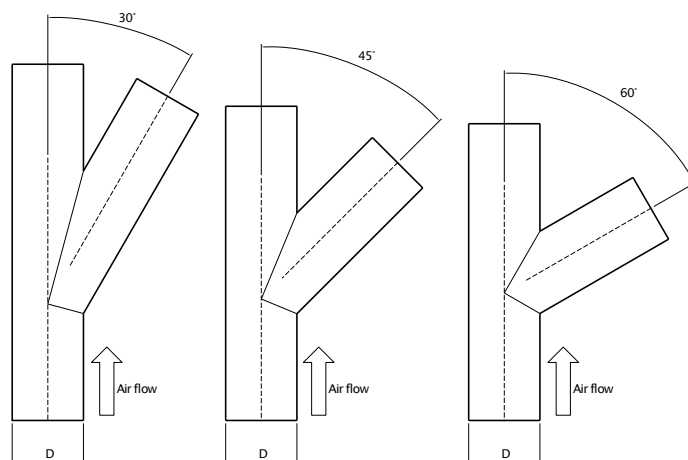
D700/zip



Bend (BEN)

	Bend 30°		Bend 45°		Bend 60°		Bend 90°	
D=Ø mm	Left	Right	Left	Right	Left	Right	Left	Right
	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
500	8440369052	8440369030	8440369077	8440308019	8440369123	8440369100	8440369147	8440308040
600	8440369053	8440369031	8440369078	8440368059	8440369124	8440369101	8440369148	8440308041
700	8440369054	8440369032	8440369079	8440308021	8440369125	8440369102	8440369149	8440368095
800	8440369055	8440369033	8440369080	8440369075	8440369126	8440369103	8440369150	8440308043
900	8440369056	8440369034	8440369081	8440368062	8440369127	8440369104	8440369151	8440368096
1 000	8440369057	8440369035	8440369082	8440368066	8440369128	8440369105	8440369152	8440368097
1 100	8440369058	8440369036	8440369083	8440308025	8440369129	8440369106	8440369153	8440308046
1 200	8440369059	8440369037	8440369084	8440368067	8440369130	8440369107	8440369154	8440368098
1 300	8440369060	8440369038	8440369085	8440308027	8440369131	8440369108	8440369155	8440308048
1 400	8440369061	8440369039	8440369086	8440368069	8440369132	8440369109	8440369156	8440368099
1 500	8440369062	8440369040	8440369087	8440308029	8440369133	8440369110	8440369157	8440308050
1 600	8440369063	8440369041	8440369088	8440368073	8440369134	8440369111	8440369158	8440368100
1 700	8440369064	8440369042	8440369089	8440308031	8440369135	8440369112	8440369159	8440308052
1 800	8440369065	8440369043	8440369090	8440368074	8440369136	8440369113	8440369160	8440368101
2 000	8440369066	8440369044	8440369091	8440308033	8440369137	8440369114	8440369161	8440368102
2 200	8440369067	8440369045	8440369092	8440368075	8440369138	8440369115	8440369162	8440368103
2 400	8440369068	8440369046	8440369093	8440308035	8440369139	8440369116	8440369163	8440308056
2 500	8440369069	8440369047	8440369094	8440308036	8440369140	8440369117	8440369164	8440308057
2 600	8440369070	8440369048	8440369095	8440308037	8440369141	8440369118	8440369165	8440308058
2 800	8440369017	8440369049	8440369096	8440308038	8440369142	8440369119	8440369166	8440308059
3 000	8440369072	8440369050	8440369097	8440308039	8440369143	8440369120	8440369167	8440308060

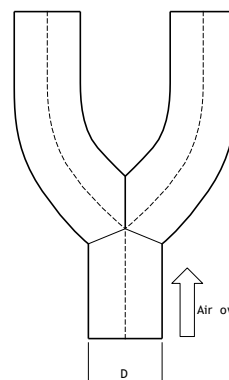
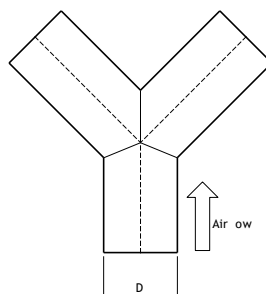
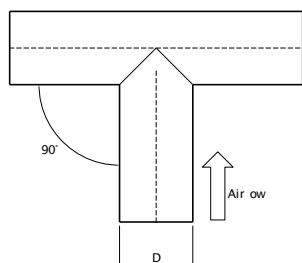
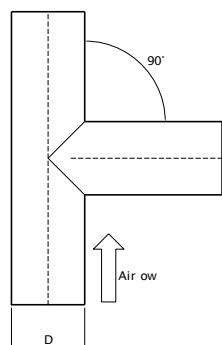
D700/zip



Branch (BRS)

	Branch 30°		Branch 45°		Branch 60°	
D=Ø mm	Left	Right	Left	Right	Left	Right
	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
500	8440369191	8440369170	8440381105	8440308061	8440381151	8440381128
600	8440369192	8440369171	8440381106	8440308062	8440381152	8440381129
700	8440369193	8440369172	8440381107	8440308063	8440381153	8440381130
800	8440369194	8440369173	8440381108	8440368080	8440381154	8440381131
900	8440369195	8440369174	8440381109	8440308065	8440381155	8440381132
1 000	8440369196	8440369175	8440381110	8440368083	8440381156	8440381133
1 100	8440369197	8440369176	8440381111	8440308067	8440381157	8440381134
1 200	8440369198	8440369177	8440381112	8440368084	8440381158	8440381135
1 300	8440369199	8440369178	8440381113	8440308069	8440381159	8440381136
1 400	8440381089	8440369179	8440381114	8440368085	8440381160	8440381137
1 500	8440381090	8440369180	8440381115	8440308071	8440381161	8440381138
1 600	8440381091	8440369181	8440381116	8440308072	8440381162	8440381139
1 700	8440381092	8440369180	8440381117	8440308073	8440381163	8440381140
1 800	8440381093	8440369181	8440381118	8440308074	8440381164	8440381141
2 000	8440381094	8440369182	8440381119	8440308075	8440381165	8440381142
2 200	8440381095	8440369183	8440381120	8440308076	8440381166	8440381143
2 400	8440381096	8440369184	8440381121	8440308077	8440381167	8440381144
2 500	8440381097	8440369185	8440381122	8440308078	8440381168	8440381145
2 600	8440381098	8440369186	8440381123	8440308079	8440381169	8440381146
2 800	8440381099	8440369187	8440381124	8440308080	8440381170	8440381147
3 000	8440381100	8440369188	8440381125	8440308081	8440381171	8440381148

