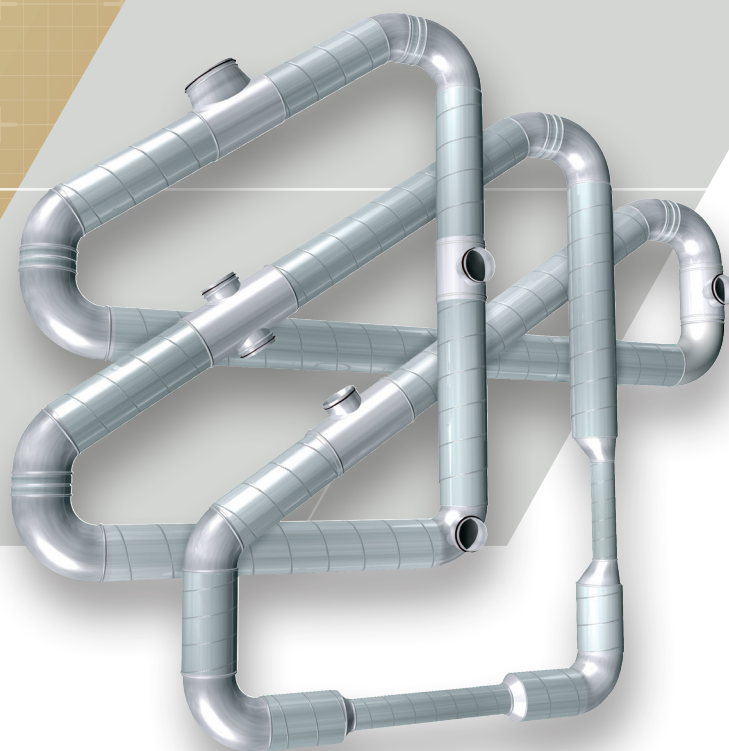


Round ducting
VELODUCT[®]

TECHNICAL DATA



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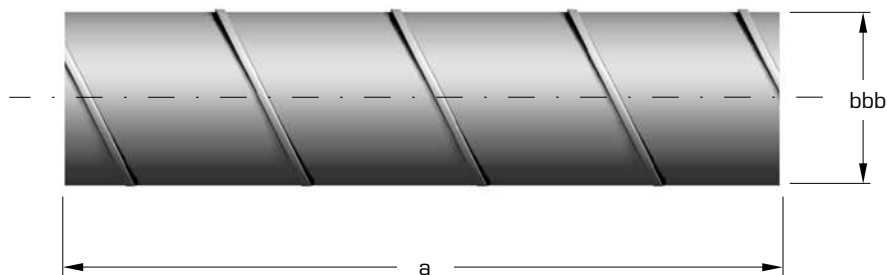
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*] CE marked (smoke control duct system) according to EN 12101-7:2011, EC Certificate of Conformity 0761-CPD-0277



DUCT

BDEK - CIRCULAR DUCT



BDEK-a-bbb

a = length

1 = 3,00 m

2 = 6,00 m

4 = optional length between 1,00 and 6,00 m

5 = 3,00 m, liquid-tight seam

DUCT PROFILE



Sizes 008-020



Sizes 025-125

STANDARD SIZES

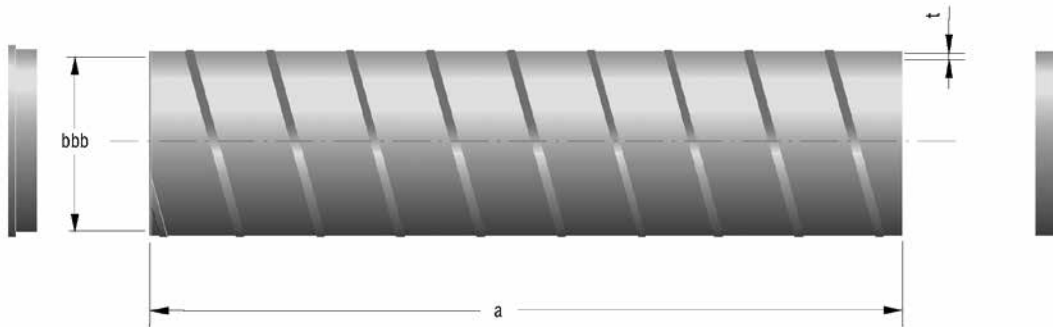
BDEK-a-bbb	Weight kg/m
-008	0.9
-010	1.1
-012	1.4
-016	1.8
-020	2.7
-025	3.3
-031	4.1
-040	6.5
-050	8.2
-063	12.2
-080	15.4
-100	25.5
-125	31.9

OTHER SIZES

BDEK-a-bbb	Weight kg/m
-014	1.6
-015	1.7
-018	2.3
-022	3.0
-028	3.7
-030	4.0
-035	5.8
-045	7.4
-056	10.7

DUCT

EKOD - CIRCULAR DUCT WITH PLASTIC PROTECTIVE CAP



EKOD-a-bbb-1

a = length

3 = 3,00 m

6 = 6,00 m

4 = optional length between 1,00 and 6,00 m

DUCT PROFILE



Sizes 008-020



Sizes 025-125

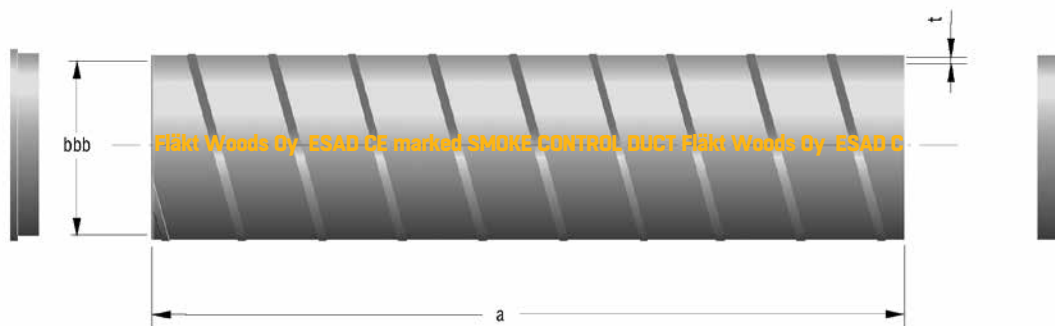
STANDARD SIZES

EKOD-a-bbb-1	t mm	Weight kg/m
-008	0.5	1.1
-010	0.5	1.3
-012	0.5	1.7
-016	0.5	2.1
-020	0.5	2.7
-025	0.5	3.3
-031	0.5	3.9
-040	0.7	7.9
-050	0.7	10.0
-063	0.7	12.2
-080	0.7	15.4
-100	0.9	25.5
-125	0.9	31.9



DUCT

ESAD - SMOKE CONTROL DUCT



ESAD-a-bbb-1

a = length
3 = 3,00 m

STANDARD SIZES

ESAD-a-bbb-1	t mm	Weight kg/m
-010	0.7	2.0
-012	0.7	2.5
-016	0.7	3.2
-020	0.7	4.0
-025	0.7	5.0
-031	0.7	6.3
-040	0.7	7.9
-050	0.7	10.0
-063	0.7	12.2
-080	0.7	15.4
-100	0.9	25.5
-125	0.9	31.9

OTHER SIZES

ESAD-a-bbb-1	t mm	Weight kg/m
-015	0.7	3.0
-030	0.7	6.0
-056	0.7	11.2

DUCT PROFILE



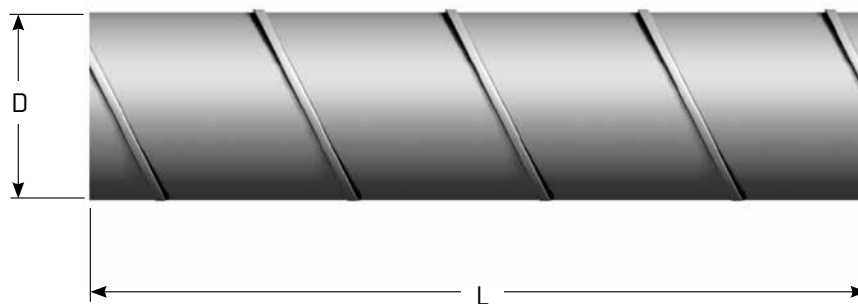
Sizes 010-020



Sizes 025-100

SPIRAL DUCT FOR EMBEDDING

XCEK – SPIRAL DUCT FOR EMBEDDING IN CONCRETE, FIT-ON



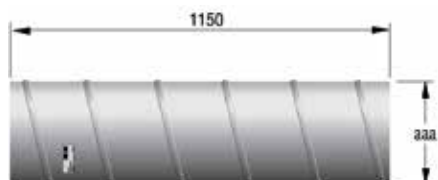
STANDARD SIZES

XCEK-1-bbb	D nom.	L m	Weight, kg	t mm	Value for deformation limit at vaccum, kPa
-010	010	3.0	4.4	0.6	36
-012	012	3.0	6.4	0.7	31



DUCT VELOFLEX

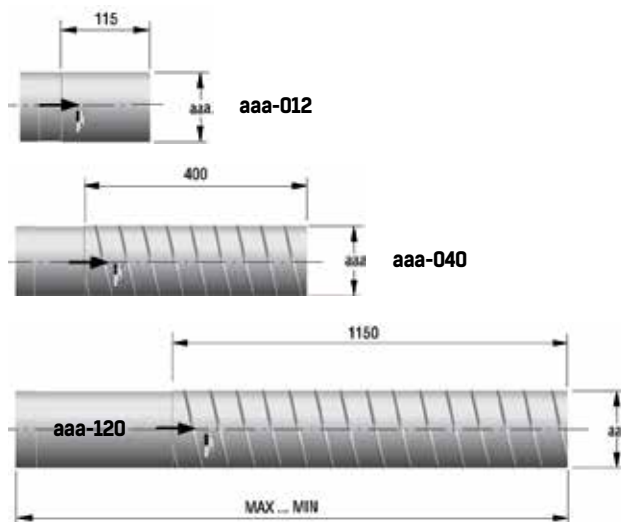
FLEK - SPIRAL TUBE, LENGTH 1150 MM



STANDARD SIZES

FLEK-aaa-120	Weight kg
-010	1.50
-012	1.96
-016	2.42

FLEX -TELESKOPIC TUBE

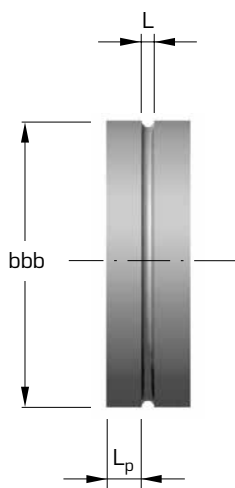


STANDARD SIZES

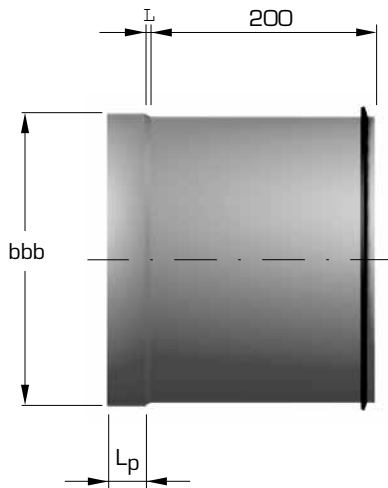
FLEX-aaa-bbb	Length max	Length min	Weight, kg
-010 - 012	200	153	0.30
-010 - 040	640	438	0.86
-010 - 120	1720	1188	2.26
-012 - 012	200	153	0.37
-012 - 040	640	438	1.11
-012 - 120	1720	1188	2.91
-016 - 012	200	153	0.42
-016 - 040	640	438	1.39
-016 - 120	1720	1188	2.64

JOINT

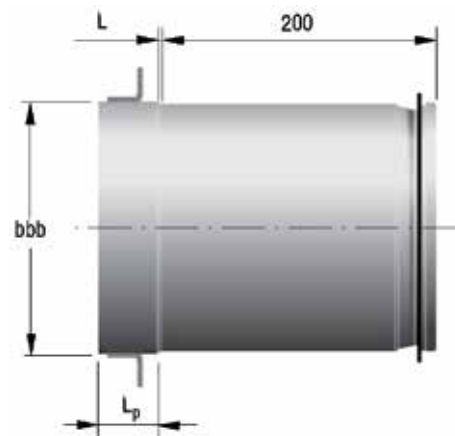
BDEM-1



BDEM-4 - LONG JOINT, FIT-ON - INSERTION



BDEM-4-bbb-K, LONG JOINT FOR CLEANING, FIT-ON - INSERTION



STANDARD SIZES

BDEM-1-bbb	L mm	Lp mm	Weight, kg
-008	12	35	0.08
-010	12	35	0.10
-012	12	35	0.12
-016	12	35	0.15
-020	12	35	0.22
-025	12	35	0.38
-031	12	35	0.44
-040	12	60	1.10
-050	12	60	1.40
-063	12	60	1.70
-080	12	95	3.30
-100	12	95	4.60
-125	12	95	6.00

STANDARD SIZES

BDEM-4-bbb	L mm	Lp mm	Weight, kg
-008	5	35	0.25
-010	5	35	0.32
-012	5	35	0.40
-016	5	35	0.51
-020	5	35	0.76
-025	5	35	0.95
-031	5	35	1.20
-040	5	60	1.80
-050	5	60	2.20
-063	5	60	2.80

STANDARD SIZES

BDEM-4-bbb-K	L mm	Lp mm	Weight, kg
-010	5	35	0.32
-012	5	35	0.40
-016	5	35	0.51
-020	5	35	0.76
-025	5	35	0.95

OTHER SIZES

BDEM-1-bbb	L mm	Lp mm	Weight, kg
-014	12	35	0.14
-015	12	35	0.14
-018	12	35	0.20
-022	12	35	0.30
-028	12	35	0.40
-030	12	35	0.43
-035	12	60	0.89
-045	12	60	1.20
-056	12	60	1.50

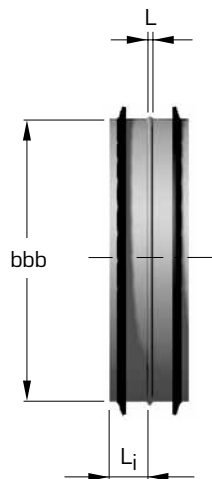
OTHER SIZES

BDEM-4-bbb	L mm	Lp mm	Weight, kg
-014	5	35	0.45
-015	5	35	0.48
-018	5	35	0.69
-022	5	35	0.85
-028	5	35	1.00
-030	5	35	1.10
-035	5	60	1.50
-045	5	60	2.00
-056	5	60	2.50

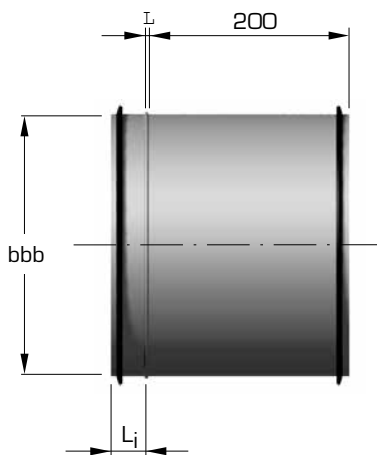


INSERTION JOINT

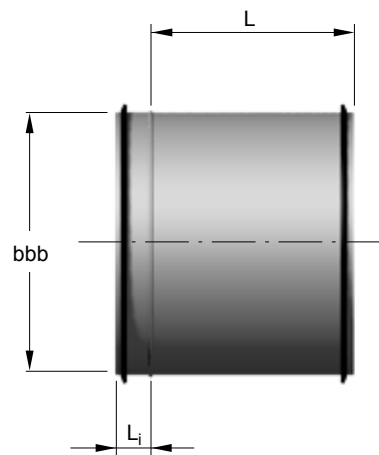
BDEN-1



BDEN-4 - LONG INSERTION JOINT



BDEN-3 - LONG INSERTION JOINT



STANDARD SIZES

BDEN-1-bbb	L mm	Li mm	Weight, kg
-008	5	35	0.10
-010	5	35	0.11
-012	5	35	0.15
-016	5	35	0.19
-020	5	35	0.27
-025	5	35	0.43
-031	5	35	0.52
-040	8	60	1.10
-050	8	60	1.40
-063	8	60	1.80
-080	12	95	3.70
-100	12	95	5.20
-125	12	95	6.60

STANDARD SIZES

BDEN-4-bbb	L mm	Li mm	Weight, kg
-008	5	35	0.25
-010	5	35	0.32
-012	5	35	0.40
-016	5	35	0.51
-020	5	35	0.76
-025	5	35	0.95
-031	5	35	1.20
-040	5	60	1.80
-050	5	60	2.20
-063	5	60	2.80

STANDARD SIZES

BDEN-3-bbb	L mm	Li mm	Weight, kg
-010	265	35	0.41
-012	265	35	0.51
-016	265	35	0.65
-020	265	35	0.82
-025	260	35	1.04
-031	260	35	1.31
-040	240	60	2.41

OTHER SIZES

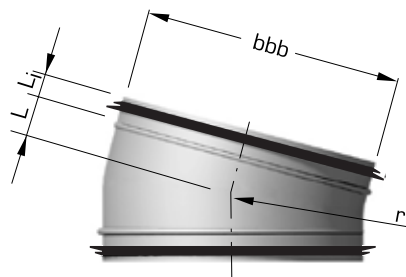
BDEN-1-bbb	L mm	Li mm	Weight, kg
-014	5	35	0.14
-015	5	35	0.14
-018	5	35	0.20
-022	5	35	0.30
-028	5	35	0.40
-030	5	35	0.43
-035	8	60	0.89
-045	8	60	1.20
-056	8	60	1.50

OTHER SIZES

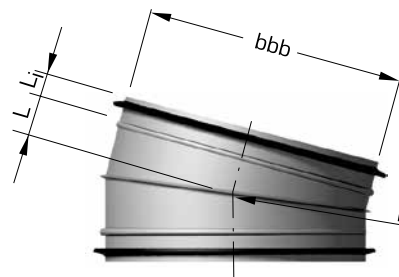
BDEN-4-bbb	L mm	Li mm	Weight, kg
-014	5	35	0.45
-015	5	35	0.48
-018	5	35	0.69
-022	5	35	0.85
-028	5	35	1.00
-030	5	35	1.10
-035	5	60	1.50
-045	5	60	2.00
-056	5	60	2.50

BEND

BDEB 15° - PRESSED



BDEB 15° - FABRICATED



STANDARD SIZES

BDEB-15-bbb	L mm	r mm	Li mm	Weight, kg
-008	15	100	35	0.11
-010	15	100	35	0.14
-012	15	125	35	0.19
-016	15	160	35	0.26
-020	15	200	35	0.42

STANDARD SIZES

BDEB-15-bbb	L mm	r mm	Li mm	Weight, kg
-025	44	250	35	0.60
-031	60	315	35	1.00
-040	55	400	60	1.80
-050	70	500	60	2.40
-063	85	630	60	3.40
-080	110	800	95	6.2
-100	135	1000	95	11
-125	165	1250	95	16

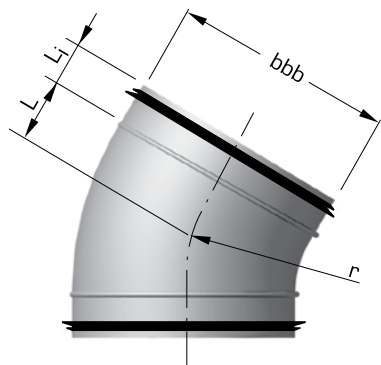
OTHER SIZES

BDEB-15-bbb	L mm	r mm	Li mm	Weight, kg
-014	20	140	35	0.22
-015	20	150	35	0.24
-018	25	180	35	0.36
-022	30	224	35	0.50
-028	40	280	35	0.70
-030	40	300	35	0.80
-035	50	355	60	1.50
-045	60	450	60	2.00
-056	75	560	60	2.80

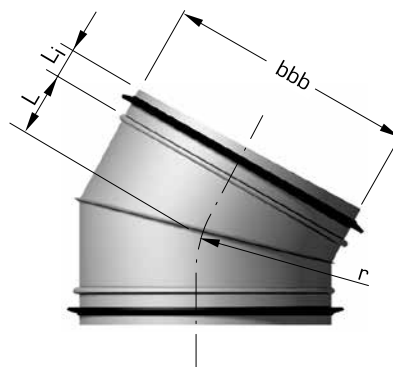


BEND

BDEB 30° - PRESSED



BDEB 30° - FABRICATED



STANDARD SIZES

BDEB-30-bbb	L mm	r mm	Li mm	Weight, kg
-008	25	100	35	0.15
-010	30	100	35	0.22
-012	30	125	35	0.31
-016	40	160	35	0.42
-020	60	200	35	0.67

STANDARD SIZES

BDEB-30-bbb	L mm	r mm	Li mm	Weight, kg
-025	70	250	35	1.00
-031	90	315	35	1.20
-040	110	400	60	2.40
-050	135	500	60	3.50
-063	170	630	60	5.10
-080	220	800	95	9.0
-100	270	1000	95	17
-125	340	1250	95	25

OTHER SIZES

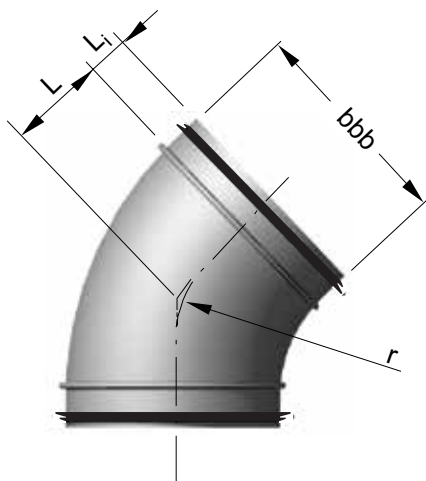
BDEB-30-bbb	L mm	r mm	Li mm	Weight, kg
-014	40	140	35	0.36
-015	40	150	35	0.39
-018	50	180	35	0.54
-022	60	224	35	0.79
-028	80	280	35	1.00

OTHER SIZES

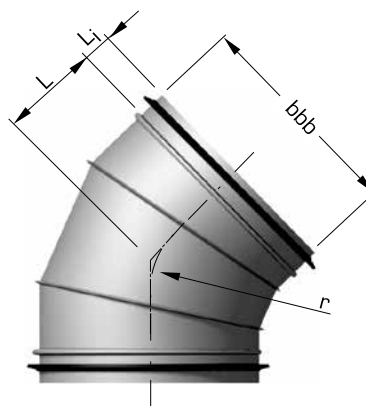
BDEB-30-bbb	L mm	r mm	Li mm	Weight, kg
-030	85	300	35	1.1
-035	100	355	60	2.0
-045	125	450	60	2.9
-056	155	560	60	4.2

BEND

BDEB 45° - PRESSED



BDEB 45° - FABRICATED



STANDARD SIZES

BDEB-45-bbb	L mm	r mm	Li mm	Weight, kg
-008	40	100	35	0.23
-010	40	100	35	0.25
-012	50	125	35	0.38
-016	65	160	35	0.54
-020	80	200	35	0.80
-025	105	250	35	1.0

STANDARD SIZES

BDEB-45-bbb	L mm	r mm	Li mm	Weight, kg
-031	130	315	35	1.8
-040	165	400	60	3.4
-050	205	500	60	4.6
-063	260	630	60	6.9
-080	330	800	95	12
-100	410	1000	95	23
-125	515	1250	95	34

OTHER SIZES

BDEB-45-bbb	L mm	r mm	Li mm	Weight, kg
-014	60	140	35	0.45
-015	65	150	35	0.50
-018	75	180	35	0.67
-022	95	224	35	0.90
-028	115	280	35	1.30

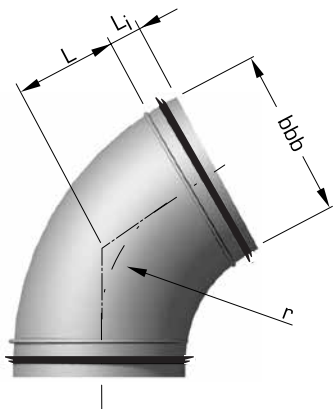
OTHER SIZES

BDEB-45-bbb	L mm	r mm	Li mm	Weight, kg
-030	125	300	35	1.6
-035	150	355	60	2.3
-045	185	450	60	3.9
-056	230	560	60	5.6



BEND

BDEB 60° - PRESSED



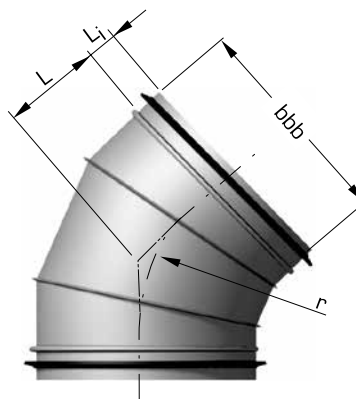
STANDARD SIZES

BDEB-60-bbb	L mm	r mm	Li mm	Weight, kg
-010	60	100	35	0.29
-012	75	125	35	0.40
-016	95	160	35	0.60
-020	115	200	35	0.87

OTHER SIZES

BDEB-60-bbb	L mm	r mm	Li mm	Weight, kg
-014	85	140	35	0.48
-015	90	150	35	0.54
-018	105	180	35	0.73
-022	130	224	35	1.3

BDEB 60° - FABRICATED



STANDARD SIZES

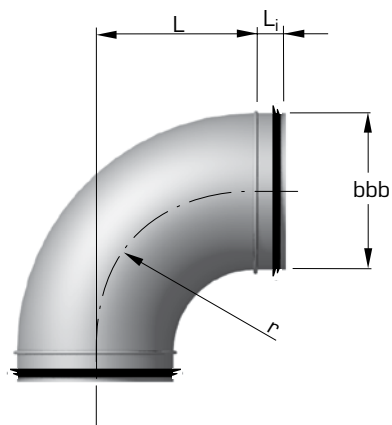
BDEB-60-bbb	L mm	r mm	Li mm	Weight, kg
-025	145	250	35	1.3
-031	185	315	35	1.9
-040	235	400	60	4.3
-050	290	500	60	6.3
-063	365	630	60	9.2
-080	465	800	95	15
-100	580	1000	95	30
-125	725	1250	95	45

OTHER SIZES

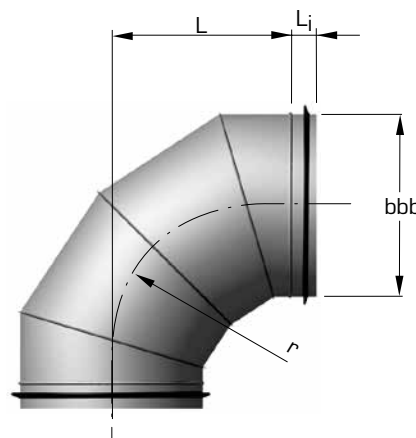
BDEB-60-bbb	L mm	r mm	Li mm	Weight, kg
-028	165	280	35	1.6
-030	175	300	35	1.8
-035	205	355	60	3.3
-045	260	450	60	6.0
-056	325	560	60	7.5

BEND

BDEB 90° - PRESSED



BDEB 90° - FABRICATED



STANDARD SIZES

BDEB-90-bbb	L mm	r mm	Li mm	Weight, kg
-008	100	100	35	0.29
-010	100	100	35	0.34
-012	125	125	35	0.50
-016	160	160	35	0.87
-020	200	200	35	1.3
-025	250	250	35	1.7

STANDARD SIZES

BDEB-90-bbb	L mm	r mm	Li mm	Weight, kg
-031	315	315	35	2.3
-040	400	400	60	5.9
-050	500	500	60	8.8
-063	630	630	60	13
-080	800	800	95	21
-100	1000	1000	95	42
-125	1250	1250	95	64

OTHER SIZES

BDEB-90-bbb	L mm	r mm	Li mm	Weight, kg
-014	140	140	35	0.62
-015	150	150	35	0.75
-018	180	180	35	1.10
-022	224	224	35	1.50
-028	280	280	35	2.00

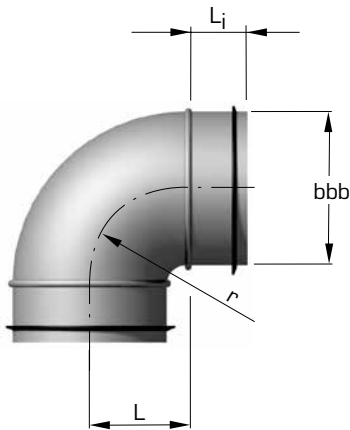
OTHER SIZES

BDEB-90-bbb	L mm	r mm	Li mm	Weight, kg
-030	300	300	35	2.2
-035	355	355	60	4.6
-045	450	450	60	7.1
-056	560	560	60	10



BEND

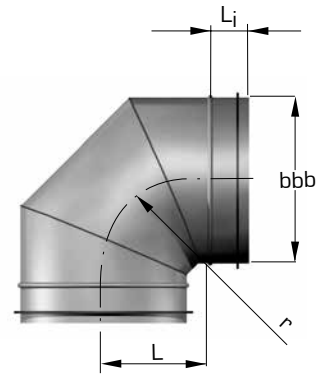
BDEB 90 - SHORT, PRESSED



STANDARD SIZES

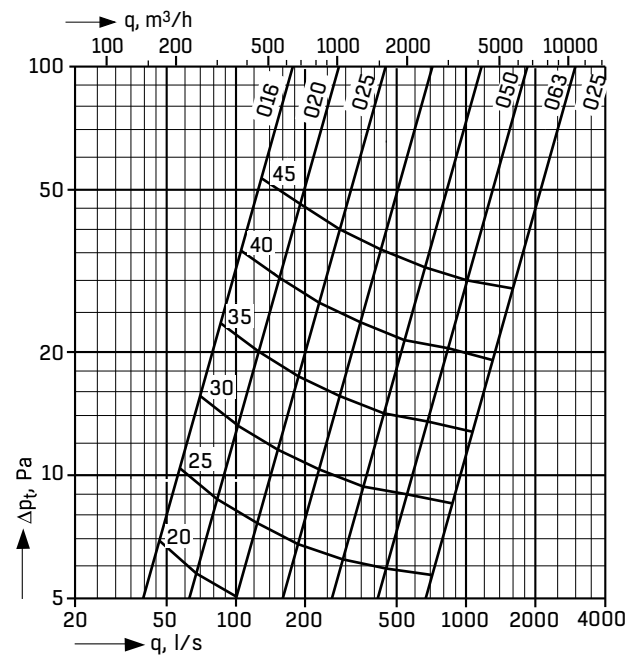
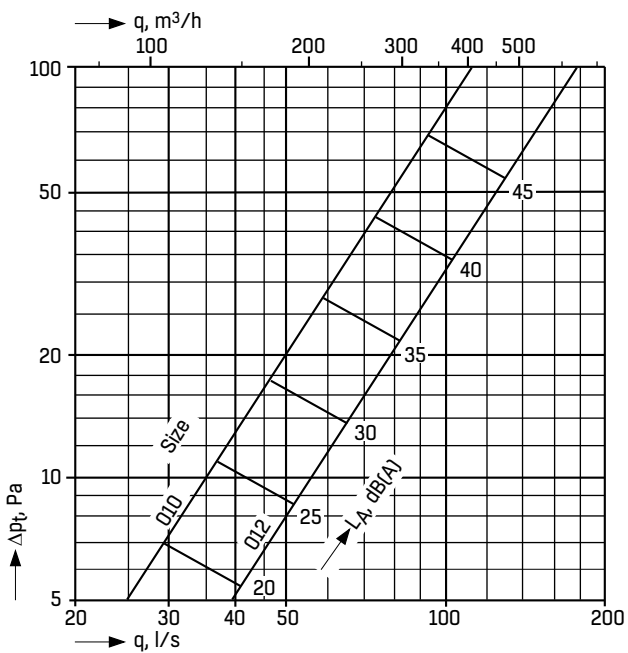
BDEB-90-bbb-4	L mm	r mm	Li mm	Weight, kg
-010	65	60	35	0.26
-012	80	75	35	0.37

BDEB 90° - SHORT, FABRICATED



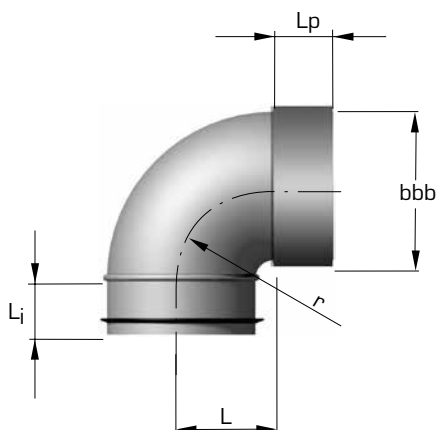
STANDARD SIZES

BDEB-90-bbb-4	L mm	r mm	Li mm	Weight, kg
-016	105	100	35	0.56
-020	125	120	35	0.94
-025	160	155	35	1.3
-031	190	185	35	1.9
-040	230	220	60	3.8
-050	290	280	60	5.6
-063	400	400	60	8.4

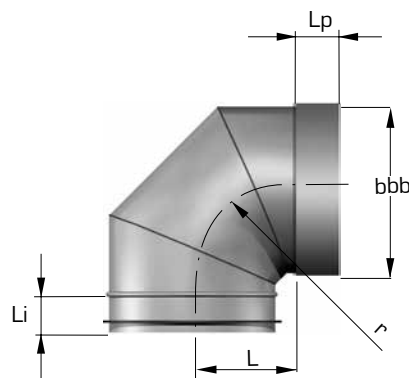


BEND

BDEB 90° - SHORT, PRESSED, FIT-ON - INSERTION



BDEB 90° - SHORT, FABRICATED, FIT-ON - INSERTION

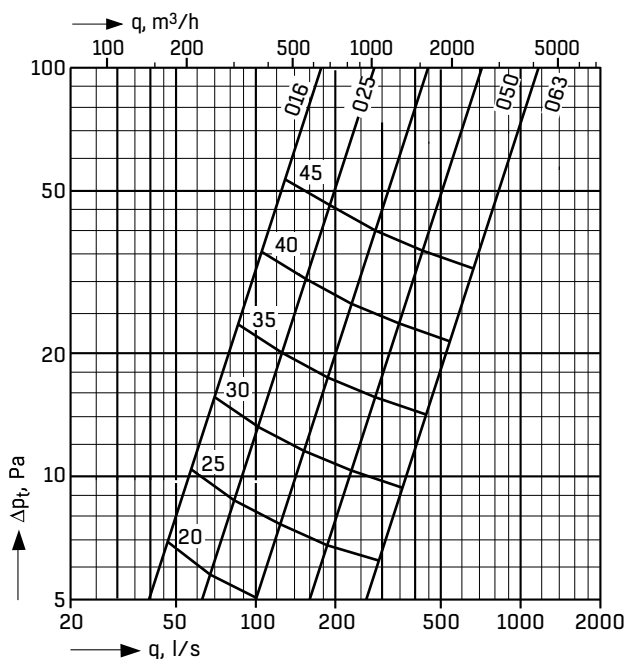
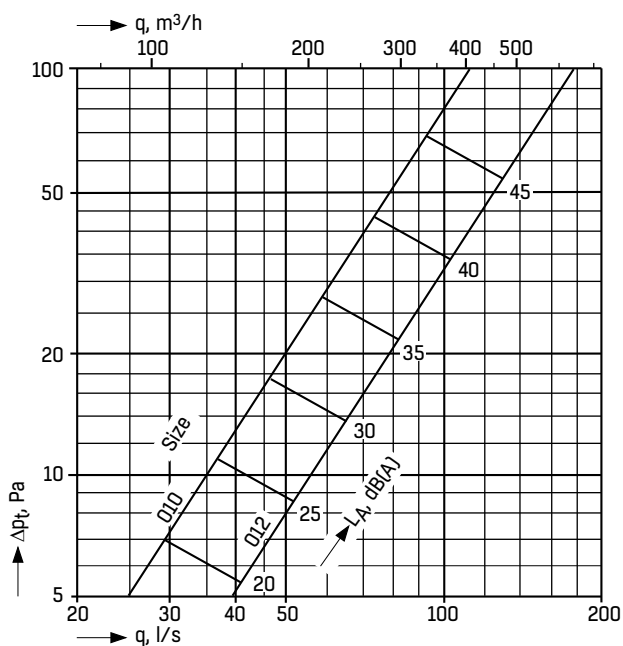


STANDARD SIZES

BDEB-90-bbb-4-2	L mm	r mm	Lp/Li mm	Weight, kg
-010	65	60	35/35	0.26
-012	80	75	35/35	0.37

STANDARD SIZES

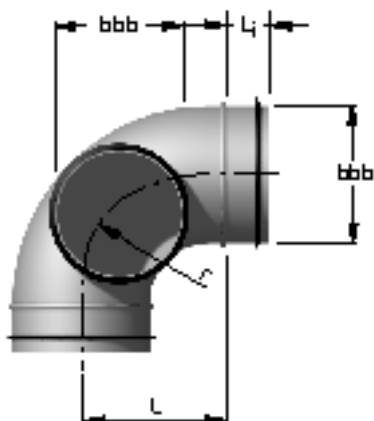
BDEB-90-bbb-4-2	L mm	r mm	Lp/Li mm	Weight, kg
-016	105	100	35/35	0.56
-020	125	120	35/35	0.94
-025	160	155	35/35	1.3
-031	190	185	35/35	1.9
-040	230	220	60/60	3.8





BEND

BDEB-90 - CLEANABLE



STANDARD SIZES

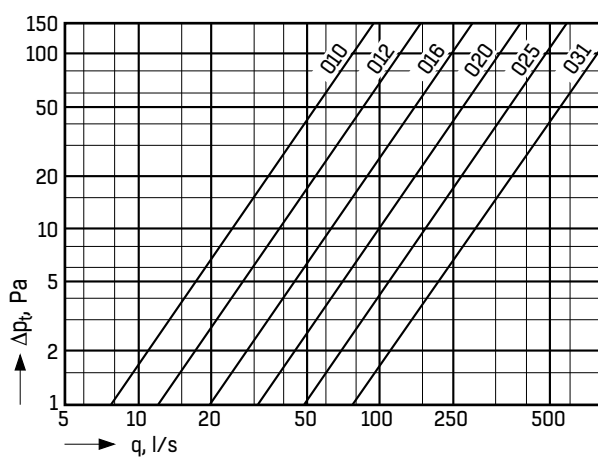
BDEB-90-bbb-3	L mm	r mm	Li mm	Weight kg
-010	100	100	35	0.46
-012	125	125	35	0.61
-016	160	160	35	1.1
-020	200	200	35	1.5
-025	250	250	35	2.6
-031	315	315	35	3.8

BDKE - CLEANABLE



STANDARD SIZES

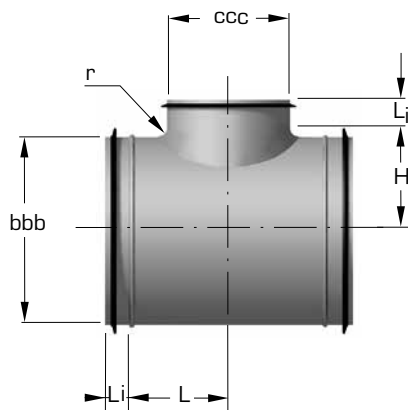
BDKE-aaa	r mm	L mm	C mm	E mm	Li mm	Weight kg
-040	400	400	265	400	60	5.9



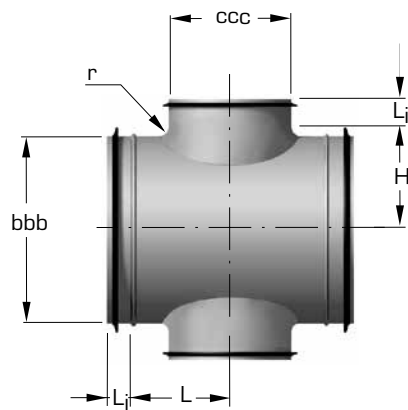
Pressure drop with cleaning cover BDEG-2 or BDEG-3.

T-PIECE AND CROSS

BDET-1 - T-PIECE, PRESSED BRANCHES, CONCENTRIC



BDEX-1 - CROSS, PRESSED BRANCHES, CONCENTRIC



STANDARD SIZES

BDE(T,X)-1-bbb-ccc	H	L	r	Li	Weight, BDET	Weight, BDEX
	mm	mm	mm	mm	kg	kg
-008-008	50	75	10	35	0.31	0.40
-010-008	60	75	10	35	0.37	0.46
-010	65	75	12	35	0.45	0.59
-012-008	70	75	10	35	0.51	0.67
-010	78	90	12	35	0.52	0.66
-012	78	90	12	35	0.64	0.84
-016-008	90	75	10	35	0.61	0.77
-010	95	90	12	35	0.63	0.77
-012	95	100	12	35	0.74	0.91
-016	105	125	16	35	0.92	1.2
-020-008	110	75	10	35	0.80	0.94
-010	115	90	12	35	0.84	0.95
-012	115	100	12	35	1.0	1.1
-016	125	125	16	35	1.2	1.4
-020	130	163	20	35	1.4	1.6
-025-008	135	75	10	35	0.96	1.1
-010	140	90	12	35	1.0	1.1
-012	140	100	12	35	1.2	1.4
-016	150	125	16	35	1.4	1.6
-020	155	163	20	35	1.8	2.1
-025	155	190	20	35	2.1	2.5

STANDARD SIZES

BDE(T,X)-1-bbb-ccc	H	L	r	Li	Weight, BDET	Weight, BDEX
	mm	mm	mm	mm	kg	kg
-031-008	167	75	10	35	1.2	1.3
010	173	90	12	35	1.3	1.4
-012	173	100	12	35	1.5	1.6
-016	183	125	16	35	1.7	1.9
-020	188	164	20	35	2.1	2.5
-025	188	190	20	35	2.6	2.9
-031	193	215	35	35	2.9	3.3
-040-010	212	90	12	60/35	2.5	2.9
-012	212	100	12	60/35	2.7	3.1
-016	225	125	16	60/35	3.0	3.3
-020	225	155	20	60/35	3.3	3.5
-025	225	190	20	60/35	3.9	4.2
-031	235	215	35	60/35	4.2	4.4
-040	240	280	32	60	5.1	6.3
-050-010	265	90	12	60/35	3.0	3.4
-012	265	100	12	60/35	3.3	3.7
-016	275	125	16	60/35	3.7	4.0
-020	270	155	20	60/35	4.1	4.3
-025	290	190	30	60/35	4.8	5.1
-031	285	215	25	60/35	5.2	5.4
-040	290	280	32	60	6.5	7.5
-063-010	330	90	12	60/35	3.5	3.9
-012	330	100	12	60/35	3.9	4.3
-016	335	125	20	60/35	4.4	4.7
-020	335	155	20	60/35	4.9	5.2
-025	350	190	25	60/35	5.9	6.2
-031	350	215	25	60/35	6.3	6.5
-040	355	280	32	60	7.4	8.4



T-PIECE AND CROSS

BDET-1 - T-PIECE, PRESSED BRANCHES, CONCENTRIC

OTHER SIZES

BDE(T,X)-1-bbb-ccc	H	L	r	Li	Weight, BDET kg	Weight, BDEX kg
	mm	mm	mm	mm		
-014-008	85	75	15	35	0.55	0.71
-010	90	90	20	35	0.57	0.71
-012	90	100	20	35	0.67	0.84
-014	85	125	15	35	0.78	0.98
-015-008	90	75	15	35	0.58	0.74
-010	95	90	20	35	0.60	0.74
-012	95	100	20	35	0.70	0.84
-014	90	125	15	35	0.77	0.93
-015	100	125	25	35	0.86	1.1
-016-014	95	125	15	35	0.81	0.97
-015	105	125	25	35	0.90	1.2
-018-008	105	75	15	35	0.74	0.87
-010	110	90	20	35	0.77	0.88
-012	110	100	20	35	0.91	1.1
-014	105	125	15	35	1.0	1.2
-015	115	125	25	35	1.0	1.2
-016	120	125	30	35	1.1	1.3
-018	110	155	20	35	1.2	1.4
-020-014	115	125	15	35	1.1	1.3
-015	125	125	25	35	1.1	1.3
-018	120	155	20	35	1.4	1.5
-022-008	127	75	15	35	0.87	1.0
-010	127	90	15	35	0.92	1.0
-012	127	100	15	35	1.1	1.3
-014	127	125	15	35	1.2	1.4
-015	137	125	25	35	1.3	1.4
-016	137	125	25	35	1.3	1.5
-018	132	155	20	35	1.5	1.8
-020	132	155	20	35	1.6	1.9
-022	134	190	22	35	1.8	2.0
-025-014	140	125	15	35	1.4	1.5
-015	150	125	25	35	1.4	1.6
-018	145	155	20	35	1.9	2.3
-022	147	190	22	35	2.0	2.2
-028-008	155	75	15	35	1.0	1.1
-010	155	90	15	35	1.1	1.2
-012	155	100	15	35	1.3	1.5
-014	155	125	15	35	1.5	1.6
-015	165	125	25	35	1.5	1.7
-016	165	125	25	35	1.6	1.7
-018	160	155	20	35	1.8	2.0
-020	165	155	25	35	1.9	2.2
-022	162	190	22	35	2.2	2.5
-025	170	190	30	35	2.3	2.7
-028	165	215	25	35	2.5	2.8
-030-008	165	75	15	35	1.2	1.3
-010	165	90	15	35	1.3	1.4
-012	165	100	15	35	1.5	1.6
-014	165	125	15	35	1.7	1.8
-015	175	125	25	35	1.7	1.9

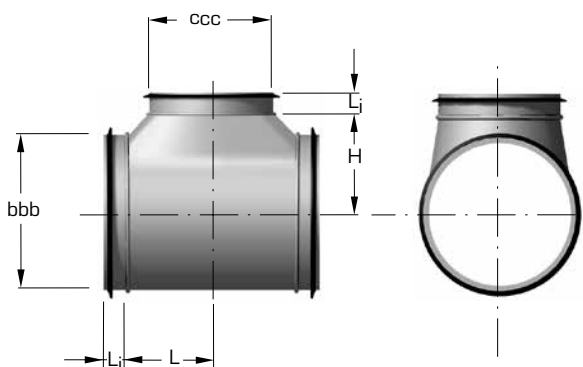
BDEX-1 - CROSS, PRESSED BRANCHES, CONCENTRIC

OTHER SIZES

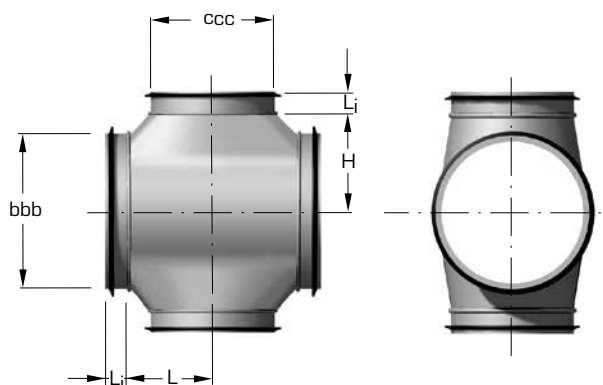
BDE(T,X)-1-bbb-ccc	H	L	r	Li	Weight, BDET kg	Weight, BDEX kg
	mm	mm	mm	mm		
-030-016	175	125	25	35	1.7	1.9
-018	170	155	20	35	2.0	2.3
-020	175	155	25	35	2.1	2.5
-022	172	190	22	35	2.5	2.7
-025	180	190	20	35	2.6	2.9
-028	175	215	25	35	2.7	3.0
-031-014	173	125	15	35	1.7	1.8
-015	183	125	25	35	1.7	1.9
-018	178	155	20	35	2.0	2.3
-022	180	190	22	35	2.5	2.7
-028	183	215	25	35	2.7	3.0
-035-010	193	90	15	60/35	1.8	1.9
-012	193	100	15	60/35	2.1	2.3
-014	193	125	15	60/35	2.4	2.5
-015	203	125	25	60/35	2.4	2.6
-016	203	125	25	60/35	2.5	2.6
-018	198	155	20	60/35	2.8	3.0
-020	203	155	25	60/35	2.9	3.2
-022	200	190	22	60/35	3.3	3.5
-025	218	190	30	60/35	3.4	3.7
-028	203	215	25	60/35	3.7	3.9
-031	208	215	20	60/35	4.2	4.4
-040-014	215	125	15	60/35	3.0	3.3
-015	220	125	25	60/35	3.0	3.3
-018	220	155	20	60/35	3.3	3.5
-025	240	190	30	60/35	3.9	4.2
-045-010	240	90	15	60/35	2.6	3.0
-012	240	100	15	60/35	2.9	3.3
-014	240	125	15	60/35	3.2	3.6
-015	245	125	20	60/35	3.2	3.6
-016	245	125	20	60/35	3.2	3.6
-018	245	155	20	60/35	3.6	3.8
-020	245	155	20	60/35	3.6	3.8
-025	265	190	30	60/35	4.2	4.5
-031	260	215	25	60/35	4.6	4.9
-050-014	265	125	15	60/35	3.7	4.0
-015	270	125	20	60/35	3.7	4.0
-018	270	155	20	60/35	4.1	4.3
-056-010	295	90	15	60/35	3.2	3.6
-012	295	100	15	60/35	3.5	3.9
-014	295	125	15	60/35	4.0	4.3
-015	300	125	20	60/35	4.0	4.3
-016	300	125	20	60/35	4.0	4.3
-018	300	155	20	60/35	4.4	4.7
-020	300	155	20	60/35	4.4	4.7
-025	315	190	25	60/35	5.3	5.6
-031	315	215	25	60/35	5.6	5.9
-063-014	330	125	15	60/35	4.4	4.7
-015	335	125	20	60/35	4.4	4.7
-018	335	155	20	60/35	4.9	5.2

T-PIECE AND CROSS

BDET-1 - T-PIECE, FABRICATED BRANCHES, CONCENTRIC



BDEX-1 CROSS - FABRICATED BRANCHES, CONCENTRIC



STANDARD SIZES

BDE(T,X)-1-bbb-ccc	H	L	Li	Weight, BDET kg	Weight, BDEX kg
	mm	mm	mm		
-050-050	345	345	60	8.6	9.5
-063-050	410	345	60	10	11
-016	430	430	60	12	13
-080-040	480	285	95/60	14	16
-050	495	350	95/60	15	17
-063	515	435	95/60	18	18
-080	545	545	95	24	30
-100-050	595	345	95/60	19	19
-063	615	430	95/60	24	24
-080	645	545	95	25	24
-100	675	675	95	31	29
-125-063	740	435	95/60	29	27
-080	770	545	95	33	38
-100	800	675	95	40	41
-125	840	840	95	46	44