D700/zip



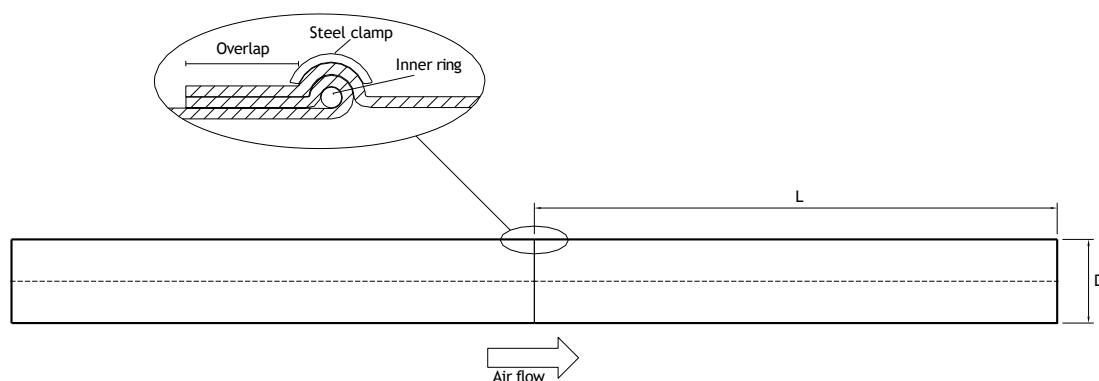
T-Branch (T-Br)

D=Ø mm	T-Branch		
	Left	Right	Both directions
	Part no.	Part no.	Part no.
500	8440381176	8440380882	8440310124
600	8440381177	8440380883	8440310125
700	8440381178	8440380884	8440310126
800	8440381179	8440380885	8440310127
900	8440381180	8440380886	8440310128
1 000	8440381181	8440380887	8440310129
1 100	8440381182	8440380888	8440310130
1 200	8440381183	8440380889	8440310131
1 300	8440381184	8440380890	8440310132
1 400	8440381185	8440380891	8440310133
1 500	8440381186	8440380892	8440310134
1 600	8440381187	8440380893	8440310135
1 700	8440381188	8440380894	8440310136
1 800	8440381189	8440380895	8440310137
2 000	8440381190	8440380896	8440310138
2 200	8440381191	8440380897	8440310139
2 400	8440381192	8440380898	8440310140
2 500	8440381193	8440380899	8440310141
2 600	8440381194	8440381000	8440310142
2 800	8440381195	8440381001	8440310143
3 000	8440381196	8440381002	8440310144

Y- & P-Branch (Y-Br) (P-Br)

D=Ø mm	Y-Branch	P-Branch
	Part no.	Part no.
500	844038103	8440310145
600	8440368076	8440310146
700	8440368078	8440310147
800	844038106	8440310148
900	8440368082	8440310149
1 000	8440368077	8440310150
1 100	844038109	8440310151
1 200	8440368104	8440310152
1 300	844038111	8440310153
1 400	844038112	8440310154
1 500	844038113	8440310155
1 600	8440368088	8440310156
1 700	844038115	8440310157
1 800	8440368086	8440310158
2 000	844038117	8440310159
2 200	8440368207	8440310160
2 400	844038119	8440310161
2 500	844038120	8440310162
2 600	844038121	8440310163
2 800	844038122	8440310164
3 000	844038123	8440310165

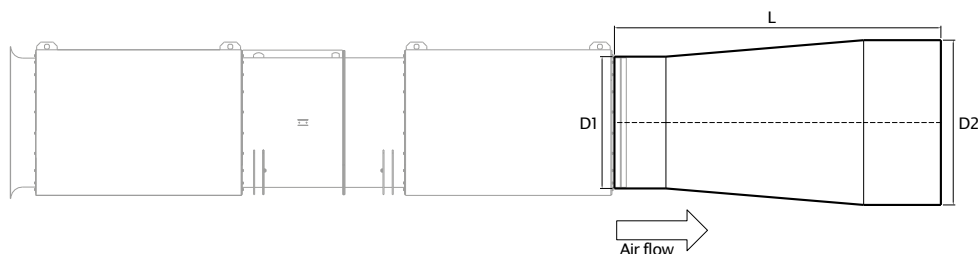
D700/steel ring



Straight duct (TitS)

Section length (L)								
	10 m	15 m	20 m	30 m	50 m	100 m	150 m	200 m
D=Ø mm	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
300	8440309310	8440309311	8440309312	8440309313	8440309314	8440309315	8440309316	8440309317
400	8440308814	8440309318	8440308815	8440308816	8440308817	8440309319	8440309320	8440309321
500	8440309322	8440309323	8440309324	8440309325	8440309326	8440309327	8440309328	8440309329
600	8440309330	8440309331	8440309332	8440309333	8440309334	8440309335	8440309336	8440309337
700	8440309338	8440309339	8440309340	8440309341	8440309342	8440309343	8440309344	8440309345
800	8440309436	8440309347	8440309348	8440309349	8440309350	8440309351	8440309352	8440309353
900	8440309354	8440309355	8440309356	8440309357	8440309358	8440309359	8440309360	8440309361
1 000	8440308819	8440309362	8440368144	8440309363	8440309364	8440307815	8440309365	8440309366
1 100	8440309367	8440309368	8440309369	8440309370	8440309371	8440309372	8440309373	8440309374
1 200	8440309375	8440309376	8440309377	8440309378	8440309379	8440309380	8440309381	8440309382
1 300	8440309383	8440309384	8440309385	8440309386	8440309387	8440309388	8440309389	8440309390
1 400	8440309391	8440309392	8440309393	8440309394	8440309395	8440309396	8440309397	8440309398
1 500	8440309399	8440309400	8440309401	8440309402	8440309403	8440309404	8440309405	8440309406
1 600	8440309407	8440309408	8440309409	8440309410	8440309411	8440309412	8440309413	8440309414
1 700	8440309415	8440309416	8440309417	8440309418	8440309419	8440309420	8440309421	8440309422
1 800	8440309423	8440309424	8440309425	8440309426	8440309427	8440309428	8440309429	8440309430