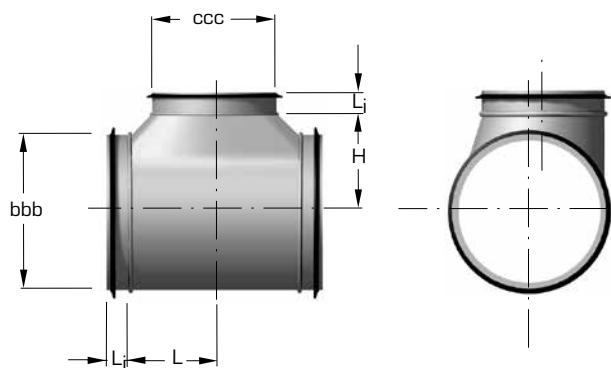
OTHER SIZES

BDE(T,X)-1-bbb-ccc	H	L	Li	Weight, BDET kg	Weight, BDEX kg
	mm	mm	mm		
-030-030	210	210	35	3.9	4.6
-031-030	220	210	35	4.0	4.7
-035-030	240	215	60/35	4.2	4.9
-035	250	250	60	5.0	5.7
-040-022	250	165	60/35	3.4	3.8
-028	260	205	60/35	3.7	4.6
-030	260	215	60/35	4.6	5.3
-035	275	250	60	5.4	6.0
-045-022	275	165	60/35	4.3	4.6
-028	285	205	60/35	4.6	4.8
-030	285	215	60/35	5.2	5.5
-035	300	250	60	5.4	5.6
-040	305	280	60	6.6	6.8
-045	315	315	60	6.9	7.2
-050-022	300	165	60/35	5.5	5.7
-028	310	205	60/35	6.7	7.0
-030	310	215	60/35	6.9	7.3
-035	325	250	60	7.0	7.4
-045	340	315	60	8.0	9.0
-056-022	330	165	60/35	5.6	5.8
-028	340	205	60/35	6.9	7.2
-030	340	215	60/35	7.0	7.5
-035	355	250	60	8.1	8.3
-040	360	280	60	8.4	8.5
-045	370	315	60	8.6	8.8
-050	375	345	60	8.8	9.3
-056	385	385	60	9.8	11
-063-022	365	165	60/35	6.0	6.3
-028	375	205	60/35	6.5	6.8
-030	375	215	60/35	7.2	7.4
-035	390	250	60	7.8	8.0
-045	405	315	60	9	10
-056	420	385	60	11	12

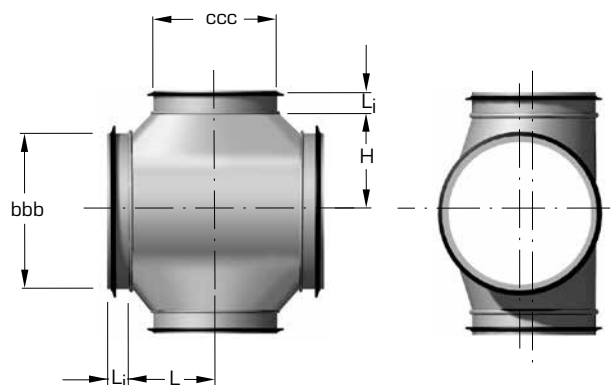


T-PIECE AND CROSS

BDET-2 - T-PIECE, FABRICATED BRANCHES, ECCENTRIC



BDEX-2 - CROSS, FABRICATED BRANCHES, ECCENTRIC

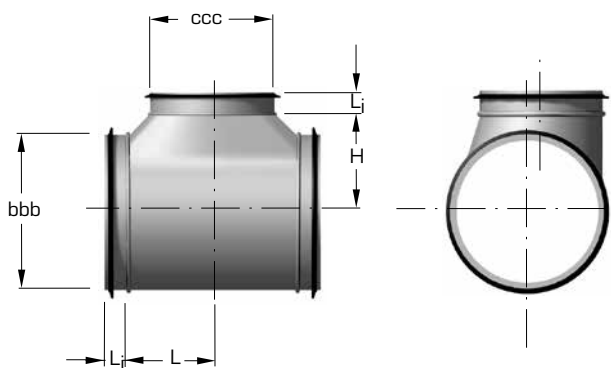


STANDARD SIZES

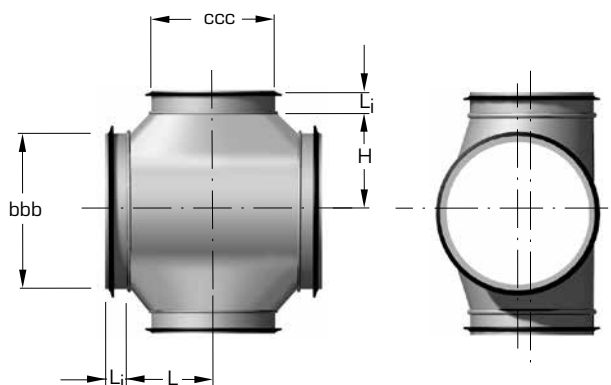
BDE(T,X)-2-bbb-ccc	H	L	Li	Weight, BDET kg	Weight, BDEX kg
	mm	mm	mm		
-040-010	230	85	60/35	2.7	2.8
-012	235	105	60/35	3.0	3.2
-016	240	125	60/35	3.1	3.6
-020	245	150	60/35	3.6	3.9
-025	255	185	60/35	4.1	4.6
-031	265	225	60/35	5.0	5.5
-050-010	280	85	60/35	3.6	3.6
-012	285	105	60/35	3.8	4.0
-016	290	125	60/35	4.1	4.4
-020	295	150	60/35	4.5	4.7
-025	305	185	60/35	5.4	5.7
-031	315	225	60/35	6.0	6.4
-040	330	280	60	7.5	8.5
-063-010	345	85	60/35	4.4	4.7
-012	350	105	60/35	4.8	5.0
-016	355	125	60/35	5.3	5.6
-020	360	150	60/35	5.7	6.0
-025	370	185	60/35	6.8	7.1
-031	380	225	60/35	7.6	8.0
-040	395	280	60	9.2	10
-050	410	345	60	11	12
-080-040	480	285	95/60	13	14
-050	495	350	95/60	16	17
-063	515	435	95/60	18	20
-100-050	595	350	95/60	17	23
-063	615	435	95/60	26	26
-080	645	545	95	32	35
-125-063	740	435	95/60	32	30
-080	770	545	95	36	34
-100	800	675	95	46	49

T-PIECE AND CROSS

BDET-2 - T-PIECE, FABRICATED BRANCHES, ECCENTRIC



BDEX-2 - CROSS, FABRICATED BRANCHES, ECCENTRIC



OTHER SIZES

BDE(T,X)-2-bbb-ccc	H	L	Li	Weight, BDET	Weight, BDEX
	mm	mm	mm	kg	kg
-040-014	240	110	60/35	3.1	3.5
-015	240	120	60/35	3.1	3.5
-018	245	140	60/35	3.5	3.8
-022	250	165	60/35	3.8	4.2
-028	260	205	60/35	4.3	4.6
-030	260	215	60/35	5.0	5.5
-035	275	250	60	5.4	6.0
-045-010	255	85	60/35	3.5	3.7
-012	260	105	60/35	4.2	4.8
-014	260	110	60/35	4.0	4.4
-015	265	120	60/35	4.0	4.4
-016	265	125	60/35	4.1	4.5
-018	270	140	60/35	4.2	4.5
-020	270	150	60/35	4.2	4.6
-022	275	165	60/35	4.3	4.6
-025	280	185	60/35	4.5	4.7
-028	285	205	60/35	4.6	4.8
-030	285	215	60/35	5.0	5.4
-031	290	225	60/35	5.0	5.4
-035	300	250	60	5.4	5.6
-040	305	280	60	6.6	6.8
-050-014	285	110	60/35	4.1	4.3
-015	290	120	60/35	4.1	4.3
-018	295	140	60/35	4.3	4.6
-022	300	165	60/35	4.9	5.3
-028	310	205	60/35	5.6	6.2
-030	310	215	60/35	6.0	6.4
-035	325	250	60	7.1	7.5
-045	340	315	60	8.5	9.0

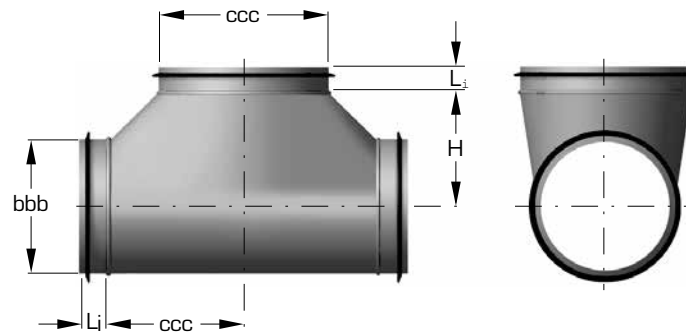
OTHER SIZES

BDE(T,X)-2-bbb-ccc	H	L	Li	Weight, BDET	Weight, BDEX
	mm	mm	mm	kg	kg
-056-010	310	85	60/35	4.0	4.2
-012	315	105	60/35	4.4	4.7
-014	315	110	60/35	4.7	5.1
-015	320	120	60/35	4.8	5.2
-016	320	125	60/35	4.8	5.3
-018	325	140	60/35	4.9	5.3
-020	325	150	60/35	5.0	5.3
-022	330	165	60/35	5.0	5.4
-025	335	185	60/35	5.3	5.6
-028	340	205	60/35	5.5	5.7
-030	340	215	60/35	6.5	6.7
-031	345	225	60/35	7.0	7.2
-035	355	250	60	7.1	7.3
-040	360	280	60	8.4	8.6
-045	370	315	60	8.6	8.9
-050	375	345	60	8.8	9.3
-063-014	350	110	60/35	5.3	5.5
-015	355	120	60/35	5.3	5.6
-018	360	140	60/35	5.5	5.8
-022	365	165	60/35	6.2	6.5
-028	375	205	60/35	7.3	7.5
-030	375	215	60/35	7.6	8.0
-035	390	250	60	8.5	9.0
-045	405	315	60	10	11
-056	420	385	60	12	13



REVERSED T-PIECE

BDET-1 - REVERSED T-PIECE, FABRICATED, CONCENTRIC



STANDARD SIZES

BDET-1-bbb-ccc	L mm	r mm	Li mm	Weight, kg
-008-010	70	80	35	0.4
-012	75	100	35	0.5
-010-012	85	100	35	0.6
-016	90	120	35	0.6
-012-016	105	120	35	0.7
-020	110	145	35	0.9
-016-020	125	145	35	1.1
-025	135	180	35	1.3
-020-025	155	180	35	1.7
-031	165	220	35	2.2
-025-031	190	220	35	2.8
-040	205	275	35/60	3.9
-031-040	240	275	35/60	4.6
-050	255	340	35/60	5.5
-040-050	295	345	60	6.5
-063	315	430	60	8.2
-050-063	365	430	60	9.7

OTHER SIZES

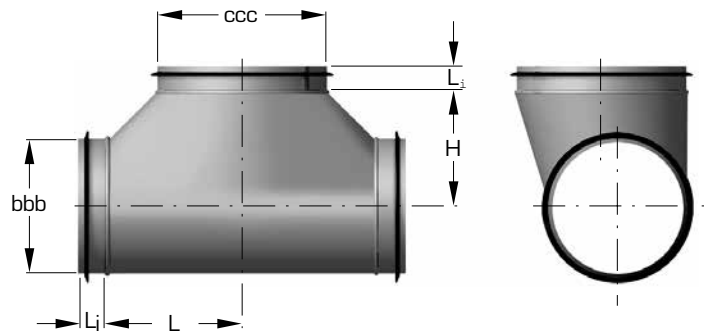
BDET-1-bbb-ccc	L mm	r mm	Li mm	Weight, kg
-016-018	125	135	35	0.9
-022	130	160	35	1.1
-018-020	135	145	35	1.4
-022	140	160	35	1.4
-025	145	180	35	1.6
-028	150	200	35	1.7
-020-022	150	160	35	1.0
-028	160	200	35	2.0
-030	160	210	35	2.1
-022-025	165	180	35	1.8
-028	170	200	35	1.9
-030	175	210	35	2.4
-031	175	220	35	2.4
-035	185	245	35/60	3.3
-025-028	185	200	35	2.4
-030	185	210	35	2.6
-035	200	245	35/60	3.6
-028-030	200	210	35	2.9
-031	205	220	35	3.2
-035	215	245	35/60	3.9
-040	220	275	35/60	4.2
-045	230	310	35/60	4.6
-030-031	215	220	35	4.0
-035	225	245	35/60	4.2
-040	230	275	35/60	4.5
-045	240	310	35/60	5.0
-050	245	340	35/60	5.4
-031-035	230	245	35/60	4.3
-045	245	310	35/60	5.1
-035-040	260	280	60	5.0
-045	265	315	60	6.1
-050	275	345	60	6.5
-056	285	385	60	7.6
-040-045	290	315	60	6.5
-056	305	385	60	6.6
-045-050	320	345	60	7.8
-056	330	385	60	8.4
-063	340	430	60	9.0
-050-056	355	385	60	9.2
-056-063	395	430	60	9.9

OTHER SIZES

BDET-1-bbb-ccc	L mm	r mm	Li mm	Weight, kg
-008-014	75	105	35	0.5
-010-014	85	105	35	0.6
-015	90	115	35	0.6
-018	95	135	35	0.6
-012-014	100	105	35	0.6
-015	100	115	35	0.6
-018	105	135	35	0.8
-014-015	110	115	35	0.8
-016	110	120	35	0.8
-018	115	135	35	0.8
-020	115	145	35	1.0
-022	120	160	35	1.1
-015-016	115	120	35	0.8
-018	120	135	35	0.8
-020	120	145	35	1.0
-022	125	160	35	1.1

REVERSED T-PIECE

BDET-2 - REVERSED T-PIECE, FABRICATED, ECCENTRIC



STANDARD SIZES

BDET-2-bbb-ccc	L mm	r mm	Li mm	Weight, kg
-008-010	70	80	35	0.4
-012	75	100	35	0.5
-010-012	85	100	35	0.6
-016	90	120	35	0.6
-012-016	105	120	35	0.7
-020	110	145	35	0.9
-016-020	125	145	35	1.1
-025	135	180	35	1.3
-020-025	155	180	35	1.7
-031	165	220	35	2.2
-025-031	190	220	35	2.8
-040	205	275	35/60	3.9
-031-040	240	275	35/60	4.6
-050	255	340	35/60	5.5
-040-050	295	345	60	6.5
-063	315	430	60	8.2
-050-063	365	430	60	9.7

OTHER SIZES

BDET-2-bbb-ccc	L mm	r mm	Li mm	Weight, kg
-016-018	125	135	35	0.9
-022	130	160	35	1.1
-018-020	135	145	35	1.4
-022	140	160	35	1.4
-025	145	180	35	1.6
-028	150	200	35	1.7
-020-022	150	160	35	1.0
-028	160	200	35	2.0
-030	160	210	35	2.1
-022-025	165	180	35	1.8
-028	170	200	35	1.9
-030	175	210	35	2.4
-031	175	220	35	2.4
-035	185	245	35/60	3.3
-025-028	185	200	35	2.4
-030	185	210	35	2.6
-035	200	245	35/60	3.6
-028-030	200	210	35	2.9
-031	205	220	35	3.2
-035	215	245	35/60	3.9
-040	220	275	35/60	4.2
-045	230	310	35/60	4.6
-030-031	215	220	35	4.0
-035	225	245	35/60	4.2
-040	230	275	35/60	4.5
-045	240	310	35/60	5.0
-050	245	340	35/60	5.4
-031-035	230	245	35/60	4.3
-045	245	310	35/60	5.1
-035-040	260	280	60	5.0
-045	265	315	60	6.1
-050	275	345	60	6.5
-056	285	385	60	7.6
-040-045	290	315	60	6.5
-056	305	385	60	6.6
-045-050	320	345	60	7.8
-056	330	385	60	8.4
-063	340	430	60	9.0
-050-056	355	385	60	9.2
-056-063	395	430	60	9.9

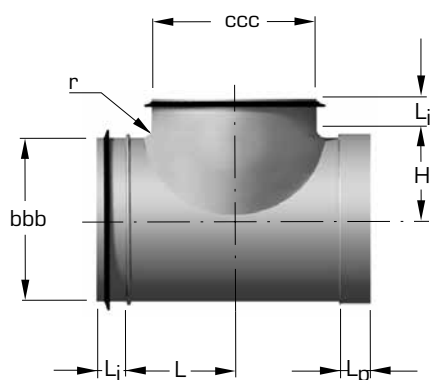
OTHER SIZES

BDET-2-bbb-ccc	L mm	r mm	Li mm	Weight, kg
-008-014	75	105	35	0.5
-010-014	85	105	35	0.6
-015	90	115	35	0.6
-018	95	135	35	0.6
-012-014	100	105	35	0.6
-015	100	115	35	0.6
-018	105	135	35	0.8
-014-015	110	115	35	0.8
-016	110	120	35	0.8
-018	115	135	35	0.8
-020	115	145	35	1.0
-022	120	160	35	1.1
-015-016	115	120	35	0.8
-018	120	135	35	0.8
-020	120	145	35	1.0
-022	125	160	35	1.1

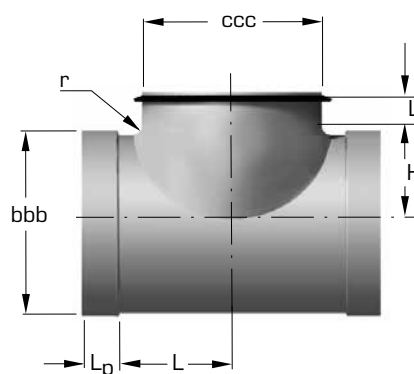


T-PIECE

BDET-3 - T-PIECE, SHORT, INSERTION - FIT-ON



BDET-4 - T-PIECE, SHORT, FIT-ON - FIT-ON



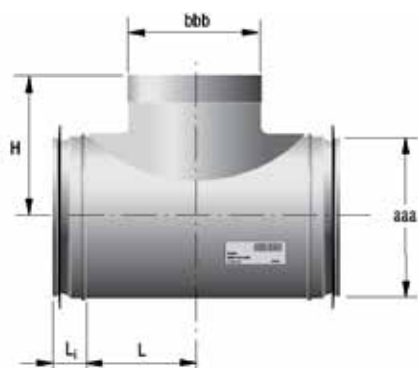
STANDARD SIZES

BDET-3-bbb-ccc	H mm	L mm	Li/Lp mm	r mm	Weight, kg
-010-010	60	65	35/35	10	0.40
-012-012	75	85	35/35	12	0.57
-016-016	96	105	35/35	16	0.82
-020-020	125	135	35/35	25	1.2

STANDARD SIZES

BDET-4-bbb-ccc	H mm	L mm	Li/Lp mm	r mm	Weight, kg
-010-010	60	65	35/35	10	0.40
-012-012	75	85	35/35	12	0.57
-016-016	96	105	35/35	16	0.82
-020-020	125	135	35/35	25	1.2

VELOFLEX FLET - T-PIECE, INSERTION - FIT-ON

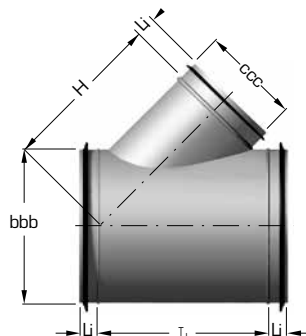


STANDARD SIZES

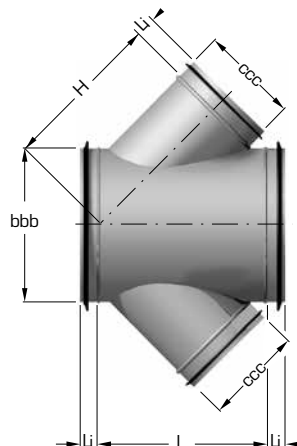
FLET-aaa-bbb	H mm	L mm	Li mm	Weight, kg
-010 - 010	108	90	35	0.50
-012 - 010	121	85	35	0.57
-012 - 012	121	100	35	0.32
-016 - 010	138	90	35	0.67
-016 - 012	138	100	35	0.80
-016 - 016	138	125	35	1.05

T-PIECE AND CROSS

BDEV-1 - T-PIECE, 45° (TO THE LEFT)



BXEV-1 - CROSS, 45°, CONCENTRIC (TO THE RIGHT)



STANDARD SIZES

B(D,X)EV-1-bbb-ccc	H	L	Li	Weight, BDEV	Weight, BXEV
	mm	mm	mm	kg	kg
-008-008	250	165	35	0.41	0.46
-010-008	250	180	35	0.51	0.56
-010	280	190	35	0.56	0.65
-012-008	250	200	35	0.63	0.68
-010	280	210	35	0.69	0.78
-012	315	220	35	0.80	0.91
-016-008	280	220	35	0.80	0.89
-010	305	230	35	0.94	1.0
-012	340	245	35	1.1	1.2
-016	390	275	35	1.2	1.4
-020-008	280	250	35	1.0	1.1
-010	305	260	35	1.1	1.2
-012	340	270	35	1.2	1.3
-016	390	305	35	1.5	1.6
-020	450	325	35	1.8	2.0
-025-010	305	295	35	1.4	1.5
-012	340	310	35	1.6	1.7
-016	390	340	35	1.8	2.0
-020	450	360	35	2.1	2.3
-025	520	385	35	2.7	2.9
-031-010	335	340	35	1.9	2.0
-012	370	335	35	2.1	2.3
-016	420	385	35	2.4	2.6
-020	475	405	35	2.8	3.0
-025	545	430	35	3.3	3.6
-031	640	480	35	4.0	4.3

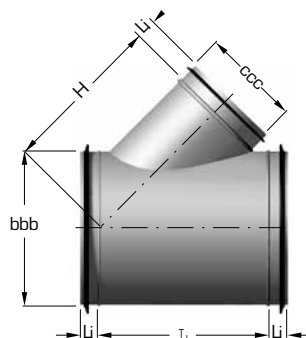
STANDARD SIZES

B(D,X)EV-1-bbb-ccc	H	L	Li	Weight, BDEV	Weight, BXEV
	mm	mm	mm	kg	kg
-040-010	335	400	60/35	3.4	3.5
-012	370	415	60/35	3.6	3.7
-016	420	445	60/35	4.0	4.2
-020	475	465	60/35	4.4	4.6
-025	545	490	60/35	5.0	5.3
-031	640	535	60/35	5.6	5.9
-040	760	580	60	6.8	7.6
-050-010	355	570	60/35	4.4	4.5
-012	370	585	60/35	4.5	4.7
-016	420	515	60/35	5.0	5.2
-020	475	535	60/35	5.5	5.7
-025	545	560	60/35	6.0	6.4
-031	640	610	60/35	7.1	7.4
-040	760	650	60	8.3	9.0
-050	900	700	60	10	11
-063-016	420	605	60/35	6.3	6.5
-020	530	630	60/35	7.4	7.6
-025	600	655	60/35	8.2	8.5
-031	690	700	60/35	9.3	9.6
-040	810	740	60	11	12
-050	950	790	60	13	14
-063	1140	855	60	15	17

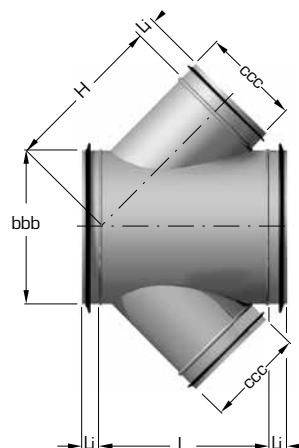


T-PIECE AND CROSS

BDEV-1 - T-PIECE, 45° (TO THE LEFT)



BXEV-1 - CROSS, 45°, CONCENTRIC (TO THE RIGHT)



OTHER SIZES

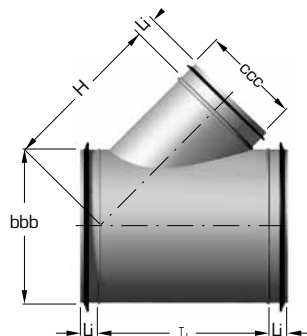
B(D,X)EV-1-bbb-ccc	H	L	Li	Weight, BDEV	Weight, BXEV
	mm	mm	mm	kg	kg
-014-008	280	210	35	0.77	0.86
-010	305	220	35	0.83	0.92
-012	340	230	35	0.94	1.0
-014	365	250	35	1.1	1.2
-015-008	280	215	35	0.82	0.87
-010	305	225	35	0.89	0.98
-012	340	240	35	1.0	1.1
-015	380	265	35	1.1	1.3
-016-014	365	265	35	1.1	1.3
-018-008	280	235	35	0.98	1.0
-010	305	245	35	1.1	1.2
-012	340	260	35	1.2	1.3
-014	365	280	35	1.3	1.4
-015	380	285	35	1.3	1.4
-016	390	290	35	1.4	1.5
-018	420	300	35	1.5	1.7
-020-014	365	295	35	1.4	1.5
-015	380	300	35	1.4	1.5
-018	420	315	35	1.6	1.8
-022-010	305	275	35	1.1	1.1
-012	340	290	35	1.4	1.5
-014	365	310	35	1.5	1.6
-015	380	315	35	1.6	1.7
-016	390	320	35	1.6	1.8
-018	420	330	35	1.8	1.9
-020	450	340	35	1.9	2.1
-022	480	350	35	2.1	2.3
-025-014	365	330	35	1.7	1.8
-015	380	335	35	1.8	1.9
-018	420	350	35	2.0	2.2
-022	480	370	35	2.3	2.5

OTHER SIZES

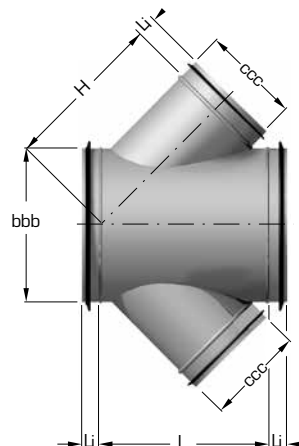
B(D,X)EV-1-bbb-ccc	H	L	Li	Weight, BDEV	Weight, BXEV
	mm	mm	mm	kg	kg
-028-010	335	315	35	1.7	1.8
-012	370	330	35	1.9	2.0
-014	390	350	35	2.0	2.2
-015	405	355	35	2.1	2.3
-016	420	360	35	2.2	2.4
-018	445	370	35	2.3	2.5
-020	475	380	35	2.5	2.7
-022	510	390	35	2.7	2.9
-025	545	405	35	3.0	3.2
-028	590	435	35	3.2	3.5
-030-010	335	340	35	1.9	2.0
-012	370	350	35	2.1	2.3
-014	390	365	35	2.2	2.4
-015	405	370	35	2.3	2.5
-016	420	375	35	2.4	2.6
-018	445	385	35	2.5	2.7
-020	475	395	35	2.7	2.9
-022	510	405	35	2.9	3.1
-025	545	420	35	3.2	3.5
-028	590	450	35	3.5	3.8
-030	615	460	35	3.9	4.2
-031-014	390	375	35	2.2	2.4
-015	405	380	35	2.3	2.5
018	445	395	35	2.6	2.8
-022	510	415	35	3.0	3.2
-028	590	460	35	3.6	3.9
-030	615	470	35	3.7	4.0
-035-010	335	370	60/35	2.1	2.2
-012	370	380	60/35	2.3	2.4
-014	390	405	60/35	2.5	2.7
-015	405	410	60/35	2.6	2.7
-016	420	415	60/35	2.7	2.9
-018	445	425	60/35	2.8	3.0
-020	475	435	60/35	3.0	3.2
-022	510	445	60/35	3.4	3.6
-025	545	460	60/35	3.6	3.9
-028	590	490	60/35	3.9	4.2
-030	615	500	60/35	4.3	4.7
-031	640	505	60/35	4.4	4.8
-035	695	525	60	4.7	5.3

T-PIECE AND CROSS

BDEV-1 - T-PIECE, 45° (TO THE LEFT)



BXEV-1 - CROSS, 45°, CONCENTRIC (TO THE RIGHT)



OTHER SIZES

B(D.X)EV-1-bbb-ccc	H	L	Li	Weight, BDEV	Weight, BXEV
	mm	mm	mm	kg	kg
-040-014	390	435	60/35	3.8	3.9
-015	405	440	60/35	3.9	4.0
-018	445	455	60/35	4.2	4.4
-022	510	475	60/35	4.7	4.9
-028	590	520	60/35	5.3	5.6
-030	615	530	60/35	5.5	5.8
-035	695	555	60	6.2	6.8
-045-010	335	435	60/35	3.9	4.0
-012	370	450	60/35	4.2	4.3
-014	390	470	60/35	4.4	4.5
-015	405	475	60/35	4.5	4.6
-016	420	480	60/35	4.6	4.8
-018	445	490	60/35	4.8	5.0
-020	475	500	60/35	5.0	5.2
-022	510	510	60/35	5.4	5.6
-025	545	525	60/35	5.7	5.9
-028	590	555	60/35	6.0	6.4
-030	615	565	60/35	6.3	6.7
-031	640	570	60/35	6.5	6.9
-035	695	590	60	7.0	7.6
-040	760	615	60	7.7	8.4
-045	830	640	60	8.5	9.3
-050-014	390	505	60/35	4.7	4.9
-015	405	510	60/35	4.9	5.1
-018	445	525	60/35	5.2	5.4
-022	510	550	60/35	5.8	6.0
-028	590	590	60/35	6.6	6.9
-030	615	600	60/35	6.8	7.2
-035	695	630	60	7.6	8.2
-045	830	675	60	9.2	9.9

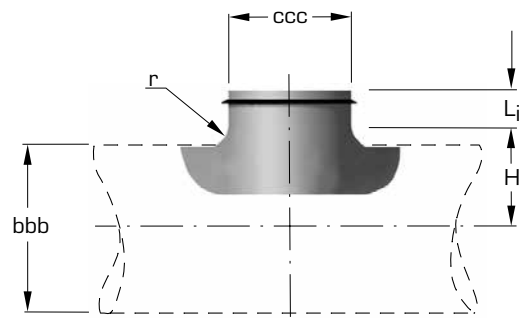
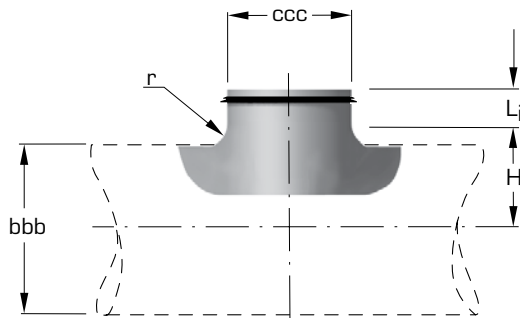
OTHER SIZES

B(D.X)EV-1-bbb-ccc	H	L	Li	Weight, BDEV	Weight, BXEV
	mm	mm	mm	kg	kg
-056-015	405	550	60/35	5.4	5.6
-016	420	555	60/35	5.6	5.7
-018	445	565	60/35	5.8	6.0
-020	530	580	60/35	6.4	6.8
-022	565	590	60/35	6.9	7.1
-025	600	605	60/35	7.3	7.6
-028	640	630	60/35	7.7	8.0
-030	665	640	60/35	7.5	7.8
-031	690	650	60/35	8.3	8.6
-035	750	670	60	8.9	9.5
-040	810	690	60	9.6	10
-045	880	715	60	11	11
-050	950	740	60	12	12
-056	1040	800	60	13	14
-063-015	405	600	60/35	6.1	6.3
-018	445	615	60/35	6.6	6.8
-022	565	640	60/35	7.9	8.1
-028	640	680	60/35	8.7	9.0
-030	665	665	60/35	9.0	9.3
-035	750	720	60	10	11
-045	880	765	60	12	13
-056	1040	850	60	14	15



BRANCH

BDEA-1 - BRANCH, PRESSED, CONCENTRIC



STANDARD SIZES

BDEA-1-bbb-ccc	H mm	r mm	Li mm	Weight kg
-008-008	50	10	35	0.10
-010-008	60	10	35	0.10
-010	65	12	35	0.14
-012-008	70	10	35	0.10
-010	78	12	35	0.13
-012	78	12	35	0.21
-016-008	90	10	35	0.09
-010	95	12	35	0.12
-012	95	12	35	0.19
-016	105	16	35	0.34
-020-008	110	10	35	0.09
-010	115	12	35	0.12
-012	115	12	35	0.17
-016	125	16	35	0.29
-020	130	20	35	0.46
-025-008	135	10	35	0.09
-010	140	12	35	0.12
-012	140	12	35	0.17
-016	150	16	35	0.29
-020	155	20	35	0.41
-025	155	20	35	0.63
-031-008	167	10	35	0.09
-010	173	12	35	0.12
-012	173	12	35	0.17
-016	183	16	35	0.27
-020	188	20	35	0.41
-025	188	20	35	0.50
-031	193	35	35	0.85
-040-010	212	12	35	0.12
-012	212	12	35	0.17
-016	225	16	35	0.25
-020	225	20	35	0.37
-025	225	20	35	0.49
-031	235	35	35	0.68
-050-010	265	12	35	0.12
-012	265	12	35	0.17
-016	275	16	35	0.25
-063-010	330	12	35	0.12
-012	330	12	35	0.17

STANDARD SIZES

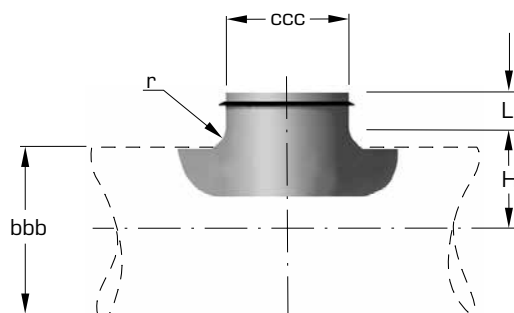
BDEA-1-bbb-ccc	H mm	r mm	Li mm	Weight kg
-040-040	240	32	60	1,90
-050-020	270	20	35	0.48
-025	290	30	35	0.69
-031	285	25	35	0.85
-040	290	32	60	1.70
-063-016	335	20	35	0.48
-020	335	20	35	0.48
-025	350	25	35	0.69
-031	350	25	35	0.85
-040	355	32	60	1.70

OTHER SIZES

BDEA-1-bbb-ccc	H mm	r mm	Li mm	Weight kg
-014-008	85	15	35	0.19
-010	90	20	35	0.19
-012	90	20	35	0.24
-014	85	15	35	0.33
-015-008	90	15	35	0.19
-010	95	20	35	0.19
-012	95	20	35	0.24
-014	90	15	35	0.28
-015	100	25	35	0.37
-016-014	95	15	35	0.30
-015	105	25	35	0.37
-018-008	105	15	35	0.17
-010	110	20	35	0.17
-012	110	20	35	0.23
-014	105	15	35	0.27
-015	115	25	35	0.28
-016	120	30	35	0.32
-018	110	20	35	0.44
-020-014	115	15	35	0.26
-015	125	25	35	0.29
-018	120	20	35	0.44

BRANCH

BDEA-1 - BRANCH, PRESSED, CONCENTRIC



OTHER SIZES

BDEA-1-bbb-ccc	H mm	r mm	Li mm	Weight kg
-022-008	127	15	35	0.16
-010	127	15	35	0.16
-012	127	15	35	0.23
-014	127	15	35	0.27
-015	137	25	35	0.31
-016	137	25	35	0.35
-018	132	20	35	0.44
-020	132	20	35	0.53
-022	134	22	35	0.62
-025-014	140	15	35	0.27
-015	150	25	35	0.31
-018	145	20	35	0.44
-022	147	22	35	0.62
-028-008	155	15	35	0.16
-010	155	15	35	0.16
-012	155	15	35	0.23
-014	155	15	35	0.27
-015	165	25	35	0.31
-016	165	25	35	0.35
-018	160	20	35	0.44
-020	165	25	35	0.53
-022	162	22	35	0.62
-025	170	20	35	0.75
-028	165	25	35	0.88
-030-008	165	15	35	0.16
-010	165	15	35	0.16
-012	165	15	35	0.23
-014	165	15	35	0.26
-015	175	25	35	0.29
-016	175	25	35	0.32
-018	170	20	35	0.42
-020	175	25	35	0.52
-022	172	22	35	0.62
-025	180	20	35	0.72
-028	175	25	35	0.86
-031-014	173	15	35	0.26
-015	183	25	35	0.29
-018	178	20	35	0.42
-022	180	22	35	0.62
-028	183	25	35	0.86

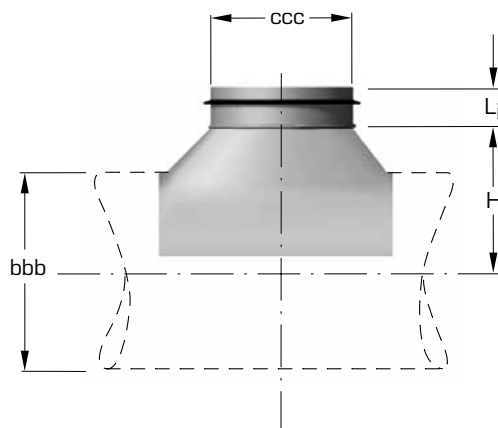
OTHER SIZES

BDEA-1-bbb-ccc	H mm	r mm	Li mm	Weight kg
-035-010	193	15	35	0.16
-012	193	15	35	0.23
-014	193	15	35	0.26
-015	203	25	35	0.29
-016	203	25	35	0.32
-018	198	20	35	0.42
-020	203	25	35	0.52
-022	200	22	35	0.62
-025	218	30	35	0.72
-028	203	25	35	0.86
-031	208	20	35	1.0
-040-014	215	15	35	0.48
-015	220	20	35	0.48
-018	220	20	35	0.48
-045-010	240	15	35	0.48
-012	240	15	35	0.48
-014	240	15	35	0.48
-015	245	20	35	0.48
-016	245	20	35	0.48
-018	245	20	35	0.48
-020	245	20	35	0.48
-025	265	30	35	0.69
-031	260	25	35	0.85
-050-014	265	15	35	0.48
-015	270	20	35	0.48
-018	270	20	35	0.48
-056-010	295	15	35	0.48
-012	295	15	35	0.48
-014	295	15	35	0.48
-015	300	20	35	0.48
-016	300	20	35	0.48
-018	300	20	35	0.48
-020	300	20	35	0.48
-025	315	25	35	0.69
-031	315	25	35	0.85
-063-014	330	15	35	0.48
-015	335	20	35	0.48
-018	335	20	35	0.48



BRANCH

BDEA-1 - BRANCH, FABRICATED, CONCENTRIC



STANDARD SIZES

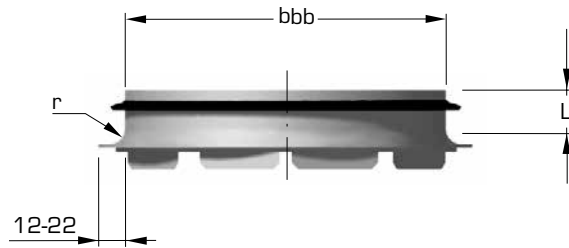
BDEA-1-bbb-ccc	H mm	Li mm	Weight, kg
-050-050	345	60	3.9
-063-050	410	60	3.9
-063	430	60	5.5
-080-031	480	35	2.4
-040	495	60	4.2
-050	515	60	4.8
-063	520	60	6.1
-080	525	95	13
-100-031	555	35	3.9
-040	580	60	2.6
-050	595	60	3.4
-063	615	60	7.0
-080	645	95	7.6
-100	675	95	12
-125-050	720	60	8.1
-063	740	60	6.3
-080	770	95	9.3
-100	800	95	13
-125	840	95	19

OTHER SIZES

BDEA-1-bbb-ccc	H mm	Li mm	Weight, kg
-030-030	210	35	1.3
-031-030	220	35	1.4
-035-030	240	35	1.6
-035	250	60	2.2
-040-022	250	35	1.2
-028	260	35	1.6
-030	260	35	1.7
-035	275	60	2.3
-045-022	275	35	1.2
-028	285	35	1.6
-030	285	35	1.7
-035	300	60	2.4
-040	305	60	2.7
-045	315	60	2.8
-050-022	300	35	1.2
-028	310	35	1.6
-030	310	35	1.7
-035	325	60	2.6
-045	340	60	3.4
-056-022	330	35	1.2
-028	340	35	1.6
-030	340	35	1.8
-035	355	60	2.7
-040	360	60	3.0
-045	370	60	3.6
-050	375	60	3.9
-056	385	60	4.1
-063-022	365	35	1.2
-028	375	35	1.6
-030	375	35	1.9
-035	390	60	2.8
-045	405	60	3.4
-056	420	60	4.8

BRANCH

BDEA-2 - BRANCH WITH FOLDING TABS AND SEAL, SMALL RADIUS AND POP-RIVETING EDGE



STANDARD SIZES

BDEA-2-bbb	r mm	Li mm	Weight, kg
-008	3	35	0.13
-010	3	35	0.15
-012	3	35	0.19
-016	3	35	0.25
-020	4	35	0.33
-025	4	35	0.43
-031	4	35	0.55
-040	4	60	0.85
-050	4	60	1.1
-063	4	60	1.6

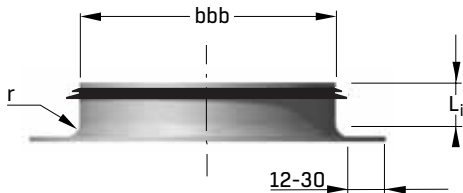
OTHER SIZES

BDEA-2-bbb	r mm	Li mm	Weight, kg
-014	3	35	0.21
-015	5	35	0.23
-018	4	35	0.29
-022	4	35	0.37
-028	4	35	0.49
-030	4	35	0.53
-035	4	60	0.70
-045	4	60	0.98
-056	4	60	1.3

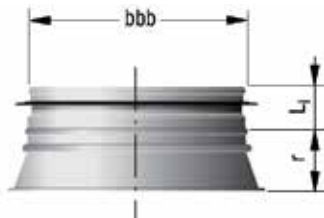


BRANCH

BDEA-5 - BRANCH WITH RADIUS



Sizes 008 - 063 pressed



Sizes 080 - 125 fabricated

STANDARD SIZES

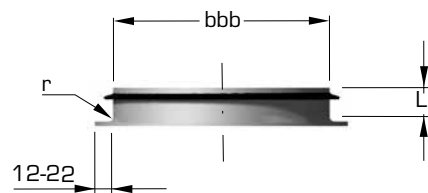
BDEA-5-bbb	r mm	Li mm	Weight, kg
-008	10	35	0.11
-010	15	35	0.15
-012	20	35	0.20
-016	25	35	0.27
-020	25	35	0.35
-025	25	35	0.51
-031	25	35	0.70
-040 *	30	60	0.88
-050 *	30	60	1.1
-063 *	30	60	1.4
-080	120	95	3.8
-100	120	95	7.2
-125	145	95	9.2

*] normal Veloduct sealing

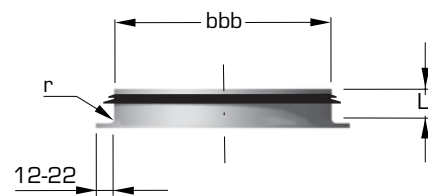
OTHER SIZES

BDEA-5-bbb	r mm	Li mm	Weight, kg
-014	15	35	0.23
-015	25	35	0.25
-018	20	35	0.31
-022	20	35	0.42
-028	25	35	0.60

BDEA-6 - BRANCH WITH SMALL RADIUS



Sizes 008 - 020 extruded sealing and 080 - 125 Veloduct sealing



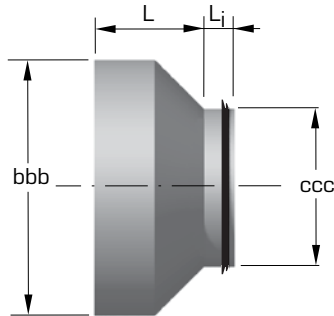
Sizes 025 - 063 Veloduct Twin sealing

STANDARD SIZES

BDEA-6-bbb	r mm	Li mm	Weight, kg
-008	2	35	0.10
-010	2	35	0.10
-012	2	35	0.15
-016	2	35	0.18
-020	2	35	0.25
-025	4	40	0.23
-031	4	40	0.27
-040	4	50	0.40
-050	4	65	0.66
-063	4	70	1.0
-080	4	95	2.2
-100	4	95	2.6
-125	4	95	3.2

OTHER SIZES

BDEA-6-bbb	r mm	Li mm	Weight, kg
-014	3	35	0.16
-015	3	35	0.17
-018	3	35	0.22
-022	4	35	0.29
-028	4	35	0.38
-030	4	35	0.40
-035	4	60	0.51
-045	4	60	0.70
-056	4	60	0.88

REDUCER**BDED-1 - REDUCER, CONCENTRIC, FIT-ON - INSERTION****STANDARD SIZES**

BDED-1-bbb-ccc	L mm	Li mm	Weight, kg
-010-008	20	35	0.15
-012-008	50	35	0.22
-010	35	35	0.22
-016-008	55	35	0.28
-010	55	35	0.28
-012	40	35	0.28
-020-010	80	35	0.36
-012	65	35	0.36
-016	45	35	0.36
-025-012	95	35	0.55
-016	75	35	0.55
-020	50	35	0.55
-031-016	110	35	0.75
-020	90	35	0.75
-025	60	35	0.75
-040-020 *	125	35	1.4
-025 *	105	35	1.3
-031 *	75	35	1.2
-050-025 *	150	35	1.9
-031 *	120	35	1.8
-040 *	80	60	1.9
-063-031 *	185	35	2.7
-040 *	145	60	2.8
-050 *	95	60	2.6

*) normal Veloduct sealing

OTHER SIZES

BDED-1-bbb-ccc	L mm	Li mm	Weight, kg
-014-008	55	35	0.18
-010	35	35	0.25
-012	25	35	0.24
-015-008	60	35	0.19
-010	45	35	0.30
-012	30	35	0.28
-014	20	35	0.25
-016-014	25	35	0.28
-015	20	35	0.28
-018-010	65	35	0.29
-012	45	35	0.29
-014	35	35	0.28
-015	30	35	0.28
-016	25	35	0.27
-020-014	55	35	0.34
-015	45	35	0.34
-018	25	35	0.33
-022-012	85	35	0.54
-014	70	35	0.35
-015	65	35	0.33
-016	50	35	0.49
-018	40	35	0.46
-020	30	35	0.43
-025-014	80	35	0.46
-015	75	35	0.61
-018	60	35	0.55
-022	30	35	0.51
-028-014	95	35	0.55
-015	90	35	0.54
-016	85	35	0.54
-018	75	35	0.53
-020	65	35	0.54
-022	55	35	0.51
-025	40	35	0.53
-030-015	100	35	0.60
-016	95	35	0.60
-018	85	35	0.60
-020	75	35	0.60
-022	65	35	0.57
-025	50	35	0.59
-028	35	35	0.56

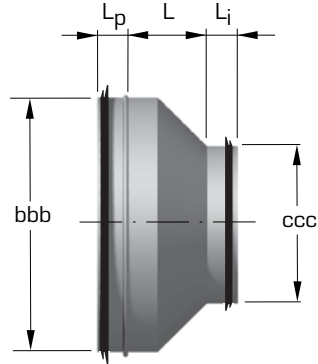
OTHER SIZES

BDED-1-bbb-ccc	L mm	Li mm	Weight, kg
-031-015	110	35	0.65
-018	95	35	0.64
-022	70	35	0.62
-028	45	35	0.61
-030	35	35	0.59
-035-018	115	35	1.2
-020	105	35	1.2
-022	90	35	1.2
-025	80	35	1.1
-028	65	35	1.1
-030	55	35	1.1
-031	45	35	1.0
-040-022	115	35	1.3
-028	85	35	1.3
-030	75	35	1.3
-035	55	60	1.5
-045-022	40	35	1.6
-025	125	35	1.7
-028	110	35	1.6
-030	100	35	1.6
-031	95	35	1.6
-035	80	60	1.8
-040	55	60	1.7
-050-028	135	35	1.9
-030	125	35	1.8
035	105	60	2.0
-045	55	60	1.9
056-028	165	35	2.2
-030	155	35	2.2
-031	150	35	2.2
-035	135	60	2.4
-040	110	60	2.3
-045	85	60	2.3
-050	60	60	2.1
-063-030	190	35	2.7
-035	170	60	2.9
-045	120	60	2.8
-056	65	60	2.4



REDUCER

BDED-3 - REDUCER, CONCENTRIC, INSERTION - INSERTION



STANDARD SIZES

BDED-3-bbb-ccc	L mm	Lp/Li mm	Weight, kg
-010-008	25	35/35	0.15
-012-008	40	35/35	0.22
-010	25	35/35	0.22
-016-008	60	35/35	0.28
-010	45	35/35	0.28
-012	35	35/35	0.28
-020-010	70	35/35	0.36
-012	55	35/35	0.36
-016	35	35/35	0.36
-025-012	85	35/35	0.55
-016	65	35/35	0.55
-020	40	35/35	0.55
-031-016	100	35/35	0.75
-020	80	35/35	0.75
-025	50	35/35	0.75
-040-020 *	135	60/35	1.4
-025 *	95	60/35	1.3
-031 *	65	60/35	1.2
-050-025 *	160	60/35	1.9
-031 *	130	60/35	1.8
-040 *	90	60/60	1.9
-063-031 *	195	60/35	2.7
-040 *	155	60/60	2.8
-050 *	105	60/60	2.6

*) normal Veloduct sealing

OTHER SIZES

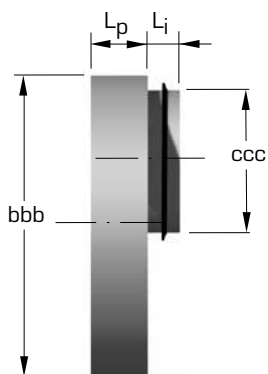
BDED-3-bbb-ccc	L mm	Lp/Li mm	Weight, kg
-014-008	60	35/35	0.18
-010	30	35/35	0.25
-012	20	35/35	0.24
-015-008	65	35/35	0.19
-010	40	35/35	0.30
-012	25	35/35	0.28
-014	35	35/35	0.25
-016-014	20	35/35	0.28
-015	15	35/35	0.28
-018-010	55	35/35	0.29
-012	40	35/35	0.29
-014	30	35/35	0.28
-015	25	35/35	0.28
-016	20	35/35	0.27
-020-014	45	35/35	0.34
-015	35	35/35	0.34
-018	20	35/35	0.33
-022-012	75	35/35	0.54
-014	75	35/35	0.35
-015	70	35/35	0.33
-016	45	35/35	0.49
-018	30	35/35	0.46
-020	20	35/35	0.43
-025-014	85	35/35	0.46
-015	65	35/35	0.61
-018	50	35/35	0.55
-022	25	35/35	0.51
-028-014	100	35/35	0.55
-015	95	35/35	0.54
-016	90	35/35	0.54
-018	80	35/35	0.53
-020	70	35/35	0.54
-022	60	35/35	0.51
-025	45	35/35	0.53
-030-015	105	35/35	0.60
-016	100	35/35	0.60
-018	90	35/35	0.60
-020	80	35/35	0.60
-022	70	35/35	0.57
-025	55	35/35	0.59
-028	40	35/35	0.56