D700/steel ring

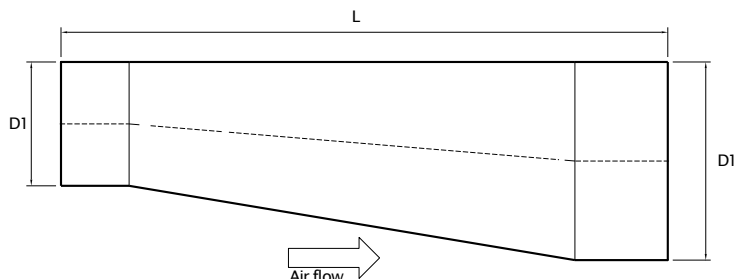


Duct adapter (DAS)

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
650/500	8440311774	1 800
650/600	8440309490	1 200
650/700	8440309495	1 300
650/800	8440309496	1 900
650/900	8440309497	2 500
650/1 000	8440309498	3 100
650/1 100	8440309734	3 700
650/1 200	8440309499	4 300
730/600	8440309500	1 920
730/700	8440309501	1 320
730/800	8440309502	1 420
730/900	8440309503	2 020
730/1 000	8440309504	2 620
730/1 100	8440309735	3 220
730/1 200	8440309505	3 820
730/1 400	8440309506	5 020
930/800	8440309507	1 780
930/900	8440381173	1 320
930/1 000	8440309508	1 420
930/1 100	8440309509	2 020
930/1 200	8440309738	2 620
930/1 400	8440309510	3 820
930/1 500	8440309511	4 420
930/1 600	8440309512	5 020

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
1 030/1 000	8440309513	1 180
1 030/1 100	8440309739	1 420
1 030/1 200	8440309514	2 020
1 030/1 400	8440309515	3 220
1 030/1 500	8440309516	3 820
1 030/1 600	8440309517	4 420
1 280/900	8440311772	3 040
1 280/1 000	8440311773	2 440
1 280/1 100	8440309882	1 840
1 280/1 200	8440381126	1 240
1 280/1 400	8440309518	1 720
1 280/1 500	8440309519	2 320
1 280/1 600	8440309520	2 920
1 280/1 700	8440309521	3 520
1 280/1 800	8440309522	4 120
1 430/1 400	8440309523	1 180
1 430/1 500	8440309524	1 420
1 430/1 600	8440309525	2 020
1 430/1 700	8440309526	2 620
1 430/1 800	8440309527	3 220
1 630/1 600	8440381149	1 180
1 630/1 700	8440309528	1 420
1 630/1 800	8440309529	2 020
1 840/1 800	8440309736	1 720

D700/steel ring



Duct cone (DCS)

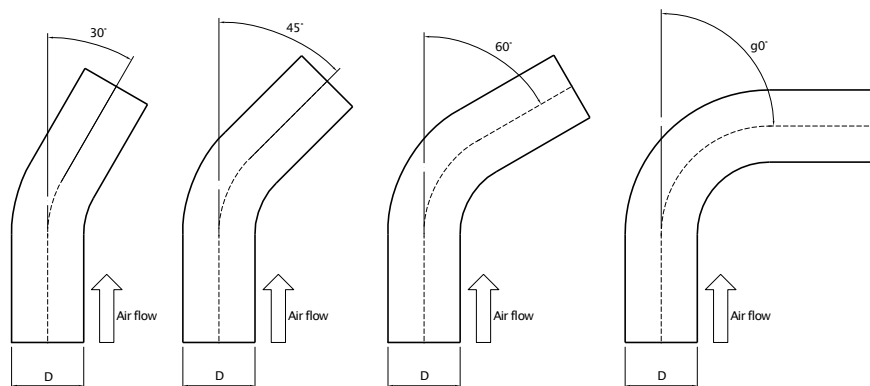
D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
300/400	8440310095	1200
300/500	8440310096	1900
300/600	8440310097	2 500
400/300	8440310098	1200
400/500	8440310123	1300
400/600	8440381199	2 000
400/700	8440381201	2 600
400/800	8440381203	3 200
500/300	8440310099	1900
500/400	8440310100	1300
500/600	8440381205	1400
500/700	8440381207	2 100
500/800	8440381209	2 600
600/300	8440310101	2 500
600/400	8440310102	2 000
600/500	8440310103	1 400
600/700	8440309879	1 500
600/800	8440368992	2 200
600/900	8440368993	2 800
600/1 000	8440368994	3 400
600/1 100	8440309718	4 000
600/1 200	8440368995	4 600

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
700/600	8440310104	1 500
700/800	8440368996	1 600
700/900	8440368997	2 300
700/1 000	8440368998	2 900
700/1 100	8440309719	3 500
700/1 200	8440368999	4 100
700/1 300	8440309720	4 800
700/1 400	8440369000	5 400
800/600	8440310105	2 200
800/700	8440310106	1 600
800/900	8440369001	1 700
800/1 000	8440369002	2 400
800/1 100	8440309721	3 000
800/1 200	8440369003	3 600
800/1 300	8440369004	4 200
800/1 400	8440369005	4 800
900/700	8440310107	2300
900/800	8440310108	1700
900/1 000	8440369006	1800
900/1 100	8440309722	2 500
900/1 200	8440308555	3 100
900/1 300	8440309723	3 700
900/1 400	8440309880	4 300
900/1 500	8440369007	4 900
900/1 600	8440369008	5 500

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
1000/800	8440310109	2 400
1000/900	8440310110	1800
1000/1 100	8440312006	1800
1000/1 200	8440369009	2 400
1000/1 300	8440309724	3 100
1000/1 400	8440369010	3 700
1000/1 500	8440369011	4 300
1000/1 600	8440369012	4 900
1100/900	8440312007	2 500
1100/1 000	8440312008	1800
1100/1 200	8440312009	1800
1100/1 400	8440312010	3 100
1100/1 500	8440312011	3 800
1100/1 600	8440312012	4 400
1200/1 000	8440310111	2 400
1200/1 100	8440310112	1800
1200/1 300	8440309725	1900
1200/1 400	8440369013	2 500
1200/1 500	8440369014	3 200
1200/1 600	8440369015	3 900
1200/1 700	8440369016	4 500
1200/1 800	8440369017	5 100