OTHER SIZES

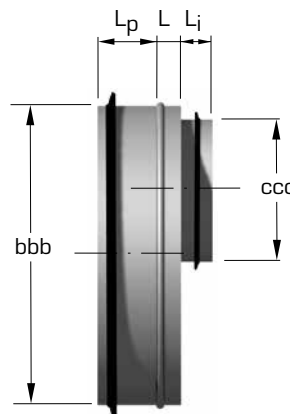
BDED-3-bbb-ccc	L mm	Lp/Li mm	Weight, kg
-031-015	115	35/35	0.65
-018	100	35/35	0.64
-022	75	35/35	0.62
-028	50	35/35	0.61
-030	40	35/35	0.59
-035-018	125	60/35	1.2
-020	115	60/35	1.2
-022	100	60/35	1.1
-025	90	60/35	1.1
-028	75	60/35	1.1
-030	65	60/35	1.1
-031	55	60/35	1.0
-040-022	125	60/35	1.3
-028	95	60/35	1.3
-030	85	60/35	1.3
-035	65	60/60	1.5
-045-022	150	60/35	1.6
-025	135	60/35	1.7
-028	120	60/35	1.6
-030	110	60/35	1.6
-031	105	60/35	1.6
-035	90	60/60	1.8
-040	65	60/60	1.7
-050-028	145	60/35	1.9
-030	135	60/35	1.8
-035	115	60/60	2.0
-045	65	60/60	1.9
-056-028	175	60/35	2.2
-030	165	60/35	2.2
-031	160	60/35	2.2
-035	145	60/60	2.4
-040	120	60/60	2.3
-045	95	60/60	2.3
-050	70	60/60	2.1
-063-030	200	60/35	2.7
-035	180	60/60	2.9
-045	130	60/60	2.8
-056	75	60/60	2.4

REDUCER

BDED-2 - REDUCER, ECCENTRIC, FIT-ON - INSERTION



BDED-4 - REDUCER, ECCENTRIC, INSERTION - INSERTION



STANDARD SIZES

BDED-2-bbb-ccc	Lp/Li mm	Weight, kg
-040-020	60/35	1.2
-025	60/35	1.2
-031	60/35	1.2
-050-025	60/35	1.7
-031	60/35	1.7
-040	60/60	1.6
-063-031	60/35	2.4
-040	60/60	2.4
-050	60/60	2.4
-080-040	95/60	5.3
-050	95/60	4.9
-063	95/60	4.4
-100-050	95/60	7.4
-063	95/60	6.8
-080	95/95	6.6
-125-063	95/60	11
-080	95/95	10
-100	95/95	8.7

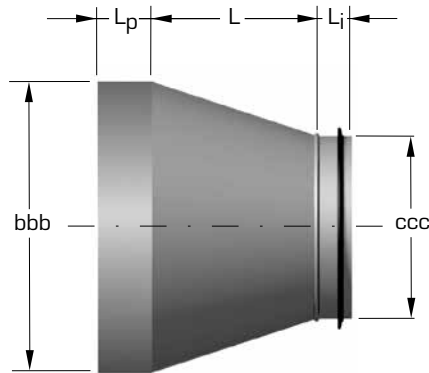
STANDARD SIZES

BDED-4-bbb-ccc	L mm	Lp/Li mm	Weight, kg
-040-020	25	60/35	1.2
-025	25	60/35	1.2
-031	25	60/35	1.2
-050-025	40	60/35	1.7
-031	40	60/35	1.7
-040	45	60/60	1.6
-063-031	40	60/35	2.4
-040	45	60/60	2.4
-050	35	60/60	2.4
-080-040	50	95/60	5.3
-050	50	95/60	4.9
-063	50	95/60	4.4
-100-050	50	95/60	7.4
-063	50	95/60	6.8
-080	50	95/95	6.6
-125-063	50	95/60	11
-080	50	95/95	10
-100	50	95/95	8.7



REDUCER

BDEF-1 - REDUCER, LONG, CONCENTRIC, FIT-ON - INSERTION



STANDARD SIZES

BDEF-1-bbb-ccc	L mm	Lp/Li mm	Weight, kg
-010-008	60	35/35	0.19
-012-008	95	35/35	0.25
-010	65	35/35	0.22
-016-008	140	35/35	0.36
-010	115	35/35	0.33
-012	80	35/35	0.30
-020-010	170	35/35	0.55
-012	135	35/35	0.54
-016	85	35/35	0.46
-025-012	205	35/35	0.86
-016	155	35/35	0.79
-020	100	35/35	0.70
-031-016	245	35/35	1.2
-020	190	35/35	1.1
-025	120	35/35	1.0
-040-020	310	60/35	2.5
-025	245	60/35	2.3
-031	155	60/35	1.9
-050-025	380	60/35	3.6
-031	290	60/35	3.2
-040	180	60/60	2.9
-063-031	470	60/35	5.2
-040	360	60/60	5.0
-050	220	60/60	4.1
-080-040	595	95/60	9.3
-050	460	95/60	8.4
-063	280	95/60	6.9
-100-050	735	95/60	16
-063	555	95/60	14
-080	325	95/95	12
-125-063	900	95/60	23
-080	670	95/95	21
-100	395	95/95	16

OTHER SIZES

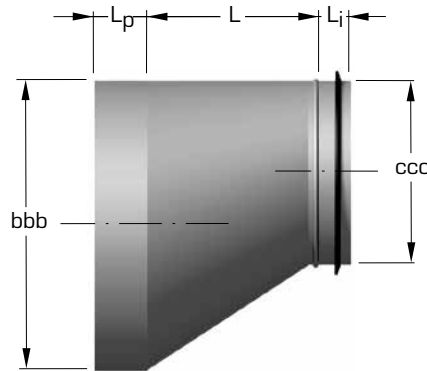
BDEF-1-bbb-ccc	L mm	Lp/Li mm	Weight, kg
-014-008	115	35/35	0.29
-010	85	35/35	0.27
-012	55	35/35	0.25
-015-008	130	35/35	0.32
-010	100	35/35	0.30
-012	65	35/35	0.26
-014	45	35/35	0.24
-016-014	60	35/35	0.28
-015	45	35/35	0.26
-018-010	140	35/35	0.47
-012	110	35/35	0.42
-014	85	35/35	0.39
-015	75	35/35	0.37
-016	60	35/35	0.35
-020-014	115	35/35	0.51
-015	100	35/35	0.48
-018	60	35/35	0.42
-022-010	200	35/35	0.70
-012	170	35/35	0.66
-014	145	35/35	0.63
-015	135	35/35	0.60
-016	120	35/35	0.58
-018	90	35/35	0.53
-020	65	35/35	0.49
-025-014	185	35/35	0.83
-015	170	35/35	0.80
-018	130	35/35	0.74
-022	70	35/35	0.61
-028-014	225	35/35	1.0
-015	210	35/35	1.0
-016	195	35/35	0.99
-018	170	35/35	0.94
-020	140	35/35	0.90
-022	110	35/35	0.81
-025	75	35/35	0.67
-030-015	240	35/35	1.2
-016	225	35/35	1.1
-018	195	35/35	1.1
-020	170	35/35	1.0
-022	135	35/35	0.95
-025	100	35/35	0.90
-028	60	35/35	0.77

OTHER SIZES

BDEF-1-bbb-ccc	L mm	Lp/Li mm	Weight, kg
-031-015	260	35/35	1.3
-018	220	35/35	1.2
-022	155	35/35	1.1
-028	80	35/35	0.88
-030	55	35/35	0.81
-035-018	270	60/35	2.0
-020	245	60/35	2.0
-022	210	60/35	1.9
-025	175	60/35	1.8
-028	135	60/35	1.6
-030	110	60/35	1.5
-031	85	60/35	1.4
-040-022	280	60/35	2.3
-028	200	60/35	2.1
-030	175	60/35	2.0
-035	100	60/60	1.9
-045-022	350	60/35	3.0
-025	310	60/35	2.9
-028	270	60/35	2.8
-030	245	60/35	2.7
-031	225	60/35	2.6
-035	170	60/60	2.6
-040	110	60/60	2.3
-050-028	340	60/35	3.4
-030	310	60/35	3.3
-035	235	60/60	3.2
-045	110	60/60	2.6
-056-028	420	60/35	4.3
-030	395	60/35	4.2
-031	375	60/35	4.1
-035	320	60/60	4.1
-040	260	60/60	3.8
-045	195	60/60	3.5
-050	125	60/60	2.9
-063-030	490	60/35	5.4
-035	415	60/60	5.3
-045	290	60/60	4.6
-056	140	60/60	3.4

REDUCER

BDEF-2 - REDUCER, LONG, ECCENTRIC, FIT-ON - INSERTION



STANDARD SIZES

BDEF-2-bbb-ccc	L mm	Lp/Li mm	Weight, kg
-010-008	60	35/35	0.19
-012-008	95	35/35	0.25
-010	65	35/35	0.22
-016-008	140	35/35	0.36
-010	115	35/35	0.33
-012	80	35/35	0.30
-020-010	170	35/35	0.55
-012	135	35/35	0.54
-016	85	35/35	0.46
-025-012	205	35/35	0.86
-016	155	35/35	0.79
-020	100	35/35	0.70
-031-016	245	35/35	1.2
-020	190	35/35	1.1
-025	120	35/35	1.0
-040-020	310	60/35	2.5
-025	245	60/35	2.3
-031	155	60/35	1.9
-050-025	380	60/35	3.6
-031	290	60/35	3.2
-040	180	60/60	2.9
-063-031	470	60/35	5.2
-040	360	60/60	5.0
-050	220	60/60	4.1
-080-040	595	95/60	9.3
-050	460	95/60	8.4
-063	280	95/60	6.9
-100-050	735	95/60	16
-063	555	95/60	14
-080	325	95/95	12
-125-063	900	95/60	23
-080	670	95/95	21
-100	395	95/95	16

OTHER SIZES

BDEF-2-bbb-ccc	L mm	Lp/Li mm	Weight, kg
-014-008	115	35/35	0.29
-010	85	35/35	0.27
-012	55	35/35	0.25
-015-008	130	35/35	0.32
-010	100	35/35	0.30
-012	65	35/35	0.26
-014	45	35/35	0.24
-016-014	60	35/35	0.28
-015	45	35/35	0.26
-018-010	140	35/35	0.47
-012	110	35/35	0.42
-014	85	35/35	0.39
-015	75	35/35	0.37
-016	60	35/35	0.35
-020-014	115	35/35	0.51
-015	100	35/35	0.48
-018	60	35/35	0.42
-022-010	200	35/35	0.70
-012	170	35/35	0.66
-014	145	35/35	0.63
-015	135	35/35	0.60
-016	120	35/35	0.58
-018	90	35/35	0.53
-020	65	35/35	0.49
-025-014	185	35/35	0.83
-015	170	35/35	0.80
-018	130	35/35	0.74
-022	70	35/35	0.61
-028-014	225	35/35	1.0
-015	210	35/35	1.0
-016	195	35/35	0.99
-018	170	35/35	0.94
-020	140	35/35	0.90
-022	110	35/35	0.81
-025	75	35/35	0.67
-030-015	240	35/35	1.2
-016	225	35/35	1.1
-018	195	35/35	1.1
-020	170	35/35	1.0
-022	135	35/35	0.95
-025	100	35/35	0.90
-028	60	35/35	0.77

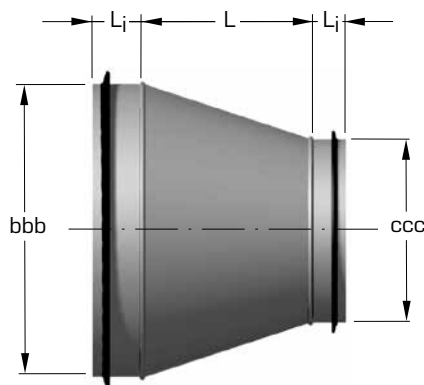
OTHER SIZES

BDEF-2-bbb-ccc	L mm	Lp/Li mm	Weight, kg
-031-015	260	35/35	1.3
-018	220	35/35	1.2
-022	155	35/35	1.1
-028	80	35/35	0.88
-030	55	35/35	0.81
-035-018	270	60/35	2.0
-020	245	60/35	2.0
-022	210	60/35	1.9
-025	175	60/35	1.8
-028	135	60/35	1.6
-030	110	60/35	1.5
-031	85	60/35	1.4
-040-022	280	60/35	2.3
-028	200	60/35	2.1
-030	175	60/35	2.0
-035	100	60/60	1.9
-045-022	350	60/35	3.0
-025	310	60/35	2.9
-028	270	60/35	2.8
-030	245	60/35	2.7
-031	225	60/35	2.6
-035	170	60/60	2.6
-040	110	60/60	2.3
-050-028	340	60/35	3.4
-030	310	60/35	3.3
-035	235	60/60	3.2
-045	110	60/60	2.6
-056-028	420	60/35	4.3
-030	395	60/35	4.2
-031	375	60/35	4.1
-035	320	60/60	4.1
-040	260	60/60	3.8
-045	195	60/60	3.5
-050	125	60/60	2.9
-063-030	490	60/35	5.4
-035	415	60/60	5.3
-045	290	60/60	4.6
-056	140	60/60	3.4



REDUCER

BDEF-3 - REDUCER, LONG, CONCENTRIC, INSERTION - INSERTION



STANDARD SIZES

BDEF-3-bbb-ccc	L mm	Li mm	Weight, kg
-010-008	60	35	0.19
-012-008	95	35	0.25
-010	65	35	0.22
-016-008	140	35	0.36
-010	115	35	0.33
-012	80	35	0.30
-020-010	170	35	0.55
-012	135	35	0.54
-016	85	35	0.46
-025-012	205	35	0.86
-016	155	35	0.79
-020	100	35	0.70
-031-016	245	35	1.2
-020	190	35	1.1
-025	120	35	1.0
-040-020	310	60/35	2.5
-025	245	60/35	2.3
-031	155	60/35	1.9
-050-025	380	60/35	3.6
-031	290	60/35	3.2
-040	180	60	2.9
-063-031	470	60/35	5.2
-040	360	60	5.0
-050	220	60	4.1
-080-040	595	95/60	9.3
-050	460	95/60	8.4
-063	280	95/60	6.9
-100-050	735	95/60	16
-063	555	95/60	14
-080	325	95	12
-125-063	900	95/60	23
-080	670	95	21
-100	395	95	16

OTHER SIZES

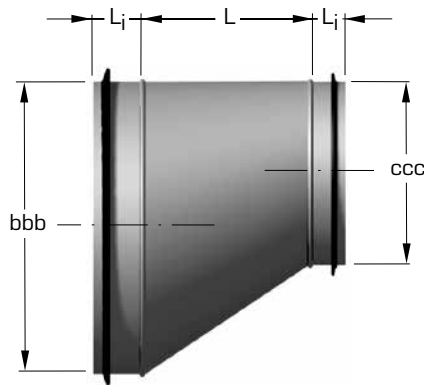
BDEF-3-bbb-ccc	L mm	Li mm	Weight, kg
-014-008	115	35	0.29
-010	85	35	0.27
-012	55	35	0.25
-015-008	130	35	0.32
-010	100	35	0.30
-012	65	35	0.26
-014	45	35	0.24
-016-014	60	35	0.28
-015	45	35	0.26
-018-010	140	35	0.47
-012	110	35	0.42
-014	85	35	0.39
-015	75	35	0.37
-016	60	35	0.35
-020-014	115	35	0.51
-015	100	35	0.48
-018	60	35	0.42
-022-010	200	35	0.70
-012	170	35	0.66
-014	145	35	0.63
-015	135	35	0.60
-016	120	35	0.58
-018	90	35	0.53
-020	65	35	0.49
-025-014	185	35	0.83
-015	170	35	0.80
-018	130	35	0.74
-022	70	35	0.61
-028-014	225	35	1.0
-015	210	35	1.0
-016	195	35	0.99
-018	170	35	0.94
-020	140	35	0.90
-022	110	35	0.81
-025	75	35	0.67
-030-015	240	35	1.2
-016	225	35	1.1
-018	195	35	1.1
-020	170	35	1.0
-022	135	35	0.95
-025	100	35	0.90
-028	60	35	0.77

OTHER SIZES

BDEF-3-bbb-ccc	L mm	Li mm	Weight, kg
-031-015	260	35	1.3
-018	220	35	1.2
-022	155	35	1.1
-028	80	35	0.88
-030	55	35	0.81
-035-018	270	60/35	2.0
-020	245	60/35	2.0
-022	210	60/35	1.9
-025	175	60/35	1.8
-028	135	60/35	1.6
-030	110	60/35	1.5
-031	85	60/35	1.4
-040-022	280	60/35	2.3
-028	200	60/35	2.1
-030	175	60/35	2.0
-035	100	60	1.9
-045-022	350	60/35	3.0
-025	310	60/35	2.9
-028	270	60/35	2.8
-030	245	60/35	2.7
-031	225	60/35	2.6
-035	170	60	2.6
-040	110	60	2.3
-050-028	340	60/35	3.4
-030	310	60/35	3.3
-035	235	60	3.2
-045	110	60	2.6
-056-028	420	60/35	4.3
-030	395	60/35	4.2
-031	375	60/35	4.1
-035	320	60	4.1
-040	260	60	3.8
-045	195	60	3.5
-050	125	60	2.9
-063-030	490	60/35	5.4
-035	415	60	5.3
-045	290	60	4.6
-056	140	60	3.4

REDUCER

BDEF-4 - REDUCER, LONG, ECCENTRIC, INSERTION - INSERTION



STANDARD SIZES

BDEF-4-bbb-ccc	L mm	Li mm	Weight, kg
-010-008	60	35	0.19
-012-008	95	35	0.25
-010	65	35	0.22
-016-008	140	35	0.36
-010	115	35	0.33
-012	80	35	0.30
-020-010	170	35	0.55
-012	135	35	0.54
-016	85	35	0.46
-025-012	205	35	0.86
-016	155	35	0.79
-020	100	35	0.70
-031-016	245	35	1.2
-020	190	35	1.1
-025	120	35	1.0
-040-020	310	60/35	2.5
-025	245	60/35	2.3
-031	155	60/35	1.9
-050-025	380	60/35	3.6
-031	290	60/35	3.2
-040	180	60	2.9
-063-031	470	60/35	5.2
-040	360	60	5.0
-050	220	60	4.1
-080-040	595	95/60	9.3
-050	460	95/60	8.4
-063	280	95/60	6.9
-100-050	735	95/60	16
-063	555	95/60	14
-080	325	95	12
-125-063	900	95/60	23
-080	670	95	21
-100	395	95	16

OTHER SIZES

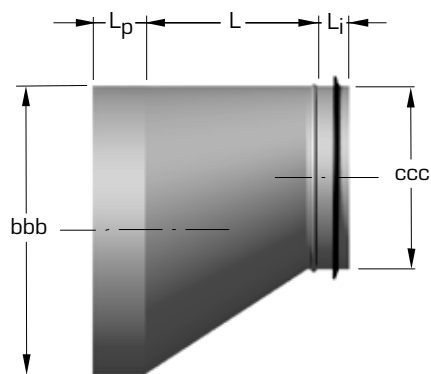
BDEF-4-bbb-ccc	L mm	Li mm	Weight, kg
-014-008	115	35	0.29
-010	85	35	0.27
-012	55	35	0.25
-015-008	130	35	0.32
-010	100	35	0.30
-012	65	35	0.26
-014	45	35	0.24
-016-014	60	35	0.28
-015	45	335	0.26
-018-010	140	35	0.47
-012	110	35	0.42
-014	85	35	0.39
-015	75	35	0.37
-016	60	35	0.35
-020-014	115	35	0.51
-015	100	35	0.48
-018	60	35	0.42
-022-010	200	35	0.70
-012	170	35	0.66
-014	145	35	0.63
-015	135	35	0.60
-016	120	35	0.58
-018	90	35	0.53
-020	65	35	0.49
-025-014	185	35	0.83
-015	170	35	0.80
-018	130	35	0.74
-022	70	35	0.61
-028-014	225	35	1.0
-015	210	35	1.0
-016	195	35	0.99
-018	170	35	0.94
-020	140	35	0.90
-022	110	35	0.81
-025	75	35	0.67
-030-015	240	35	1.2
-016	225	35	1.1
-018	195	35	1.1
-020	170	35	1.0
-022	135	35	0.95
-025	100	35	0.90
-028	60	35	0.77

OTHER SIZES

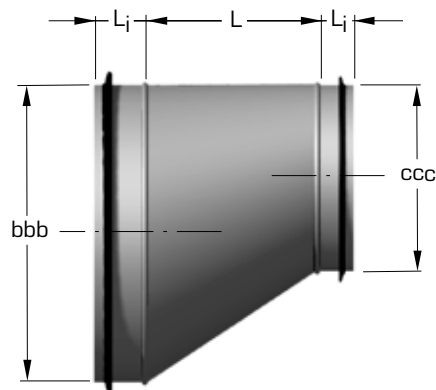
BDEF-4-bbb-ccc	L mm	Li mm	Weight, kg
-031-015	260	35	1.3
-018	220	35	1.2
-022	155	35	1.1
-028	80	35	0.88
-030	55	35	0.81
-035-018	270	60/35	2.0
-020	245	60/35	2.0
-022	210	60/35	1.9
-025	175	60/35	1.8
-028	135	60/35	1.6
-030	110	60/35	1.5
-031	85	60/35	1.4
-040-022	280	60/35	2.3
-028	200	60/35	2.1
-030	175	60/35	2.0
-035	100	60	1.9
-045-022	350	60/35	3.0
-025	310	60/35	2.9
-028	270	60/35	2.8
-030	245	60/35	2.7
-031	225	60/35	2.6
-035	170	60	2.6
-040	110	60	2.3
-050-028	340	60/35	3.4
-030	310	60/35	3.3
-035	235	60	3.2
-045	110	60	2.6
-056-028	420	60/35	4.3
-030	395	60/35	4.2
-031	375	60/35	4.1
-035	320	60	4.1
-040	260	60	3.8
-045	195	60	3.5
-050	125	60	2.9
-063-030	490	60/35	5.4
-035	415	60	5.3
-045	290	60	4.6
-056	140	60	3.4

REDUCER

BDKF-2 - REDUCER, ECCENTRIC, FIT-ON - INSERTION



BDKF-4 - REDUCER, ECCENTRIC, INSERTION - INSERTION



STANDARD SIZES

BDKF-2-bbb-ccc(-T)	L mm	Lp/Li mm	Weight, kg
-040-020 (-T)	200	60/35	2.1
-025 (-T)	200	60/35	2.2
-031 (-T)	200	60/35	2.3
-050-025 (-T)	250	60/35	3.0
-031 (-T)	250	60/35	3.2
-040 (-T)	250	60/60	3.7
-063-031 (-T)	315	60/35	4.4
-040 (-T)	315	60/60	5.0
-050 (-T)	290	60/60	5.3
-080-040 (-T)	400	95/60	8.7
-050 (-T)	400	95/60	9.1
-063 (-T)	400	95/60	10.9
-100-050 (-T)	500	95/60	14.4
-063 (-T)	500	95/60	14.9
-080 (-T)	500	95/95	17.5
-125-063 (-T)	630	95/60	20.9
-080 (-T)	630	95/95	23.5
-100 (-T)	630	95/95	25.1

T in the code: separate packing (M1)

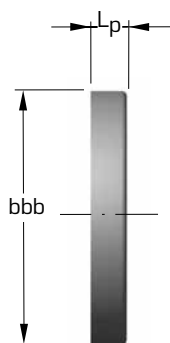
STANDARD SIZES

BDKF-4-bbb-ccc(-T)	L mm	Li mm	Weight, kg
-040-020 (-T)	200	60/35	2.1
-025 (-T)	200	60/35	2.1
-031 (-T)	200	60/35	2.3
-050-025 (-T)	250	60/35	3.0
-031 (-T)	250	60/35	3.2
-040 (-T)	250	60	3.7
-063-031 (-T)	315	60/35	4.4
-040 (-T)	315	60	5.0
-050 (-T)	290	60	5.1
-080-040 (-T)	400	95/60	8.7
-050 (-T)	400	95/60	9.1
-063 (-T)	400	95/60	10.9
-100-050 (-T)	500	95/60	14.4
-063 (-T)	500	95/60	14.9
-080 (-T)	500	95	17.5
-125-063 (-T)	630	95/60	20.9
-080 (-T)	630	95	23.5
-100 (-T)	630	95	25.1

T in the code: separate packing (M1)

LID

BDEG-1 - LID, FIT - ON



STANDARD SIZES

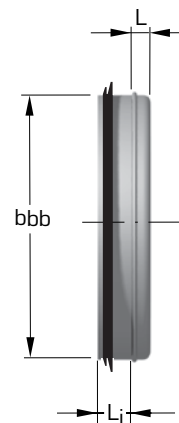
BDEG-1-bbb	Lp mm	Weight, kg
-008	40	0.07
-010	40	0.11
-012	40	0.14
-016	40	0.25
-020	40	0.32
-025	40	0.47
-031	40	0.71
-040	40	1.4
-050	45	1.9
-063	70	2.9
-080 **	95	5.8
-100 **	95	8.2
-125 **	95	11.4

**) Fabricated

OTHER SIZES

BDEG-1-bbb	Lp mm	Weight, kg
-014	35	0.15
-015	35	0.15
-018	35	0.27
-022	35	0.32
-028	35	0.53
-030	35	0.66
-035	60	1.2
-045	60	1.7
-056	60	2.4

BDEG-4 - LID, INSERTION



STANDARD SIZES

BDEG-4-bbb	L mm	L _i mm	Weight, kg
-008	15	35	0.10
-010	17	35	0.10
-012	17	35	0.10
-016	17	35	0.20
-020	15	35	0.30
-025	15	35	0.60
-031	15	35	0.90
-040	16	35	1.2
-050 *	30	60	2.2
-063 *	30	60	3.1
-080 **	30	95	6.1
-100 **	30	95	8.5
-125 **	30	95	12.0

*) Veloduct sealing

***) Fabricated + Veloduct sealing

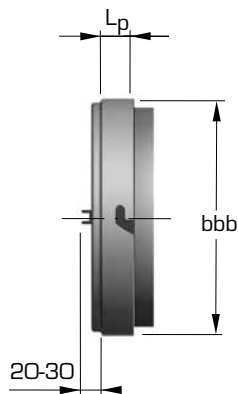
OTHER SIZES

BDEG-4-bbb	L mm	L _i mm	Weight, kg
-014	15	35	0.24
-015	15	35	0.25
-018	15	35	0.37
-022	20	35	0.50
-028	20	35	0.55
-030	20	35	0.77
-035	20	60	1.4
-045	30	60	2.0
-056	30	60	2.9

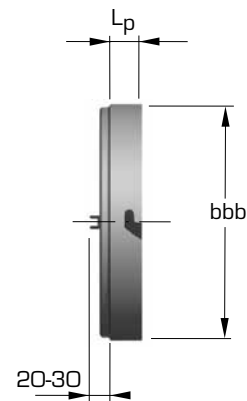


CLEANING COVER

BDEG-2 - CLEANING COVER, INSULATED, FIT - ON



BDEG-3 - CLEANING COVER, FIT - ON



FIRE RESISTANCE CLASS E 60 (EI 60)¹⁾

BDEG-2-bbb	Lp mm	Weight, kg
-010	35	0.29
-012	35	0.35
-016	35	0.49
-020	35	0.73
-025	35	1.10
-031	35	1.50

FIRE RESISTANCE CLASS E 60 (EI 60)¹⁾

BDEG-3-bbb	Lp mm	Weight, kg
-010	35	0.17
-012	35	0.22
-016	35	0.28
-020	35	0.35
-025	35	0.50
-031	35	0.74

¹⁾ In accordance with BBR 5:6213, the cover may be used where components to fire resistance class EI 60 are required provided that the cover is installed at a min. distance of 500 mm from an escape route and at a min. distance of 200 mm from any combustible material. If the fire resistance requirement is EI 30, the corresponding protective distance must be at least 400 mm (escape route) and 150 mm (combustible material) respectively.