D1/D2 (mm)	Part no.	Length (mm) (± 100 mm)
1400/1 100	8440310113	3 100
1400/1 200	8440310114	2 500
1400/1 500	8440369018	2 000
1400/1 600	8440369019	3 300
1400/1 700	8440369020	3 400
1400/1 800	8440369021	4 000
1500/1 200	8440310115	3 200
1500/1 400	8440310116	2 000
1500/1 600	8440369022	2 100
1500/1 700	8440369023	3 400
1500/1 800	8440369024	3 500
1600/1 400	8440310117	3 300
1600/1 500	8440310118	2 100
1600/1 700	8440369025	2 200
1600/1 800	8440369026	2 900
1700/1 500	8440310119	3 400
1700/1 600	8440310120	2 200
1700/1 800	8440369027	2 300
1800/1 600	8440310121	2 900
1800/1700	8440310122	2300

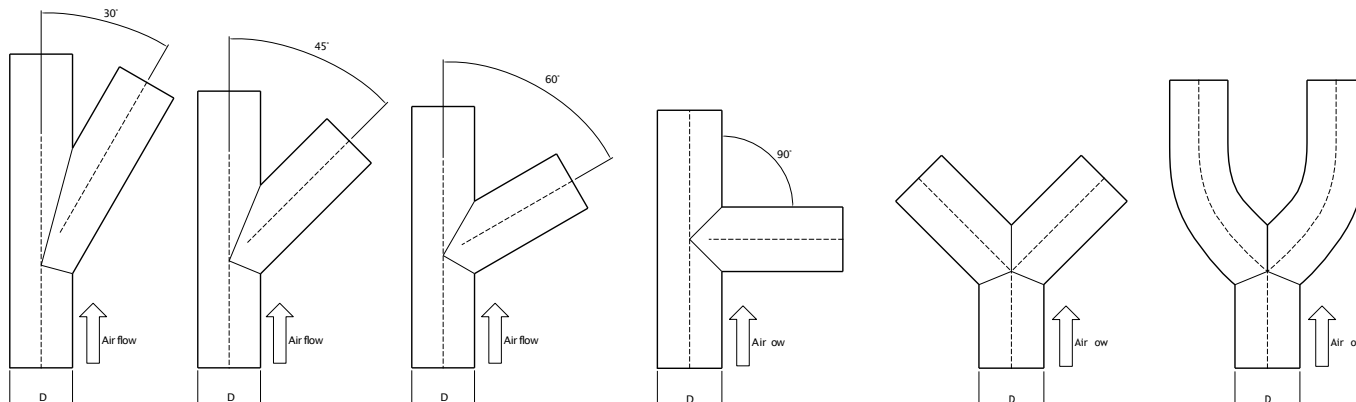
D700/steel ring



Bend (Ben)

	Bend 30°	Bend 45°	Bend 60°	Bend 90°
D=Ø mm	Part no.	Part no.	Part no.	Part no.
300	8440309530	8440368911	8440368855	8440368913
400	8440309531	8440368912	8440368856	8440308813
500	8440309135	8440308319	8440368857	8440308340
600	8440309532	8440308320	8440368858	8440308341
700	8440308673	8440308321	8440368859	8440308342
800	8440309138	8440308322	8440368860	8440307611
900	8440368063	8440308323	8440368861	8440308343
1000	8440309533	8440308324	8440368862	8440308344
1100	8440309534	8440308325	8440368863	8440308345
1200	8440309535	8440308326	8440308675	8440308346
1300	8440309536	8440308327	8440368864	8440308347
1400	8440309537	8440308328	8440368865	8440308348
1500	8440309538	8440308329	8440368866	8440308349
1600	8440309539	8440308330	8440368867	8440308350
1700	8440309540	8440308331	8440368868	8440308351
1800	8440309541	8440308332	8440368869	8440308352

D700/steel ring



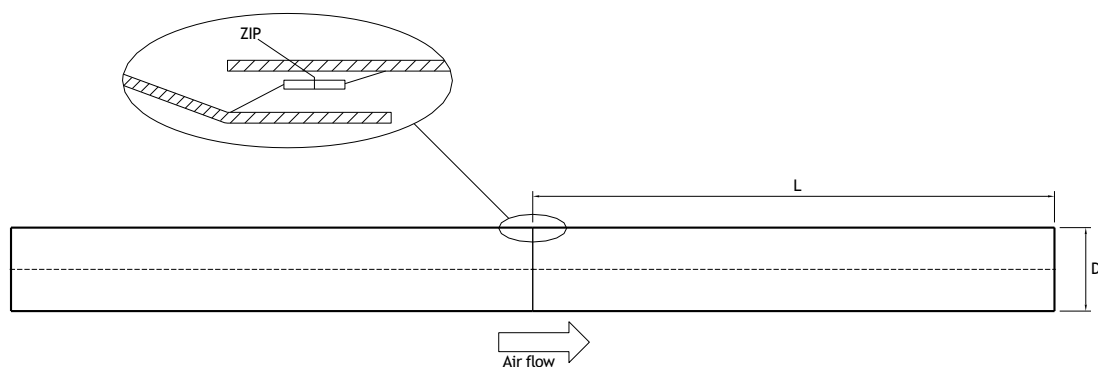
Branch (BrS)

	Branch 30°	Branch 45°	Branch 60°
D=Ø mm	Part no.	Part no.	Part no.
300	8440368873	8440368914	8440368892
400	8440368874	8440368915	8440368893
500	8440368875	8440308360	8440368894
600	8440368876	8440308361	8440368895
700	8440368877	8440308362	8440368896
800	8440368878	8440308363	8440368897
900	8440368879	8440308364	8440368898
1 000	8440368880	8440308365	8440368899
1 100	8440368881	8440308366	8440368900
1 200	8440368882	8440308367	8440368901
1 300	8440368883	8440308368	8440368902
1 400	8440368884	8440308369	8440368903
1 500	8440368885	8440308370	8440368904
1 600	8440368886	8440308371	8440368905
1 700	8440368887	8440308372	8440368906
1 800	8440368888	8440308373	8440368907

T-, Y- & P-Branch (T-Br) (Y-Br) (P-Br)