¹⁾ In accordance with BBR 5:6213, the cover may be used where components to fire resistance class EI 60 are required provided that the cover is installed at a min. distance of 500 mm from an escape route and at a min. distance of 200 mm from any combustible material. If the fire resistance requirement is EI 30, the corresponding protective distance must be at least 400 mm (escape route) and 150 mm (combustible material) respectively.

THE TYPE APPROVAL FOR FIRE RESISTANCE CLASS DOES NOT APPLY TO THE COMPONENT BELOW.

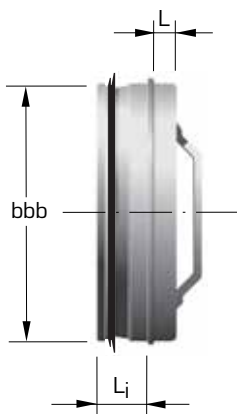
XDEG-2-bbb	Lp mm	Weight, kg
-040	60	3.4
-050	60	4.7
-063	60	6.9

THE TYPE APPROVAL FOR FIRE RESISTANCE CLASS DOES NOT APPLY TO THE COMPONENT BELOW.

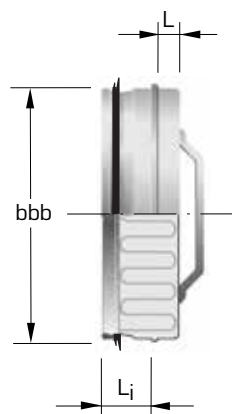
XDEG-3-bbb	Lp mm	Weight, kg
-040	60	1.5
-050	60	2.0
-063	60	2.8

CLEANING COVER

BDEB-4 - CLEANING COVER WITH HANDLE, INSERTION



BDEG-4 - CLEANING COVER WITH HANDLE, INSULATED, INSERTION



STANDARD SIZES

BDEB-4-bbb-K	L mm	Li mm	Weight kg
-010	15	35	0.20
-012	15	35	0.29
-016	15	35	0.34
-020	20	35	0.42
-025	20	35	0.65
-031	20	35	1.0
-040	30	60	1.5
-050	30	60	2.0
-063	30	60	3.1

STANDARD SIZES

BDEG-4-bbb-KE	L mm	Li mm	Weight kg
-010	15	35	0.25
-012	15	35	0.36
-016	15	35	0.46
-020	20	35	0.60
-025	20	35	0.93
-031	20	35	1.43
-040	30	60	2.22
-050	30	60	3.12
-063	30	60	4.88



CLEANING COVER

BDEG-7 - CLEANING COVER WITH MOUNTING RING, INSULATED, INSERTION,

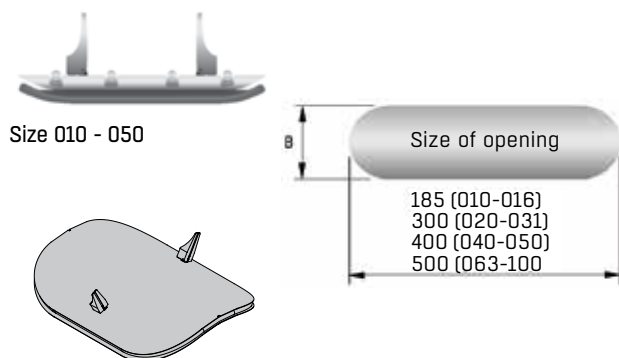


STANDARD SIZES

BDEG-7-bbb	Weight, kg
010	0.35
012	0.40
016	0.70
020	0.90
025	1.40
031	2.00

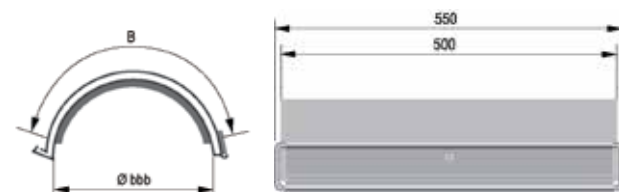
CLEANING COVER

BDKL-1 - CLEANING COVER FOR SUBSEQUENT INSTALLATION ON CIRCULAR DUCT



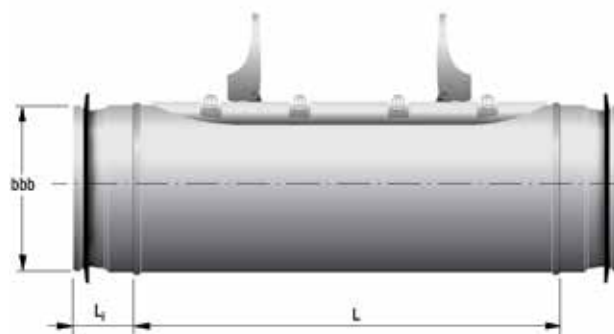
Size 010 - 050

Size 063 - 100



Size 125

BDKP-3 - CLEANING COVER, INSERTION



STANDARD SIZES

BDKL-1-bbb	B mm	C mm	Weight, kg
-010	85	185	0.25
-012	85	185	0.25
-016	85	185	0.25
-020	100	300	0.55
-025	100	300	0.55
-031	100	300	0.55
-040	200	400	1.4
-050	200	400	1.4
-063	400	500	4.8
-080	400	500	4.8
-100	400	500	4.8
-125	400	500	3.1

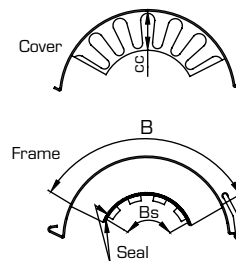
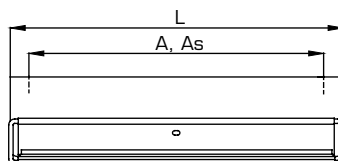
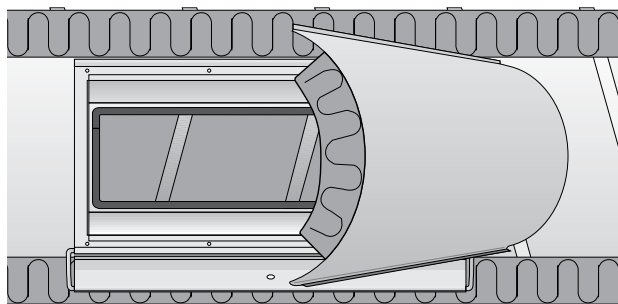
STANDARD SIZES

BDKP-3-bbb	B mm	C mm	L mm	Li mm	Weight, kg
-010	85	185	250	35	0.8
-012	85	185	250	35	0.9
-016	85	185	250	35	1.0
-020	100	300	315	35	1.8
-025	100	300	315	35	2.1
-031	100	300	315	35	3.2
-040	200	400	415	60	4.9
-050	200	400	415	60	6.0
-063	400	500	540	60	12.2



CLEANING COVER

BDBL-1 - CLEANING COVER FOR SUBSEQUENT INSTALLATION ON CIRCULAR DUCT, INSULATED



BDBL-1-bbb-cc

cc = thickness of insulation (heat and fire)

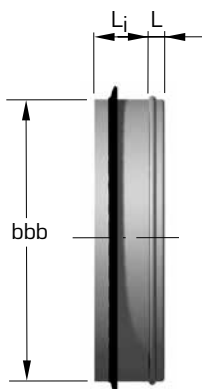
03 = 30 mm	06 = 60 mm
04 = 40 mm	08 = 80 mm
05 = 50 mm	10 = 100 mm

STANDARD SIZES

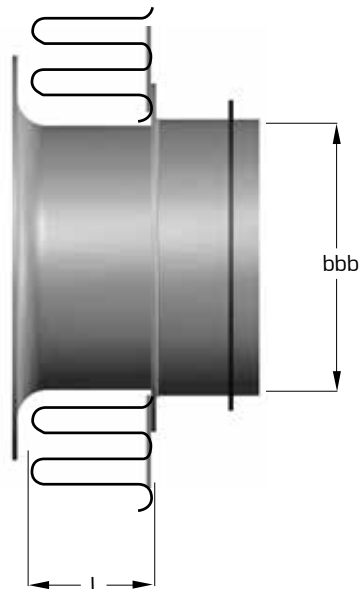
BDBL-1-bbb-cc	Opening (mm)				L	Weight (kg)					
	inner		outer			-cc (cm)					
-bbb	As	Bs	A	B		03	04	05	06	08	10
-010	360	100	400	200	450	2.1	2.3	2.5	2.7	2.8	3.2
-012	360	100	400	200	450	2.1	2.3	2.5	2.7	2.8	3.2
-016	360	100	400	200	450	2.1	2.3	2.5	2.7	2.8	3.2
-020	360	100	400	200	450	-	2.3	2.5	2.7	2.8	3.2
-025	360	100	400	300	450	-	2.9	3.1	3.4	3.8	4.1
-031	360	200	400	300	450	-	2.9	3.1	3.4	3.8	4.1
-040	360	200	400	300	450	-	-	3.1	3.4	3.8	4.1
-050	360	200	400	300	450	-	-	3.1	3.4	3.8	4.1
-063	500	300	500	400	530	-	-	5.8	6.4	7.1	7.7
-080	500	300	500	400	530	-	-	5.8	6.4	7.1	7.7
-100	500	300	500	400	530	-	-	5.8	-	7.1	7.7
-125	500	300	500	400	530	-	-	5.8	-	7.1	7.7

BRANCH

BDEC-1 – BRANCH



XDEZ-05 – BRANCH FOR INSULATION



STANDARD SIZES

BDEC-1-bbb	L mm	Li mm	Weight, kg
-008	15	35	0.06
-010	15	35	0.06
-012	15	35	0.07
-016	15	35	0.09
-020	15	35	0.14
-025	15	35	0.22
-031	15	35	0.28
-040	20	60	0.68
-050	20	60	0.85
-063	20	60	1.1
-080	25	95	2.3
-100	25	95	2.6
-125	25	95	3.2

OTHER SIZES

BDEC-1-bbb	L mm	Li mm	Weight, kg
-014	15	35	0.08
-015	15	35	0.08
-018	15	35	0.11
-022	15	35	0.15
-028	15	35	0.25
-030	15	35	0.27
-035	20	60	0.63
-045	20	60	0.82
-056	20	60	0.95

STANDARD SIZES

XDEZ-05-bbb-05	L mm	Weight, kg
-008	50	0.23
-010	50	0.26
-012	50	0.38
-016	50	0.45
-020	50	0.65
-025	50	0.89
-031	50	1.2
-040	50	1.6
-050	50	1.8
-063	50	2.2

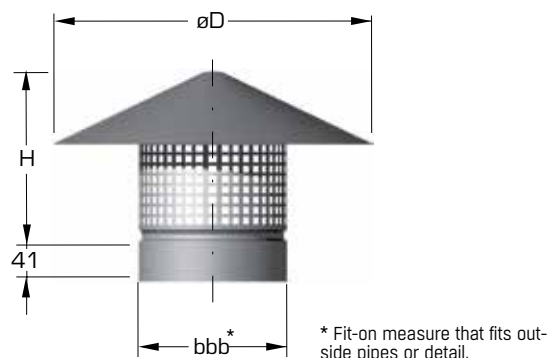
XDEZ-05-bbb -10

	L mm	Weight, kg
-008	100	0.28
-010	100	0.32
-012	100	0.46
-016	100	0.55
-020	100	0.80
-025	100	1.1
-031	100	1.4
-040	100	2.0
-050	100	2.2
-063	100	2.6



WEATHERING COWL & CEILING AND WALL BRANCH

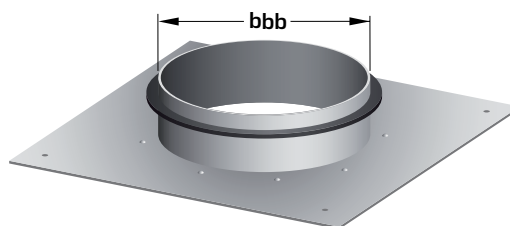
XBEZ-71 - WEATHERING COWL



STANDARD SIZES

XBEZ-71-bbb	$\varnothing D$ mm	H mm	Weight kg
-010	200	90	0,30
-012	225	95	0,38
-016	260	130	0,63
-020	310	140	0,72
-025	370	205	1,1
-031	435	215	1,4

BDEZ-43 - CEILING AND WALL BRANCH

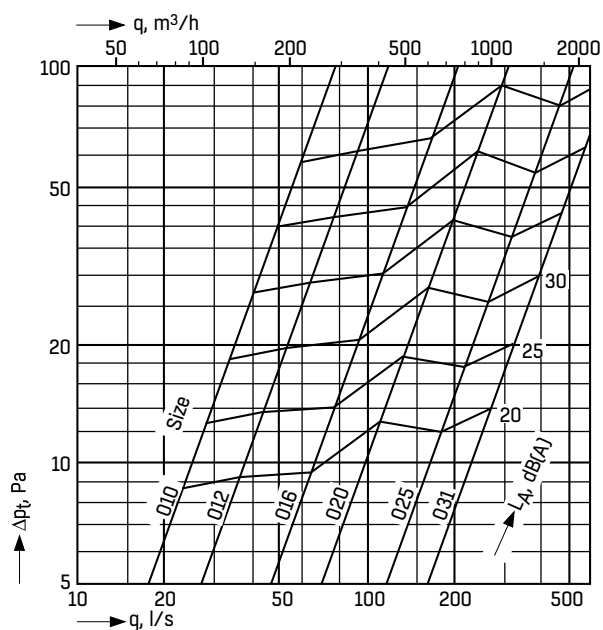


The size of the plate is 255 x 255 mm and the hole size for the insertion branch is:

STANDARD SIZES

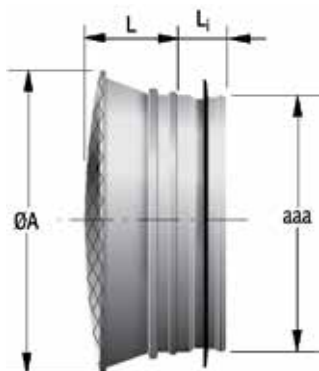
BDEZ-43-bbb	mm
-010	100
-012	125
-016	160

PRESSURE DROP



INLET CONE WITH PROTECTIVE NET

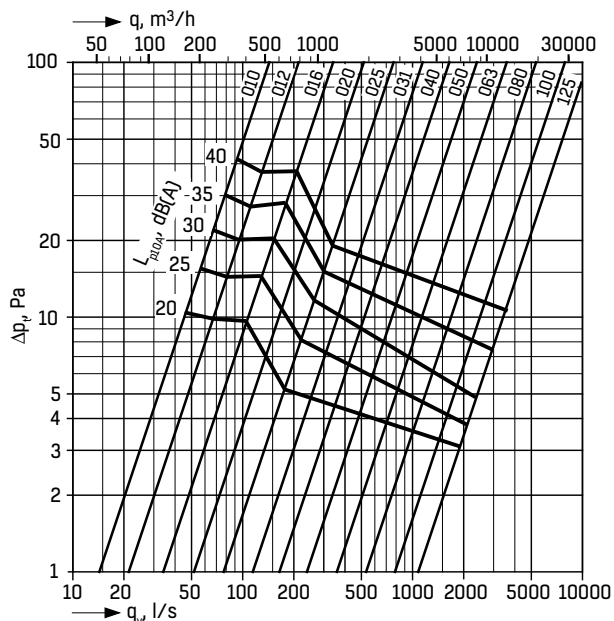
BDKU - INLET CONE WITH PROTECTIVE NET



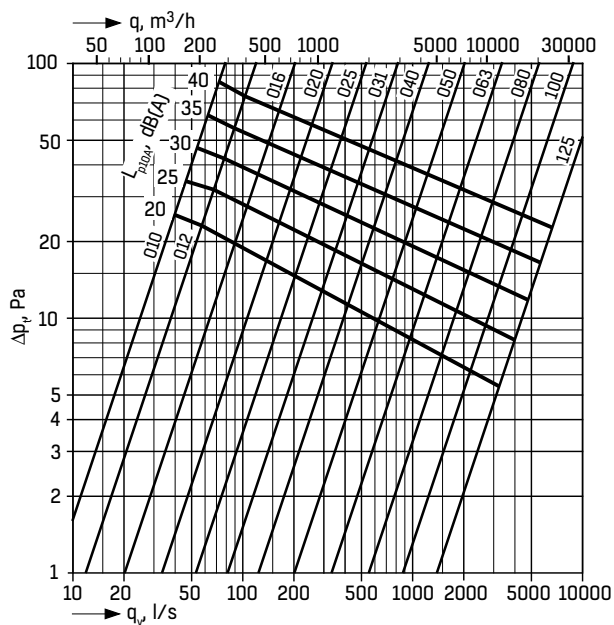
STANDARD SIZES

BDKU-aaa	A mm	L mm	Li mm	Weight, kg
-010	170	70	35	0.18
-012	190	70	35	0.21
-016	230	70	35	0.26
-020	270	70	35	0.3
-025	315	70	35	0.4
-031	370	70	35	0.5
-040	455	80	60	1.0
-050	565	80	60	1.1
-063	695	93	60	1.5
-080	905	120	95	3.6
-100	1120	120	95	4.5
-125	1410	145	95	5.8

EXTRACT AIR



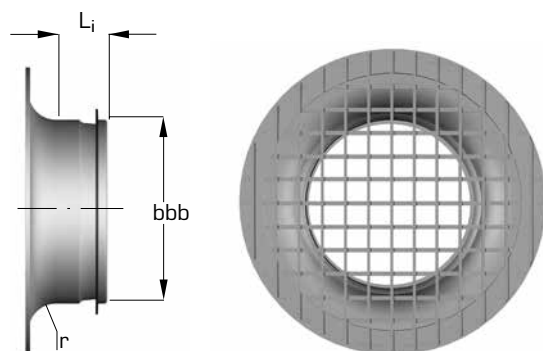
SUPPLY AIR



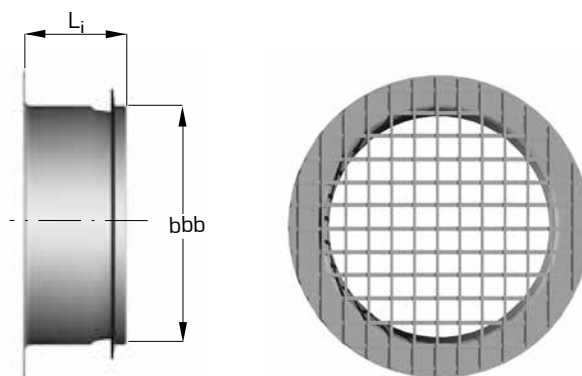


BRANCH WITH MESH

XDEA-5 – BRANCH WITH MESH



XDEA-6 – BRANCH WITH MESH



STANDARD SIZES

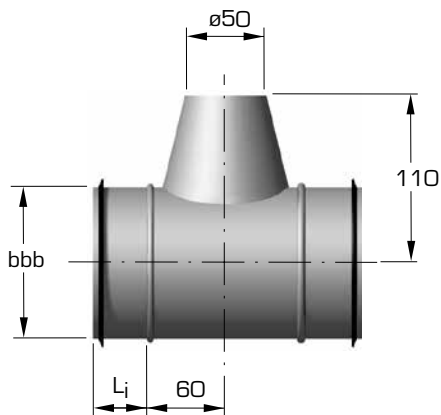
XDEA-5-bbb-10	r mm	Li mm	Weight, kg
-008	10	35	0.18
-010	15	35	0.25
-012	20	35	0.36
-016	25	35	0.51
-020	25	35	0.68
-025	25	35	0.97
-031	25	35	1,4
-040	30	60	2.0
-050	30	60	2.7
-063	30	60	3.7

STANDARD SIZES

XDEA-6-bbb-10	Li mm	Weight, kg
-008	35	0.15
-010	35	0.17
-012	35	0.25
-016	35	0.33
-020	35	0.47
-025	35	0.67
-031	35	0.94
-040	60	1.4
-050	60	2.0
-063	60	3.0

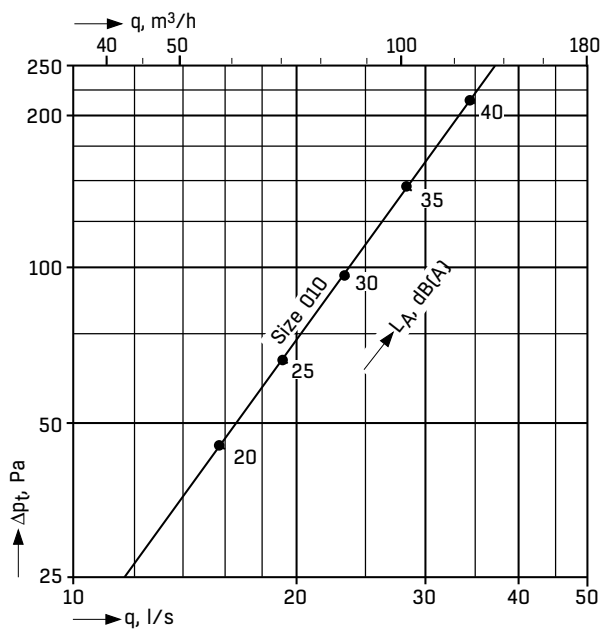
SUPPLY AIR NOZZLE

XBEZ-72 – SUPPLY AIR NOZZLE



STANDARD SIZES

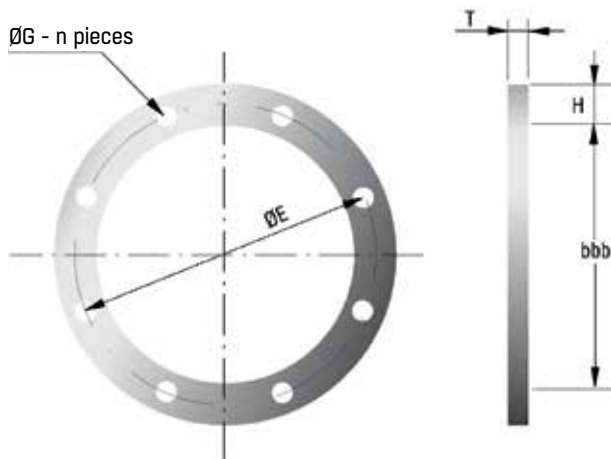
XBEZ-72-bbb	Li mm	Weight, kg
-010	35	0.38





FLANGE & BRACKET

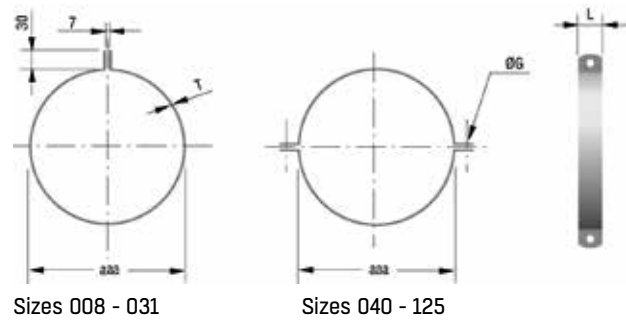
EBGA-2 - FLANGE, GALVANIZED (SIZES 031 - 160 EUROVENT 1/2)



STANDARD SIZES

EBGA-2-bbb	Ds mm	E mm	T mm	H mm	G mm	n kpl	Weight, kg
-010	106	140	4	30	11	6	0.4
-012	131	165	4	30	11	6	0.5
-016	166	200	4	30	11	8	0.6
-020	206	240	4	30	11	8	0.7
-025	256	290	4	30	11	8	0.8
-031	319	355	6	35	10	8	1.9
-040	406	450	6	40	12	8	2.6
-050	506	560	6	50	12	12	3.5
-056	566	620	6	50	12	12	4.6
-063	636	690	6	50	12	12	5.1
-071	716	770	6	50	12	16	5.7
-080	806	860	6	50	12	16	6.3
-090	908	970	6	60	15	16	8.6
-100	1008	1070	6	60	15	16	9.5
-112	1128	1190	6	60	15	20	10.5
-125	1258	1320	6	60	15	20	11.7
-140	1408	1470	6	60	15	20	13.1
-160	1608	1680	8	60	19	24	14.9

BDSK - BRACKET, GALVANIZED

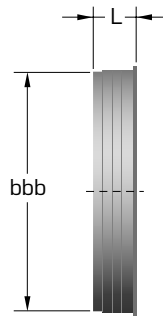


STANDARD SIZES

BDSK-aaa	Ds mm	ØG mm	L mm	T mm	Weight, kg
-008	83	11	30	1.25	0.09
-010	103	11	30	1.25	0.11
-012	128	11	30	1.25	0.14
-016	163	11	30	1.25	0.17
-020	203	11	30	1.5	0.25
-025	250	11	30	1.5	0.30
-031	314	11	30	2.0	0.51
-040	398	11	30	2.0	0.66
-050	498	11	30	2.0	0.81
-063	628	10	30	2.0	1.02
-080	798	10	25	3.0	1.58
-100	998	10	25	3.0	1.96
-125	1198	10	25	3.0	2.43

PROTECTIVE CAP

BDEZ – PLASTIC PROTECTIVE CAP, PUSHED DIMENSION INSERTION



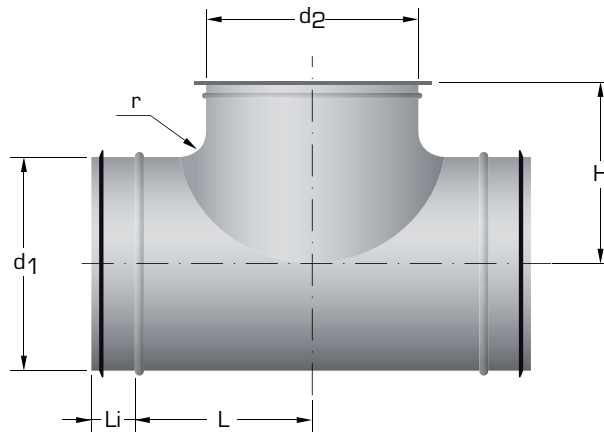
STANDARD SIZES

BDEZ-02-bbb	L mm	Weight, kg
-008	10	0.01
-010	12	0.01
-012	15	0.02
-016	15	0.03
-020	30	0.08
-025	20	0.10
-031	30	0.14
-040	40	0.35
-050	45	0.73



T-PIECE WITH DIFFUSER MOUNTING RING, LOW HEIGHT

XCET –T-PIECE WITH DIFFUSER MOUNTING FRAME, LOW HEIGHT

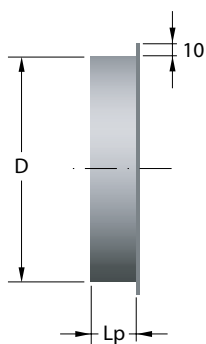


STANDARD SIZES

Product code	d ₁ nom.	d ₂ nom.	H mm	L mm	r mm	Li mm	Weight, kg
XCET-257	010	010	95	90	10	35	0.4

BRANCH

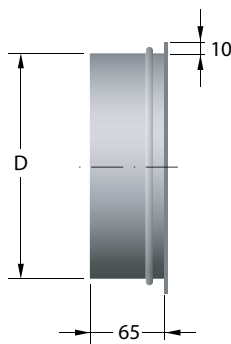
XCEA – BRANCH, INSERTION, WITH NAIL FLANGE



STANDARD SIZES

Product code	D nom.	Li mm	Weight, kg
XCEA-270	010	35	0.09
XCEA-296	012	35	0.11
XCEA-297	016	35	0.15

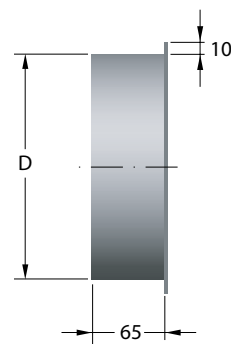
XCEA – BRANCH, INSERTION, WITH DIFFUSER MOUNTING FRAME, INTENDED FOR FACTORY CASTING "FILIGRANBRANCH"



STANDARD SIZES

Product code	D nom.	Weight, kg
XCEA-313	010	0.19
XCEA-312	012	0.21

XCEA – BRANCH, INSERTION, WITH NAIL FLANGE, INTENDED FOR FACTORY CASTING "FILIGRANBRANCH"



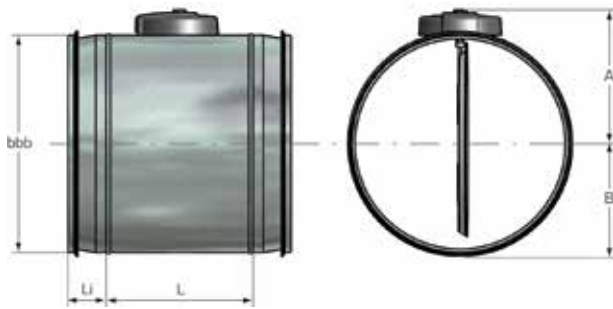
STANDARD SIZES

Product code	D nom.	Weight, kg
XCEA-314	010	0.19
XCEA-315	012	0.24
XCEA-316	016	0.30



ADJUSTING DAMPER

BDEP-1



Sizes 008 - 035

STANDARD SIZES

BDEP-1-bbb-c	L mm	A mm	B mm	Li mm	Weight, kg
-008	135	80	40	35	0.30
-010	135	90	50	35	0.34
-012	135	100	65	35	0.42
-016	135	120	100	35	0.46
-020	135	140	120	35	0.82
-025	125	165	145	35	1.2
-031	125	195	175	35	1.5
-040	160	270	220	60	2.7
-050	160	320	270	60	3.9
-063	160	385	335	60	5.2

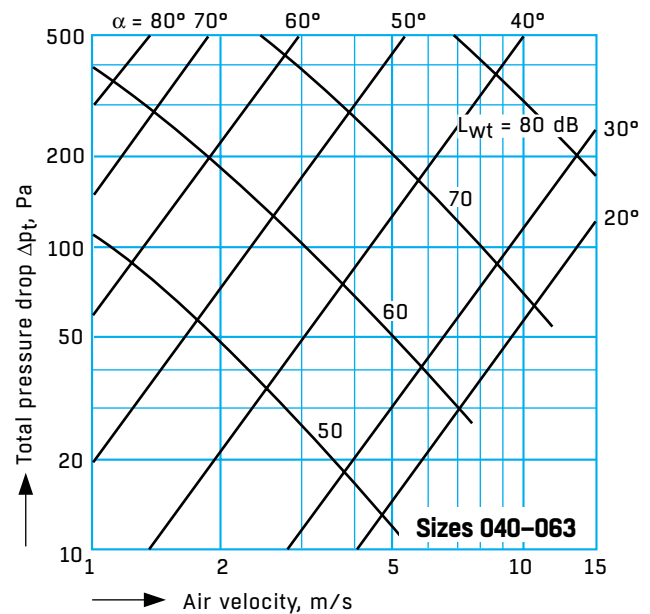
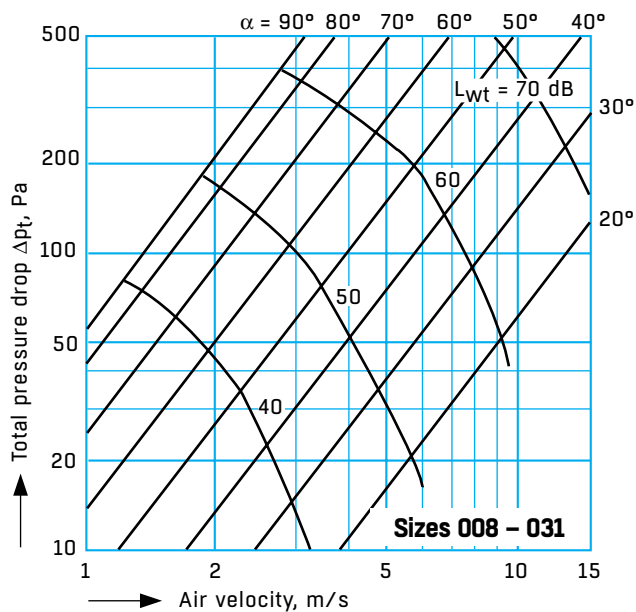


Sizes 040 - 063

OTHER SIZES

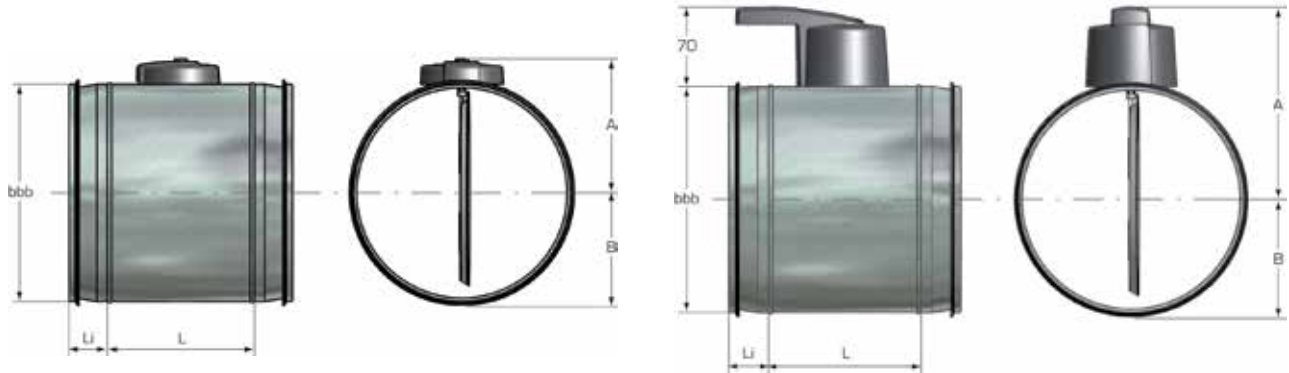
BDEP-1-bbb-c	L mm	A mm	B mm	Li mm	Weight, kg
-014	145	95	70	35	0.43
-015	135	100	75	35	0.44
-018	135	115	110	35	0.46
-022	135	135	130	35	0.90
-028	125	165	160	35	1.4
-030	125	175	170	35	1.5
-035	160	245	195	60	2.5
-045	160	295	245	60	3.6
-056	160	350	300	60	4.7

PRESSURE DROP CHARTS BDEP-1, -10, -13, -18 AND -19



ADJUSTING AND SHUT OFF DAMPER

BDEP-4



Sizes 008 - 035

STANDARD SIZES

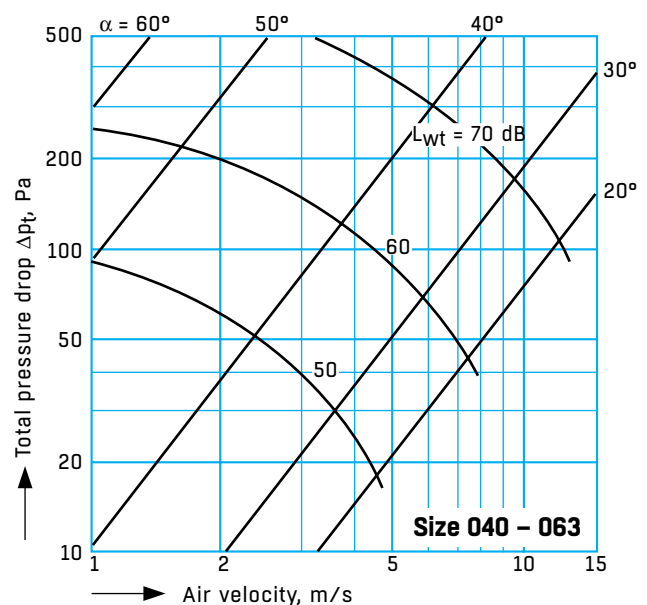
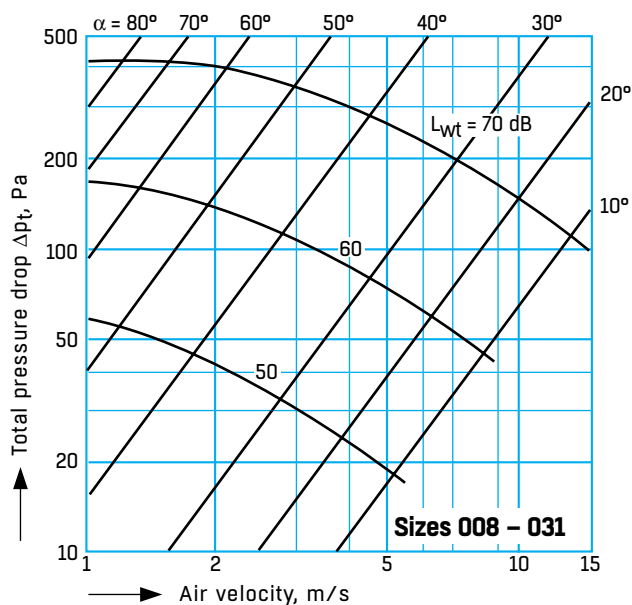
BDEP-4-bbb-c	L mm	A mm	B mm	Li mm	Weight, kg
-008	135	80	40	35	0.30
-010	135	90	50	35	0.34
-012	135	100	65	35	0.42
-016	135	120	100	35	0.46
-020	135	140	120	35	0.82
-025	125	165	145	35	1.2
-031	125	195	175	35	1.5
-040	160	270	220	60	2.7
-050	160	320	270	60	3.9
-063	160	385	335	60	5.2

Sizes 040 - 063

OTHER SIZES

BDEP-4-bbb-c	L mm	A mm	B mm	Li mm	Weight, kg
-014	145	95	70	35	0.43
-015	135	100	75	35	0.44
-018	135	115	110	35	0.46
-022	135	135	130	35	0.90
-028	125	165	160	35	1.4
-030	125	175	170	35	1.5
-035	160	245	195	60	2.5
-045	160	295	245	60	3.6
-056	160	350	300	60	4.7

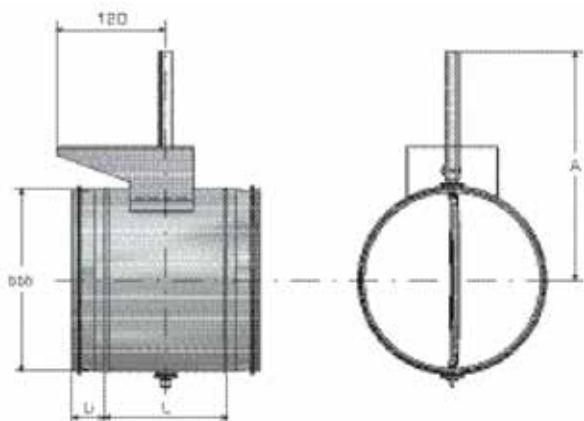
PRESSURE DROP CHARTS BDEP-4, -40, -43, -46, -48 AND -49





ADJUSTING DAMPER WITH MOTOR CONTROL

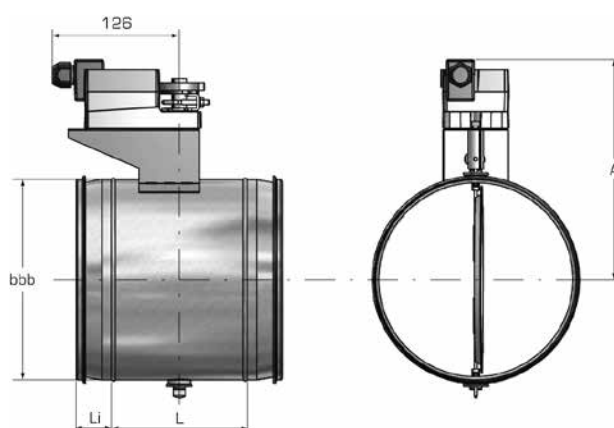
BDEP-10 AND BDEP-40 DAMPER WITH MOTOR BRACKET EXCL. MOTOR



STANDARD SIZES

BDEP-aa-bbb (aa = 10 / 40)	L mm	A mm	Li mm	Weight, kg excl. motor
-008	135	205	35	0.60
-010	135	215	35	0.65
-012	135	225	35	0.75
-016	135	245	35	1.0
-020	135	265	35	1.2
-025	125	290	35	1.6
-031	125	325	35	2.0
-040	160	365	60	3.7
-050	160	415	60	5.0
-063	160	480	60	6.0

BDEP-13 AND BDEP-43 BELIMO MOTOR TYPE LM... A ON-OFF

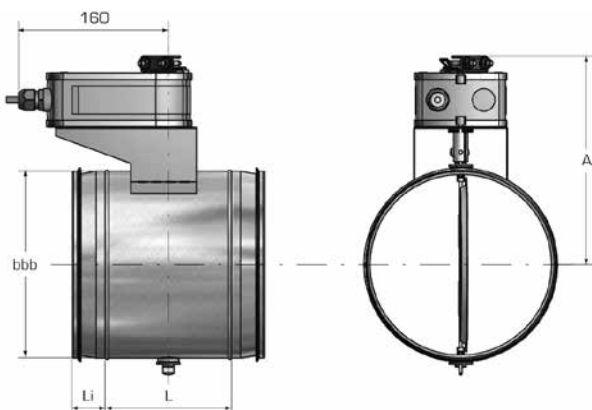


STANDARD SIZES

BDEP-aa-bbb (aa = 13 / 43)	L mm	A mm	Li mm	Weight, kg
-008	135	160	35	1.10
-010	135	170	35	1.20
-012	135	180	35	1.30
-016	135	200	35	1.45
-020	135	220	35	2.0
-025	125	245	35	2.4
-031	125	280	35	2.8

ADJUSTING DAMPER WITH MOTOR CONTROL

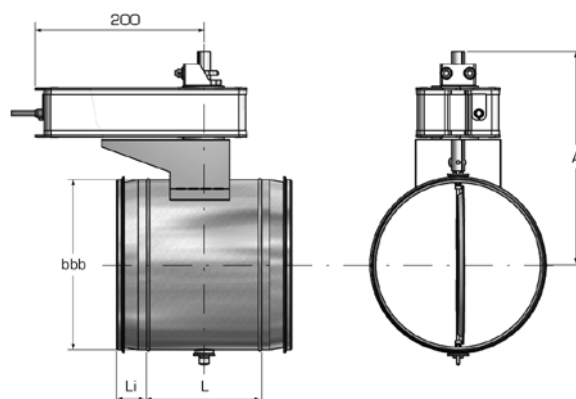
BDEP-18 AND BDEP-48 BELIMO MOTOR TYPE LF WITH SPRING RETURN



STANDARD SIZES

BDEP-aa-bbb (aa = 18 / 48)	L mm	A mm	Li mm	Weight kg
-008	135	185	35	2,1
-010	135	195	35	2,2
-012	135	210	35	2,3
-016	135	225	35	2,6
-020	135	245	35	2,8
-025	125	270	35	3,2
-031	125	305	35	3,6

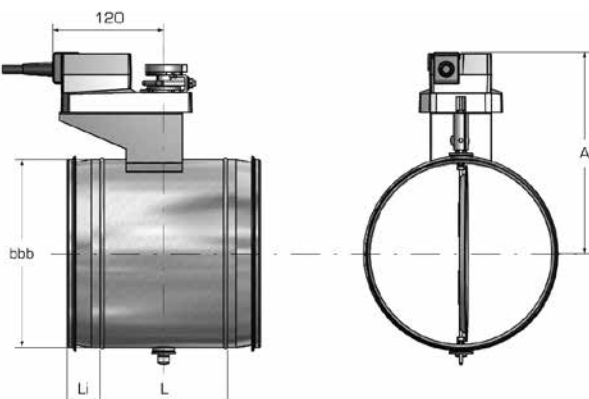
BDEP-46 BELIMO MOTOR TYPE SF WITH SPRING RETURN



STANDARD SIZES

BDEP-aa-bbb (aa = 46)	L mm	A mm	Li mm	Weight kg
-040	160	365	60	7,0
-050	160	415	60	8,3
-063	160	480	60	9,3

BDEP-19 AND BDEP-49 BELIMO MOTOR TYPE SM... A ON-OFF



STANDARD SIZES

BDEP-aa-bbb (aa = 19 / 49)	L mm	A mm	Li mm	Weight kg
-040	160	315	60	4,1
-050	160	365	60	5,5
-063	160	430	60	6,5



GENERAL

The VELODUCT® system is a complete system of round ducting for which type approval for tightness class D according to EN 12237 has been granted.

All duct fittings are equipped with a sealing ring made of EPDM rubber.

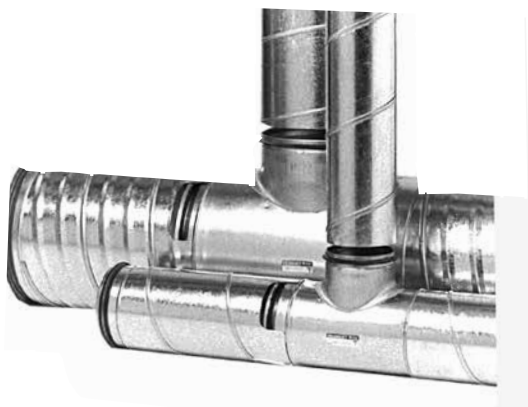
VELODUCT®

- permits rapid, easy and clean installation
- can be installed in any climate
- easy to balance
- reduces operating cost
- made of fireproof sheet steel

TYPE APPROVALS AND CERTIFICATES

- Tightness and strength type approvals
 - SP Sveriges tekniska forskningsinstitut, number 1718/88, tightness class D¹⁾
 - VTT Technical Research Centre of Finland, number VTT-RTH-00007-10, tightness class C¹⁾
- Finnish M1 cleanliness Classification by The Building Information Foundation RTS¹⁾
- CE marked (smoke control duct system) according to EN 12101-7:2011, EC Certificate of Conformity 0761-CPD-0277¹⁾

¹⁾ Certificates available at www.flaktwoods.com.



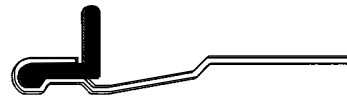
Tube and fittings are marked with a type approval label.

THE SEAL

The sealing principle is illustrated in the drawings below. These show an insertion fitting and a fit-on (tube) fitting. The seal is made of solid EPDM rubber and is fixed to the end of the fitting.

The seal is highly resistant to moisture, airborne pollutants and solar radiation and can withstand continuous exposure to temperatures between -30°C and +80°C with an unimpaired function.

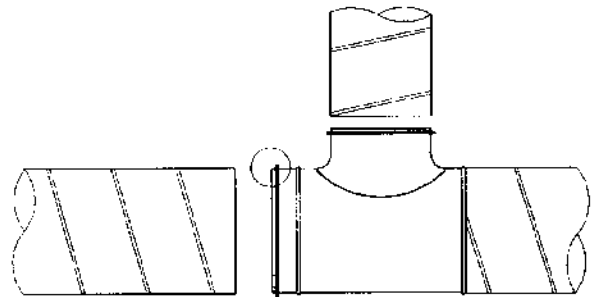
DESIGN



Veloduct sealing

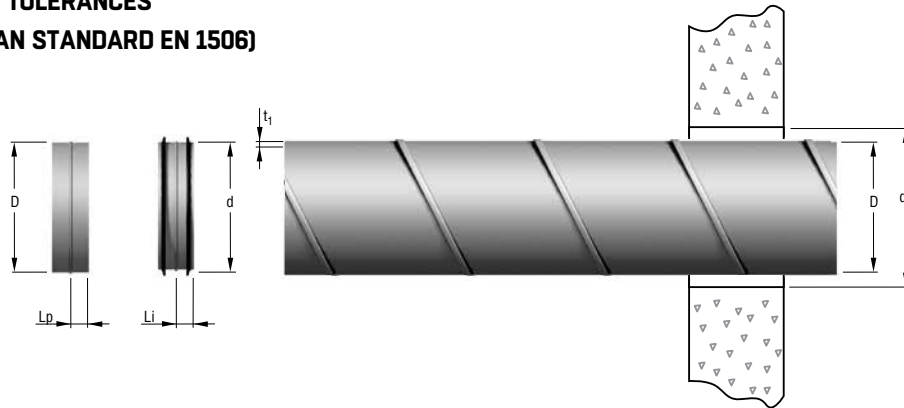


Veloduct Twin sealing



GENERAL

DIMENSIONS AND TOLERANCES (AS PER EUROPEAN STANDARD EN 1506)



Size bbb	D mm	d mm	d ₃ mm	A m ²	L _i , L _p mm	t ₁ tube BDEK	t ₁ tube, EKOD
008	80.0 - 80.5	78.8-79.3	100	0.005	35	0.4	0.5
010	100.0-100.5	98.8- 99.3	125	0.008			
012	125.0-125.5	123.8-124.3	160	0.012			
014	140.0-140.6	138.7-139.3	160	0.015			
015	150.0-150.6	148.7-149.3	180	0.018			
016	160.0-160.6	158.7-159.3	200	0.020			
018	180.0 - 180.7	178.6-179.3	224	0.025			
020	200.0-200.7	198.6-199.3	250	0.031			
022	224.0-224.8	222.5-223.3	280	0.039			
025	250.0-250.8	248.5-249.3	315	0.049			
028	280.0-280.9	278.4-279.3	355	0.062	0.5		
030	300.0 - 300.9	298.4-299.3	355	0.071			
031	315.0-315.9	313.4-314.3	400	0.078			
035	355.0 - 356.0	353.3-354.3	450	0.099			
040	400.0-401.0	398.3-399.3	500	0.126			
045	450.0-451.1	448.2-449.3	560	0.159	60	0.7	
050	500.0-501.1	498.2-499.3	630	0.196			
056	560.0-561.2	558.1-559.3	710	0.246			
063	630.0-631.2	628.1-629.3	800	0.312	0.7		
071	710.0 - 711.6	708.9-709.3	900	0.396			
080	800.0-801.6	798.0-799.3	1000	0.502	95	0.9	
090	900.0-902.0	897.0-899.3	1120	0.636			
100	1000.0-1002.0	997.9-999.3	1200	0.785			
112	1120.0 - 1122.5	1117.8-1119.3	1300	0.984			
125	1250.0- 1252.5	1247.8-1249.3	1400	1.227			

- D Inner diameter, tubes and fit-on fittings
- d Outer diameter, insertion fittings
- d₃ Recommended diameter of opening
- A Cross-section area of duct
- L_i Insertion length
- L_p Fit-on length
- t₁ Sheet metal thickness, tubes

MATERIALS AND FINISH

Pipes and pipe components are made of hot-dip galvanized sheet steel in accordance with EN 10346 with a zinc thickness of 275 g/m² (double sided). This sheet is suitable for use in an environment with corrosivity class C2 in accordance with ISO 9223 and/or environmental class M2 in accordance with VVS AMA 98.