	T-Branch	Y-Branch	P-Branch
D=Ø mm	Part no.	Part no.	Part no.
300	8440368916	8440368918	8440310166
400	8440368917	8440368919	8440310167
500	8440308381	8440308402	8440310168
600	8440308382	8440308403	8440310169
700	8440308383	8440308404	8440310170
800	8440308384	8440308405	8440310171
900	8440308385	8440308406	8440310172
1 000	8440308386	8440308407	8440310173
1 100	8440308387	8440308408	8440310174
1 200	8440308388	8440308409	8440310175
1 300	8440308389	8440308410	8440310176
1 400	8440308390	8440308411	8440310177
1 500	8440308391	8440308412	8440310178
1 600	8440308392	8440308413	8440310179
1 700	8440308393	8440308414	8440310180
1 800	8440308394	8440308415	8440310181

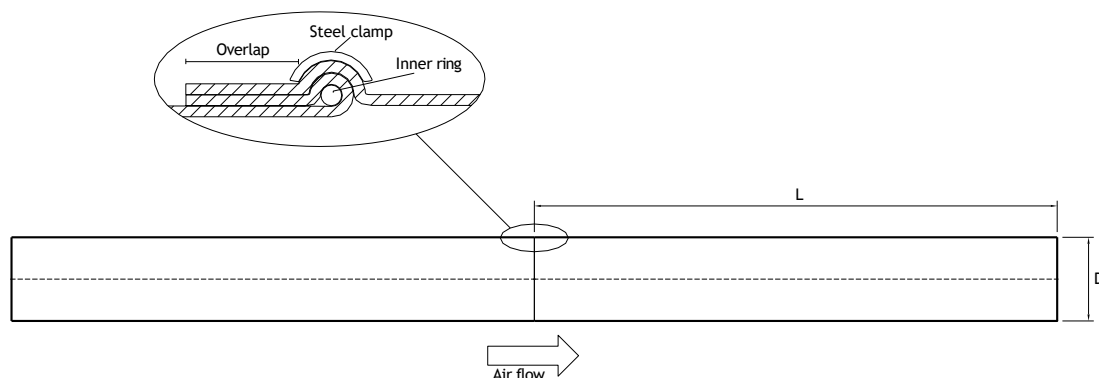
D450/zip



Straight duct (AirS)

Section length (L)								
	10 m	15 m	20 m	30 m	50 m	100 m	150 m	200 m
D (mm)	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
500	8440307725	8440308298	8440307746	8440307767	8440307788	8440307809	8440307830	8440307851
600	8440307726	8440308299	8440307747	8440307768	8440307789	8440307810	8440307831	8440307852
700	8440307727	8440308300	8440307748	8440307769	8440307790	8440307811	8440307832	8440307853
800	8440307728	8440308200	8440307749	8440307770	8440307791	8440307812	8440307833	8440307854
900	8440307729	8440308302	8440307750	8440307771	8440307792	8440307813	8440307834	8440307855
1 000	8440307730	8440308303	8440307751	8440307772	8440307793	8440307814	8440307835	8440307856
1 100	8440307731	8440308304	8440307752	8440307773	8440307794	8440309431	8440307836	8440307857
1 200	8440307732	8440308305	8440307753	8440307774	8440307795	8440307816	8440307837	8440307858
1 300	8440307733	8440308306	8440307754	8440307775	8440307796	8440307817	8440307838	8440307859
1 400	8440307734	8440308307	8440307755	8440307776	8440307797	8440307818	8440307839	8440307860
1 500	8440307735	8440308308	8440307756	8440307777	8440307798	8440307819	8440307840	8440307861
1 600	8440307736	8440308309	8440307757	8440307778	8440307799	8440307820	8440307841	8440307862
1 700	8440307737	8440308310	8440307758	8440307779	8440307800	8440307821	8440307842	8440307863
1 800	8440307738	8440308311	8440307759	8440307780	8440307801	8440307822	8440307843	8440307864
2 000	8440307739	8440308312	8440307760	8440307781	8440307802	8440307823	8440307844	8440307865
2 200	8440307740	8440308313	8440307761	8440307782	8440307803	8440307824	8440307845	8440307866
2 400	8440307741	8440308314	8440307762	8440307783	8440307804	8440307825	8440307846	8440307867
2 500	8440307742	8440308315	8440307763	8440307784	8440307805	8440307826	8440307847	8440307868
2 600	8440307743	8440308316	8440307764	8440307785	8440307806	8440307827	8440307848	8440307869
2 800	8440307744	8440308317	8440307765	8440307786	8440307807	8440307828	8440307849	8440307870
3 000	8440307745	8440308318	8440307766	8440307787	8440307808	8440307829	8440307850	8440307871

D450/steel ring



Straight duct (AirS)

Section length (L)								
	10 m	15 m	20 m	30 m	50 m	100 m	150 m	200 m
D (mm)	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
300	8440381236	8440309595	8440309611	8440309627	8440309643	8440309659	8440309675	8440309691
400	8440381237	8440309596	8440309612	8440309628	8440309644	8440309660	8440309676	8440309692
500	8440381238	8440309597	8440309613	8440309629	8440309645	8440309661	8440309677	8440309693
600	8440381239	8440309598	8440309614	8440309630	8440309646	8440309662	8440309678	8440309694
700	8440381240	8440309599	8440309615	8440309631	8440309647	8440309663	8440309679	8440309695
800	8440381241	8440309600	8440309616	8440309632	8440309648	8440309664	8440309680	8440309696
900	8440381242	8440309601	8440309617	8440309633	8440309649	8440309665	8440309681	8440309697
1 000	8440381243	8440309602	8440309618	8440309634	8440309650	8440309666	8440309682	8440309698
1 100	8440381244	8440309603	8440309619	8440309635	8440309651	8440309667	8440309683	8440309699
1 200	8440381245	8440309604	8440309620	8440309636	8440309652	8440309668	8440309684	8440309700
1 300	8440381246	8440309605	8440309621	8440309637	8440309653	8440309669	8440309685	8440309701
1 400	8440309590	8440309606	8440309622	8440309638	8440309654	8440309670	8440309686	8440309702
1 500	8440309591	8440309607	8440309623	8440309639	8440309655	8440309671	8440309687	8440309703
1 600	8440309592	8440309608	8440309624	8440309640	8440309656	8440309672	8440309688	8440309704
1 700	8440309593	8440309609	8440309625	8440309641	8440309657	8440309673	8440309689	8440309705
1 800	8440309594	8440309610	8440309626	8440309642	8440309658	8440309674	8440309690	8440309706

Steel rings

Couplings rings		
	Crank	Bolt
D=Ø mm	Part no.	Part no.
300	8440368043	8440309295
400	8440368044	8440309296
500	8440368045	8440309297
600	8440368046	8440309298
700	8440368047	8440309299
800	8440368048	8440309300
900	8440368049	8440411104
1 000	8440368050	8440309301
1 100	8440308476	8440309302
1 200	8440368051	8440309303
1 300	8440308477	8440309304
1 400	8440368052	8440309305
1 500	8440368053	8440309306
1 600	8440368054	8440309307
1 700	8440308478	8440309308
1 800	8440368055	8440309309

Inner rings

D=Ø mm	Part no.
300	8440309432
400	8440309433
500	8440368042
600	8440368031
700	8440367993
800	8440367995
900	8440368032
1 000	8440368036
1 100	8440309434
1 200	8440368038
1 300	8440309435
1 400	8440368039
1 500	8440369168
1 600	8440368040
1 700	8440309437
1 800	8440368041

Repair sleeve

Repair sleeve			
	Length 1 m	Length 3 m	Length 5 m
D=Ø mm	Part no.	Part no.	Part no.
300	8440381231	8440381233	8440381235
400	8440381232	8440381234	8440381236
500	8440368747	8440368748	8440368749
600	8440368676	8440368678	8440368679
700	8440368680	8440368681	8440368682
800	8440368683	8440368684	8440368685
900	8440368686	8440368688	8440368689
1 000	8440368690	8440368692	8440368693
1 100	8440368750	8440368694	8440368751
1 200	8440368695	8440368697	8440368698
1 300	8440368752	8440368753	8440368754
1 400	8440368699	8440368700	8440368701
1 500	8440368702	8440368703	8440368704
1 600	8440368706	8440368708	8440368710
1 700	8440368755	8440368756	8440368757
1 800	8440368711	8440368758	8440368759
2 000	8440368712	8440368714	8440368760
2 200	8440368715	8440368717	8440368718
2 400	8440368719	8440368721	8440368723
2 500	8440368724	8440368726	8440368728
2 600	8440368729	8440368730	8440368731
2 800	8440368761	8440368762	8440368763
3 000	8440368764	8440368765	8440368766

Parts, tools and kits

	Part no.
Duct mounting kit wire only *Incl. 6 mm steel wire and tow wire clips. L=52 m (171 ft)	8440309240
Duct mounting kit 32-36 mm *Incl. 6 mm steel wire and two wire clips. L=52 m (171 ft)	8440309241
Two expander bolts (12x340 mm for 32-36 mm hole)	
Ten expander bolts (8x260 mm for 15 mm hole)	
Duct mounting kit 42-46 mm *Incl. 6 mm steel wire and tow wire clips. L=52 m (171 ft)	8440309242
Two expander bolts (12x340 mm for 42-46 mm hole)	
Ten expander bolts (8x260 mm for 15 mm hole)	
Loose parts expander bolt 32-36 mm	8440300213
Loose parts expander bolt 42-46 mm	8440300223
Loose parts expander bolt 15 mm	8440300150
Loose parts wire clip	8440303628
Loose parts wire 6 mm L=52 m (171 ft) (no clips incl.)	8440309228

Technical data

		D700 FR-RSX* (yellow)	D450 FR-RSX* (yellow)	D700 FRA-RSX* (black)	D450 FRA-RSX* (black)
Base fabric		Polyester			
Yarn thickness (dtex)		2 200/1 430	3 300/1 100	2 200/1 100	3 300/1 100
Yarns/cm	warp	3.5 (x1 430)	3,5	3.5 (x1 430)	3.5
	weft	3.5 (x2 200)	3,5+1	3.5 (x2 200)	3.5+1
Coating		Plastizised PVC			
Tensile strength (N/5 cm) (DIN 53354)	warp	2 400	1400	2 400	1400
	weft	3 000	1 700	3 000	1 700
Tear strength (N) (DIN 53363)	warp	550	270	550	270
	weft	750	340	750	340
Total weight (gram/m2) (DIN 53352)		600	500	600	500
Flame resistance (DIN4102-B1)		Yes			
Cold crack (DIN 53361)		-30C			
Environmental resistance		Resistant against rotting, humus acid, diesel- and nitrous gases, UV-light			
Conductivity (ISO 284)		-----	-----	1x10 ⁻¹²	1x10 ⁻¹²

*"RS" stands for Rip-Stop. The base fabric is made with an enhanced yarn which dramatically increases the tear strength. This feature eliminates the ducting to further-tear longitudinally under normal conditions.

Max allowed working pressures

Diameter (mm) +/- 1,5%	Max allowed working pressures (kPa) valid for new ducting. Safety factor 3.			
400	98.0	64.4	98.0	64.4
500	78.4	51.5	51.5	78.4
600	65.3	42.9	65.3	42.9
700	56.0	36.8	56.0	36.8
800	49.0	32.2	49.0	32.2
900	43.6	28.6	43.6	28.6
1 000	39.2	25.8	39.2	25.8
1 100	35.6	23.5	35.6	23.5
1 200	32.7	21.5	32.7	21.5
1 300	30.2	19.8	30.2	19.8
1 400	28.0	18.4	28.0	18.4
1 500	26.1	17.1	26.1	17.1
1 600	24.5	16.1	24.5	16.1
1 700	23.1	15.2	23.1	15.2
1 800	21.8	14.3	21.8	14.3
2 000	19.6	12.9	19.6	12.9
2 200	17.8	11.7	17.8	11.7
2 400	16.3	10.7	16.3	10.7
2 500	15.7	10.4	15.7	10.4
2 600	15.1	9.9	15.1	9.9
2 800	14.0	9.2	14.0	9.2
3 000	13.1	8.6	13.1	8.6

Note: All specifications are subject to changes without notification.

Support and service

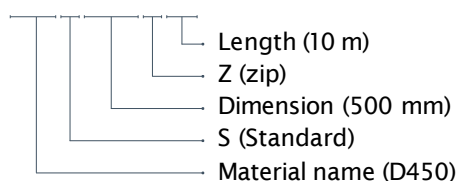
We design, manufacture and test all components of the Serpent ventilation system ourselves to certify their quality. Through years of experience, we have developed the knowhow to craft custom systems tailored to each customer's distinctive requirements.

We also provide you with a single contact to turn to with all your support and system extension needs. Our global support network ensures that the products are taken care of in every aspect, maximizing uptime and reducing running cost.

Ordering

For orders each article number have a corresponding product key. The key explains what exact parts that have been ordered without the need for actual article numbers. Description of product key for orders:

AirS500Z10



Designations

Designation	Explanation
A	Duct with antistatic function
Air	D450 – the thinner fabric choice for the ducts
Ben	Bend
Bolt	Bolt design of fastener system for the coupling
Br	Branch
Crank	Crank design of fastener system for the coupling
D	The duct diameter in millimeters
DA	Duct adapter
DC	Duct cone
DuctMkit	Duct mounting kit
DuctMWire	Duct mounting wire kit
InnRing	Inner ring
L	Length in meters for ducts or wires
P-Br	T-Branch
Repair	Repair sleeve
S	Standard duct with no antistatic function
StCbolt	Steel clamp bolt
StCcrank	Steel clamp crank
STR	Steel ring function to connect ducts
T-Br	T-Branch
Tit	D700 – the thicker fabric choice for the ducts
Y-Br	Y-Branch
Z	Zipper function to connect ducts

Fabric quality

		D700s	D450s
Base Fabric		Polyester	
Yarn thickness (dtex)		2 200/1 430	3 300/1 100
Yarns/cm	warp	3.5 (x1 430)	3.5
	weft	3.5 (x2 200)	3.5+1
Coating		Plasticized PVC	
Tensile strength (N/5 cm) (DIN 53363)	warp	2 400	1 400
	weft	3 000	1 700
Tear strength (N) (DIN 53363)	warp	550	270
	weft	750	340
Total weight (gram/m²) (DIN 53352)		600	500
Flame resistance (DIN 4102-B1)		Yes	
Cold crack (DIN 53361)		-30°C	
Environmental resistance		Resistant against rotting, humic acid, diesel- and nitrous gases, UV-light	
Conductivity (ISO 284)		-----	-----
MSHA Approval		07 - BA1 2007 and 07 - BA1 3001	

How to: install the system

Wire installation

The wire installation secures a straight line for the ducting to follow in to the tunnel or mine and helps to avoid any sharp bends that would lead to reduced airflow and increased energy consumption.

1. The first step in wire installation

First, mount the wire rope at a distance of 30–50 m (98–164 ft) from the end of the B duct.

2. The distance between expander bolts and the use of steel wire

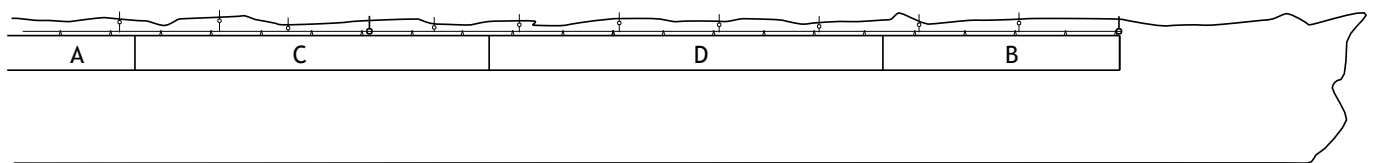
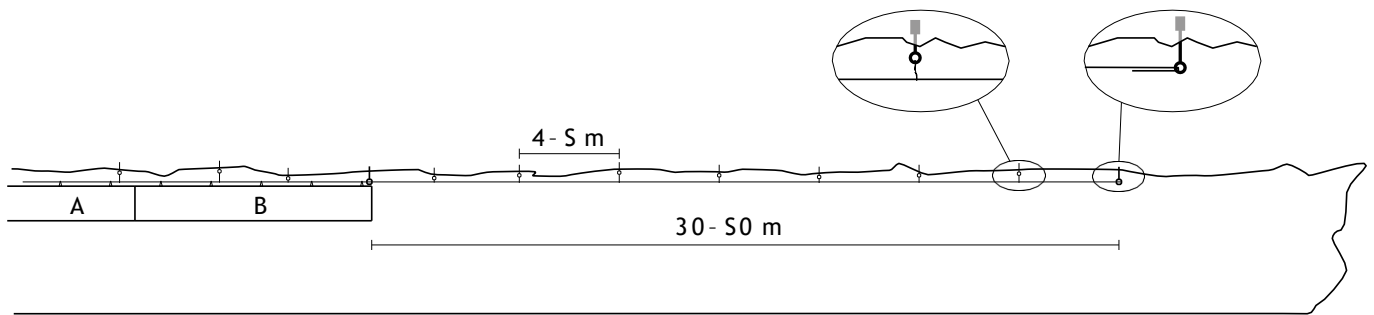
Secondly, install the expander bolts with a distance of 4–5 m (13–16 ft) between them. To correct the distance between the expander bolts in the roof and the wire, use a steel wire. The recommended wire is 2–3 mm diameter galvanized steel.

3. The first step in the extension of the duct system

During extension of the duct system it is recommended to use a D700S duct with a length of 10 m (33 ft) as a “sacrificial piece” (B). D700S fabric is stronger and can better withstand the tough working environment at the face. To install the extension duct C, move B duct closer to production area.

4. Second step in the extension of the duct system

Now move the section B duct closer to the production area and install the new duct D. Remember to change or repair ducts that have been penetrated or puncture to maintain the correct airflow and pressure.

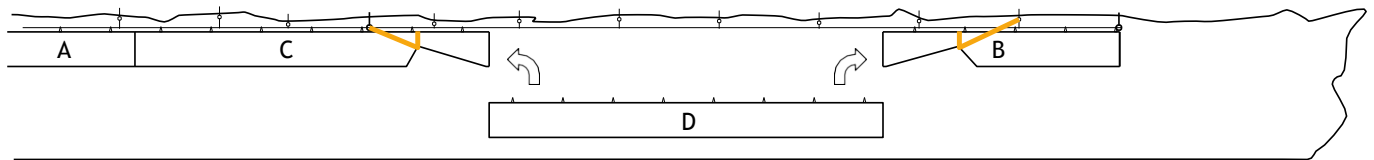
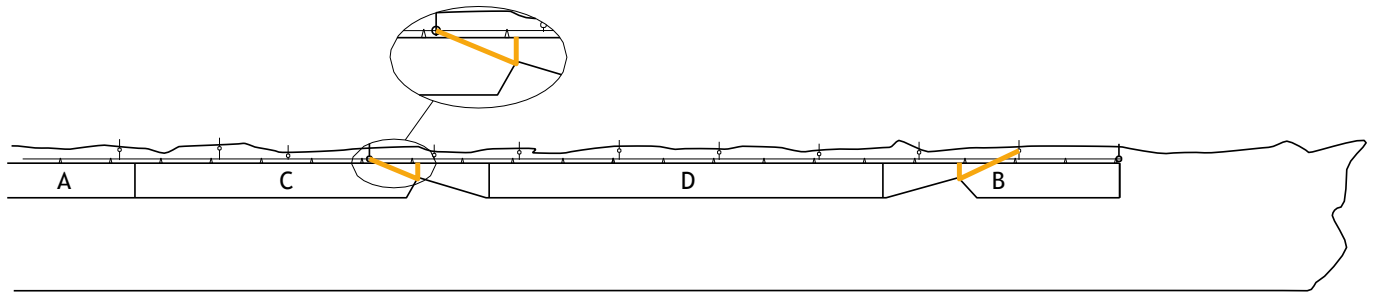


How to: replace ducts in a ventilation line

When replacing one or more ventilation ducts in a ventilation line, it is very important that the connecting ducts in the line are secured before any ducts are dismantled.

The following procedure is recommended:

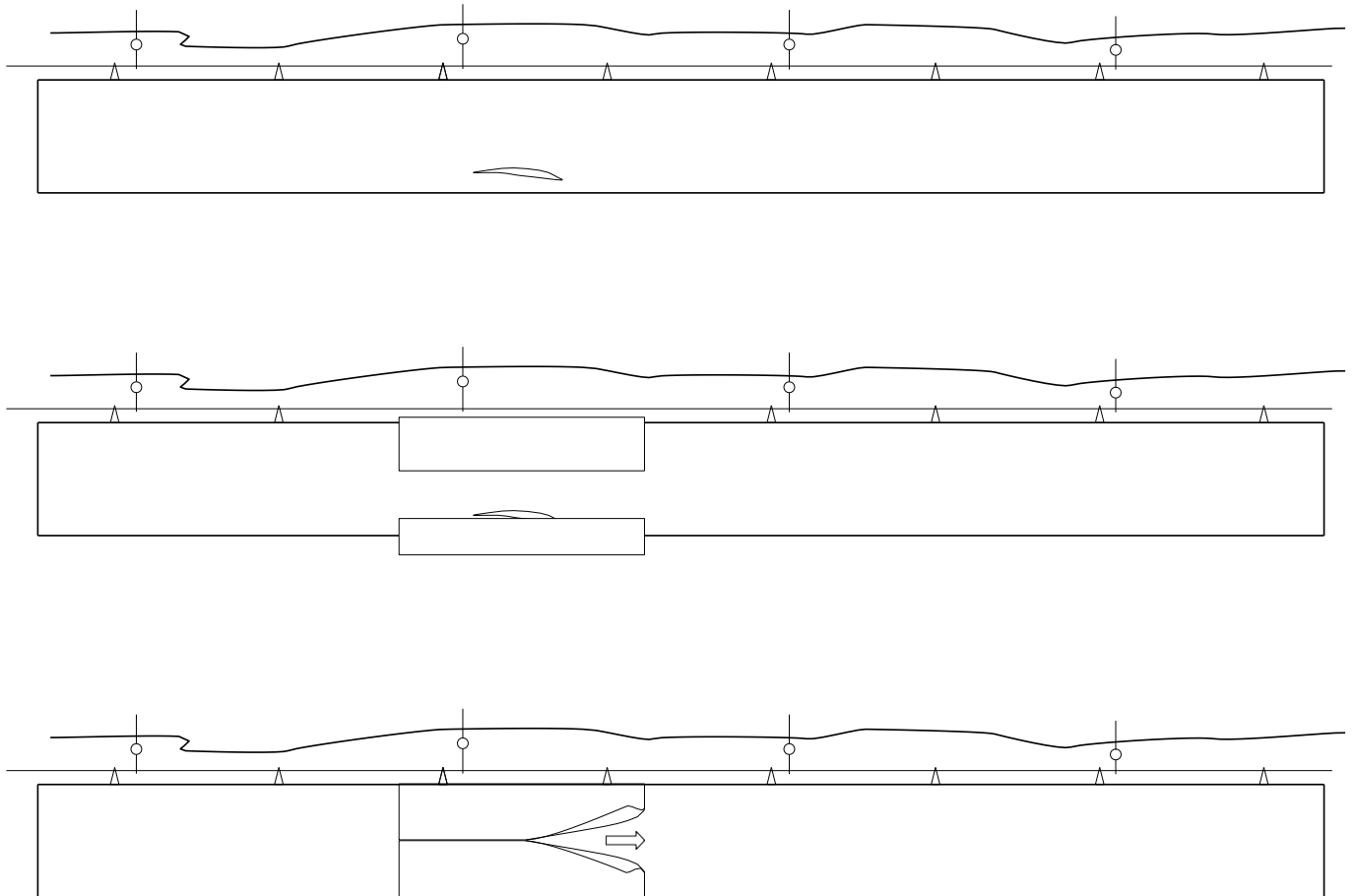
1. Lifting straps are required as well as a lashing belt – a lifting strap with a ratchet.
2. Approximately 5 m in on the adjoining duct, fasten the lifting strap around the duct.
3. With the ratchet between them, fasten the opposite end of the belt to a bolt above the duct that is to be replaced.
4. The adjoining duct is then ratcheted towards the duct(s) that are to be replaced so that there clearly is slack in the ventilation line.
5. Open the couplings and remove the ducts.
6. Attach the new ducts to the steel wire, tighten everything to keep it straight without slack, and connect with the existing ducts.
7. Detach the lashing belt and lifting straps and remove them.
8. Inspect the ventilation line after approximately one week. If there is any slack or kinks in the ducting it needs to be tightened up.



How to: install a repair sleeve

The repair sleeve is easy and quick to install and is a secure tool for repairing holes and tears in the ducting. The sleeve is made from standard duct material and features a heavy-duty longitudinal zipper for closing the sleeve. The sleeve is made approximately 0.5% smaller than the nominal duct diameter, which will allow it to be tight against the

duct once the duct is pressurized. With the repair sleeve, the repair will be professionally done and the leakage from any hole will be reduced to a minimum. The repair sleeves are manufactured in standard lengths of 1.0, 2.0, 3.0 and 5.0 m. Other lengths can be manufactured upon request.





REWSON

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