TOLERANCES

Sheet metal thickness according to SS-EN 10143
Weight ± 10%
Length. The following tolerances are applicable to the basic dimensions specified.

Basic dimensions, mm	≤ 15	(15) - 100	> 100
Tolerance, mm	0	0	0
	-2	-5	-10

The tolerance of the bends is ±2°.



PRESSURE DROP CHARTS

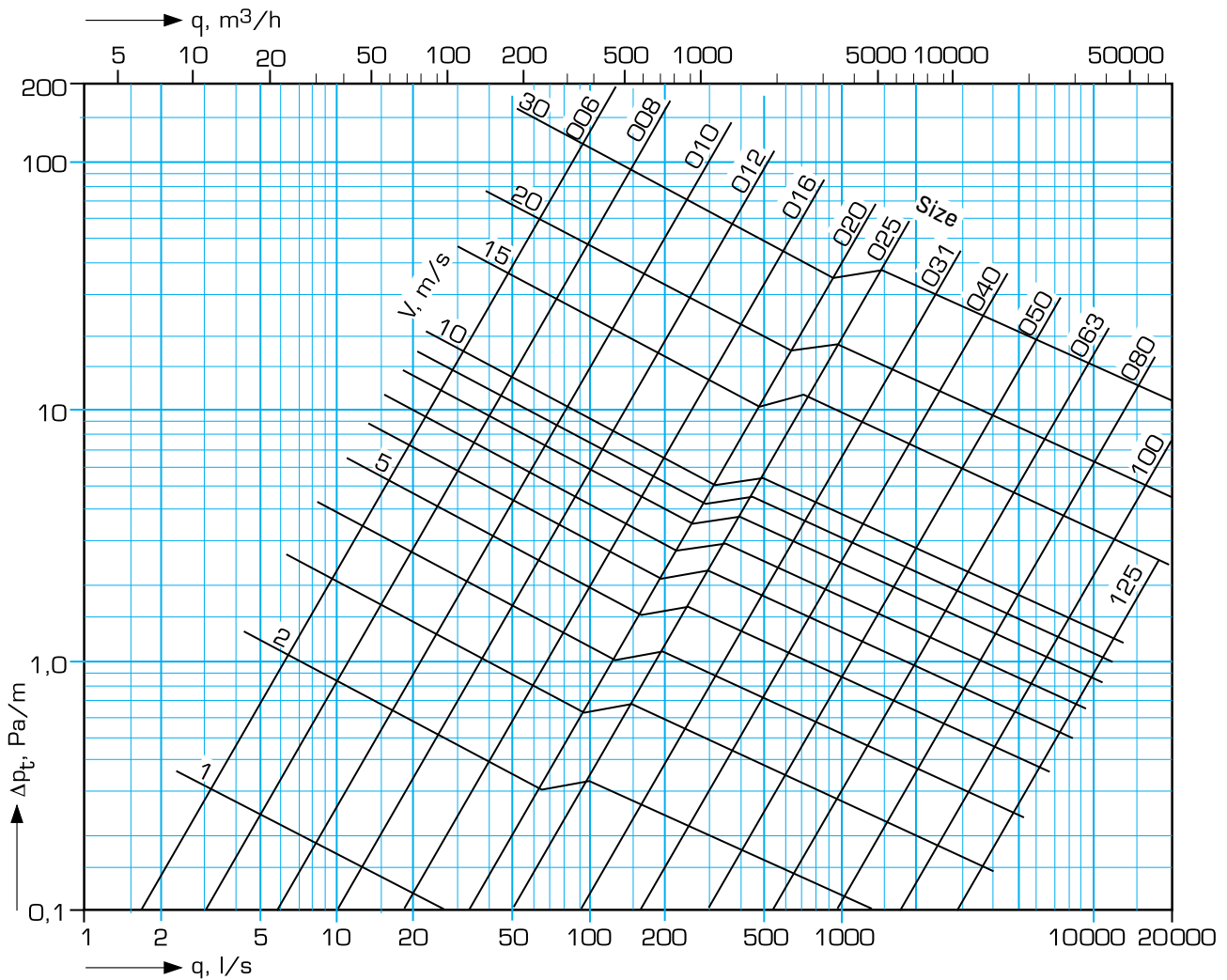
Basic calculation data for ducts and duct components having cross-section to Eurovent 2/3 and design to Eurovent 2/4. The rated nominal air flow resistance (p_{nom}) should be corrected with regard to leakage and fan connection.

$$\Sigma \Delta p_{tot} = \Delta p_{nom} + \Delta p_{leakage} + \Delta p_{fan\ conn.}$$

The air flow resistances are charted directly in Pa.

- The data in the charts refer to total pressure drop and are therefore direct measurements of the energy loss across the air flow resistances. ($\rho = 1 \text{ kg/m}^3$)
- The influence of the choice of velocity on the pressure drop can be judged directly.
- The difference in pressure drop between the first and the nth branch can be read directly.
- The effect of a transition in 1, 2 or 3 size steps can be read directly.

DUCTS



PRESSURE DROP CHARTS

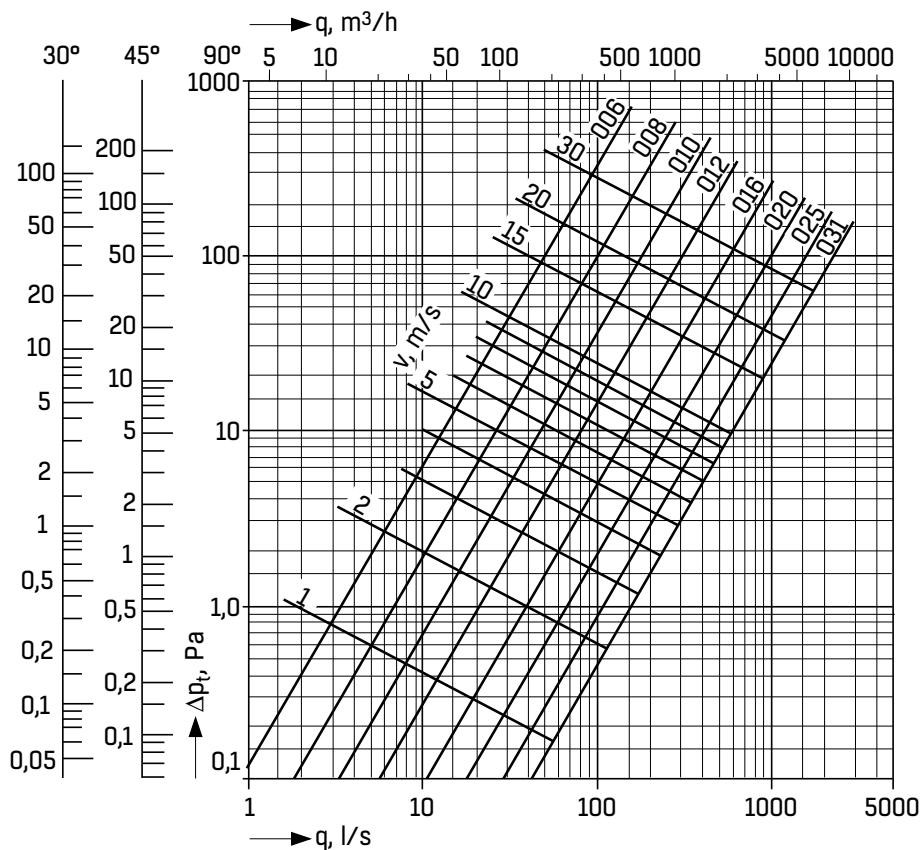
BDEB BEND, PRESSED

The pressure drop in the chart refer to 90 ° bend.

For 45 °-, respectively. 30 ° bend the following applies:

$$\Delta p_{t45^\circ} = 0.5 * \Delta p_t$$

$$\Delta p_{t30^\circ} = 0.33 * \Delta p_t$$



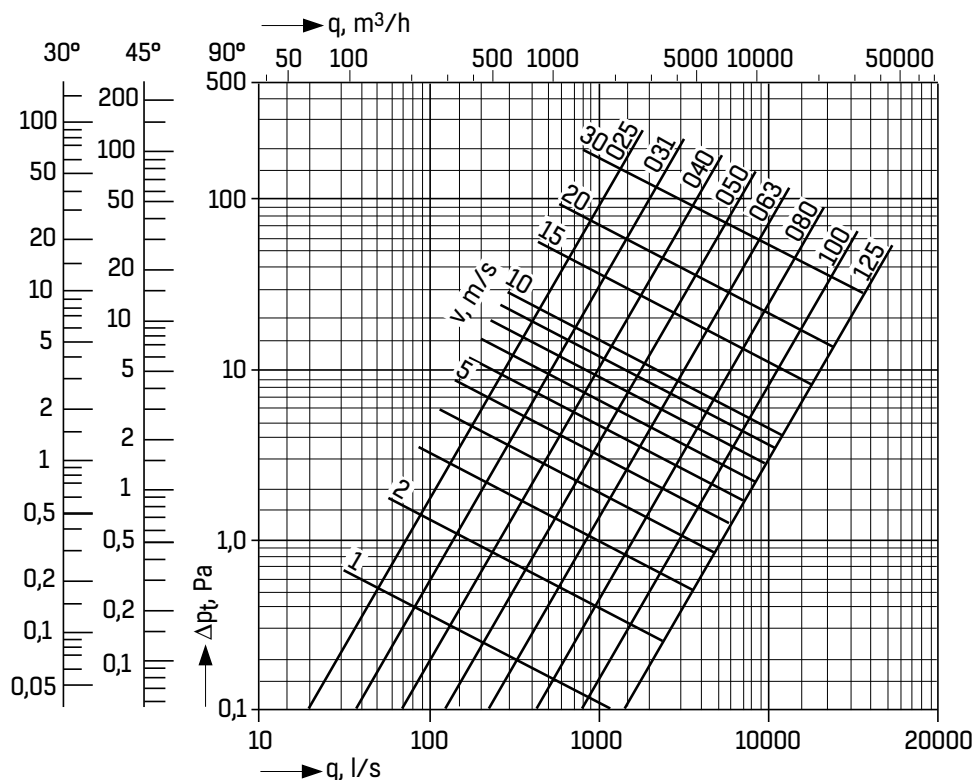
BDEB BEND, FABRICATED

The pressure drop in the chart refer to 90 ° bend.

For 45 °-, respectively. 30 ° bend the following applies:

$$\Delta p_{t45^\circ} = 0.5 * \Delta p_t$$

$$\Delta p_{t30^\circ} = 0.33 * \Delta p_t$$



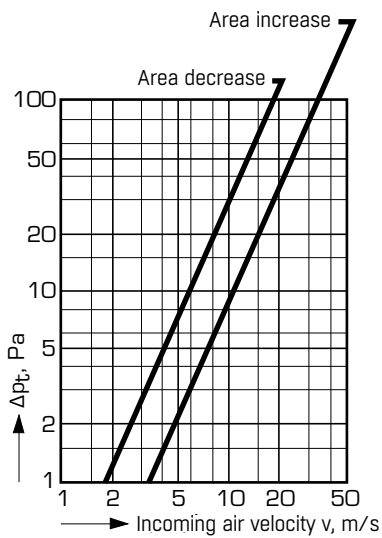


PRESSURE DROP CHARTS

REDUCER, ALL TYPES

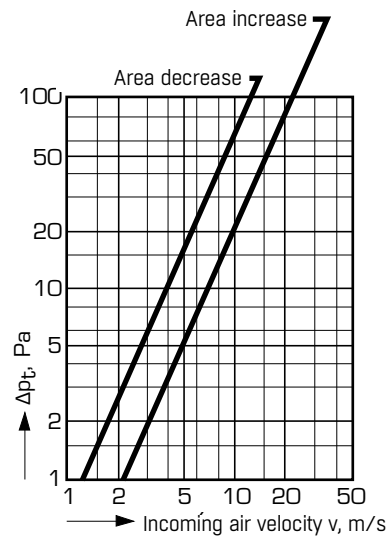
1 size step*)

$D1/D2 = 1.25$



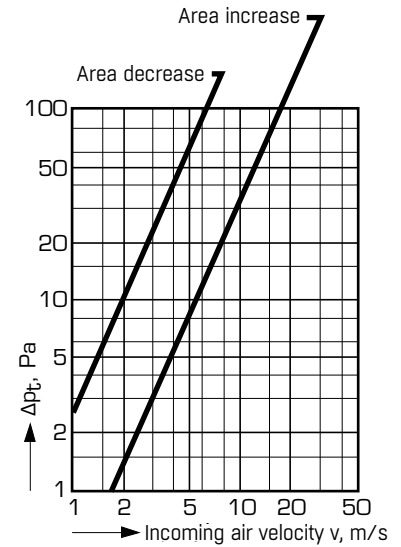
2 size step*)

$D1/D2 = 1.6$



3 size step*)

$D1/D2 = 2.0$



*) Example: Transition from Ø20 to Ø16 = 1 size step.

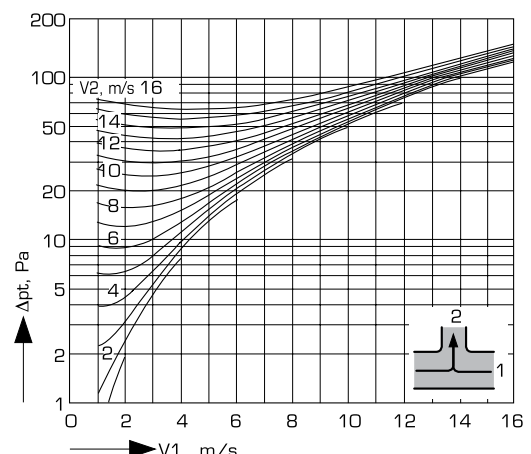
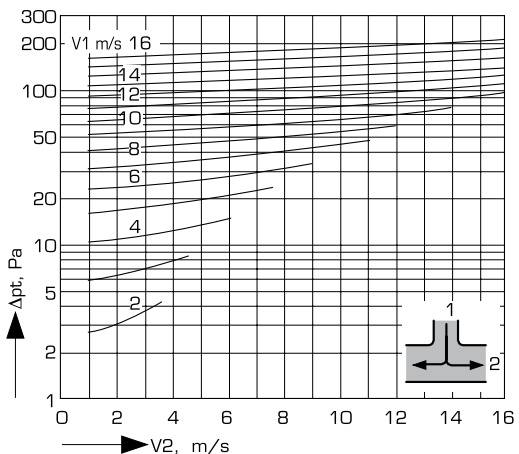
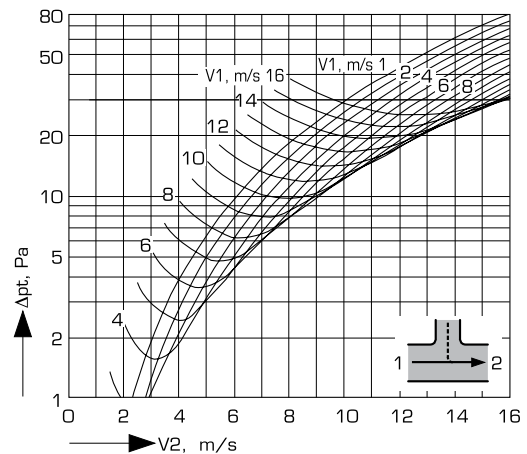
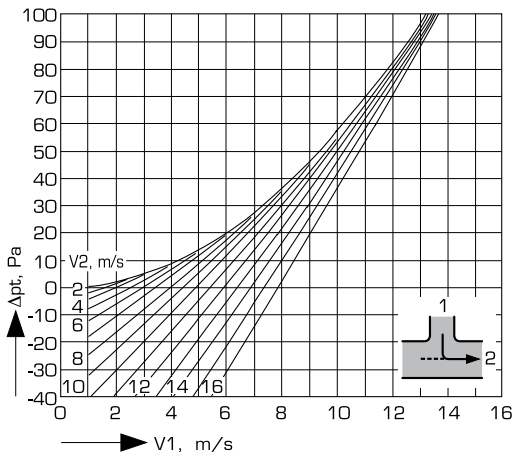
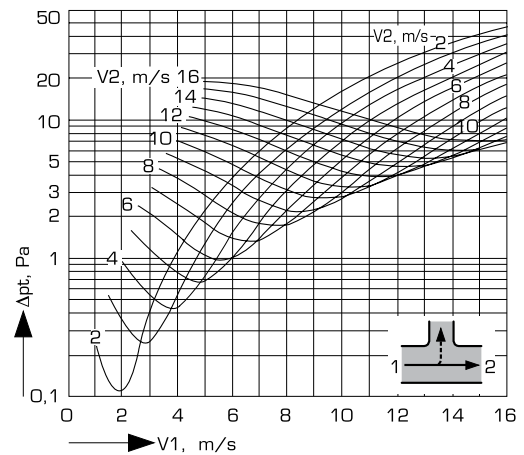
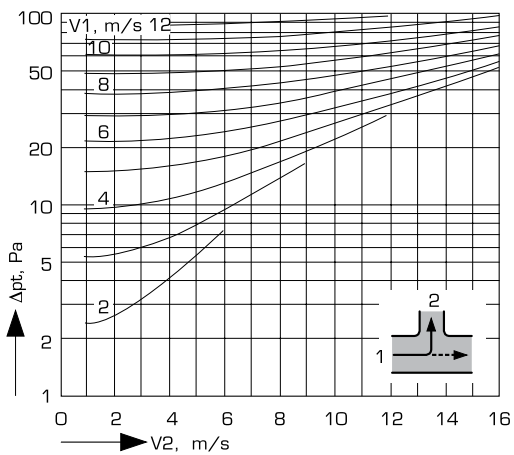
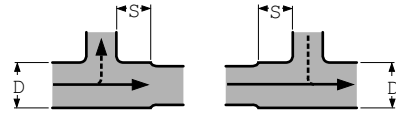
Ø20 to Ø12 = 2

Ø20 to Ø10 = 3

PRESSURE DROP CHARTS

BRANCHES, T-PIECES AND CROSSES

The pressure drops included any reductions in cross section in accordance with the figures, provided that $S < 3 \cdot D$.





INSTALLATION INSTRUCTIONS

INSTALLATION OF ROUND TUBES AND FITTINGS (TO TIGHTNESS CLASS D)



Fig. 1

THE TYPE APPROVAL

The Veloduct ducting system has been granted type approval by SITAC (the Swedish Institute for Technical Approval in Construction) in accordance with Type Approval Certificate 1718/88. The type approval signifies that a Veloduct ducting system, installed in accordance with this instruction, complies with the provisions of the Swedish Law (1994:847) on technical specification requirements for construction work, etc. In order for the type approval to be valid, it is required that all details be marked as shown in Fig. 1 or in a similar manner.

Components without this seal of approval may only be employed to a limited extent and only if they are essential for connection to items of equipment or for special matching of the ducting to the building structure.

The supervisor must check any components which do not bear the seal of approval with regard to the sealing employed and the installation. the sealing employed and the installation.

INSTALLATION INSTRUCTIONS

INSTALLATION OF ROUND TUBES AND FITTINGS (TO TIGHTNESS CLASS D)

PREPARATORY WORK PRIOR TO INSTALLATION



WARNING!

Ventilation ducts made of thin sheet metal sometimes have razor-sharp edges.

WEAR PROTECTIVE GLOVES!

Be especially careful with the following:

- cut edges of spiral ducts
- straight (non-folded) sheet metal edges of assembly parts.

1. Select a suitable section of ducting and check that the duct can be run in accordance with the drawing before collecting the necessary components from the storage area.

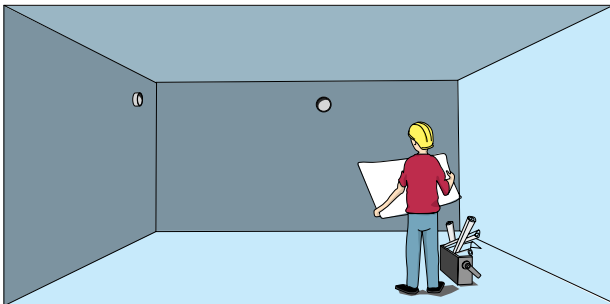


Fig. 2

2. Collect the necessary fittings and tubes. Check that they aren't damaged in any way that would cause air leakage in the finished ducting system, such as holes left after rivets/screws have been removed from reused parts. If the storage area is well arranged and has good weather protection, the components will be easier to find, and the risk of damage or wastage will be reduced. A sign such as that shown in Fig. 3 will facilitate the delivery of materials.

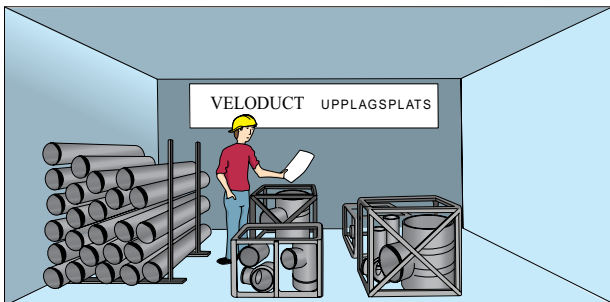


Fig. 3

3. Cut the tubes at right angles to the measured lengths (make allowance for the fitting lengths of the components), and deburr the tube ends thoroughly, using a file or a deburring tool.

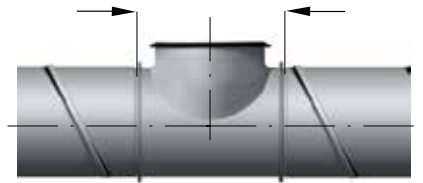


Fig. 4

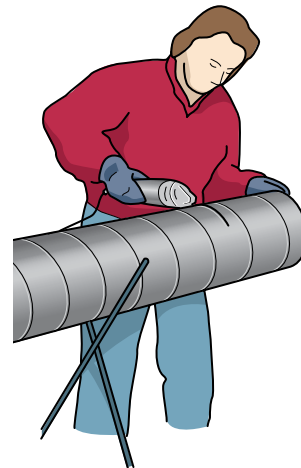


Fig. 5

INSTALLATION

4. Assemble suitable sections on the floor. To facilitate the fitting of one part into another, turn one of them while pushing it in.

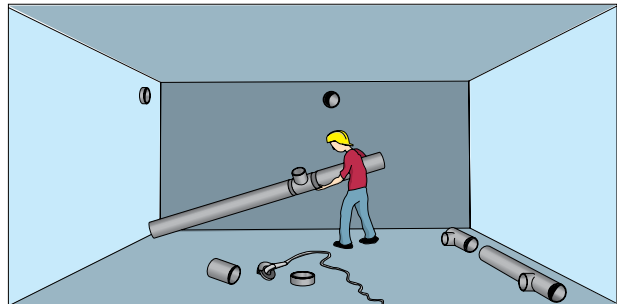


Fig. 6



INSTALLATION INSTRUCTIONS

INSTALLATION OF ROUND TUBES AND FITTINGS (TO TIGHTNESS CLASS D)

SIZE 008–063 COMPONENTS

a) Minimum overlap = to edge of bead

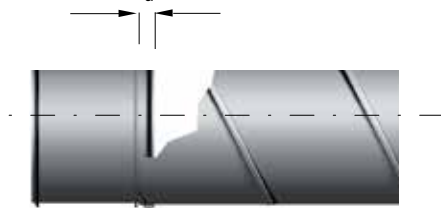


Fig. 7

SIZE 035–125 COMPONENTS

b) Minimum overlap = until the dimples centre to tube end

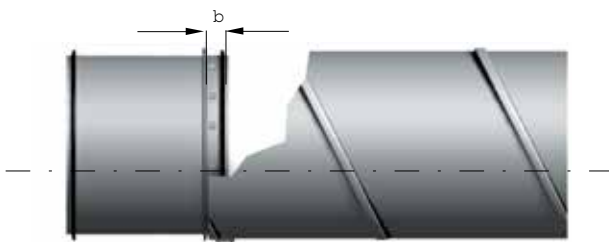


Fig. 8

5. Fit together the various components as shown in Fig. 7 and 8.
6. Lock the joints. All joints must be secured by means of self-tapping screws or pop rivets in the ducts. The purchaser decides which fasteners can be utilised for ease of cleaning. The number of self-tapping screws or pop rivets necessary is specified in the table above. Locate the screws at such a distance from the tube end that the rubber seal will not be damaged. Space the screws equally around the periphery, and arrange them in such a manner that the gap between the tube and the fitting will be as small as possible. The ductwork can be locked with the tubes and fittings resting on the floor, or this can be done after the ducting has been suspended. The latter procedure facilitates adjustment of the overall length and the positions of various fittings.

Duct size	Number of screws/pop rivets
008–016	2
020–031	3
040–063	4
080–125	8

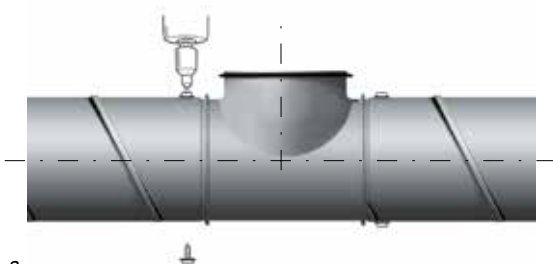


Fig. 9

7. Fit the hangers (e.g. XCEZ-111 Veloduct hanger straps). The distance L between hangers should not exceed 3.0 m for uninsulated ducts and 2.0 m for ducts with fire insulation.

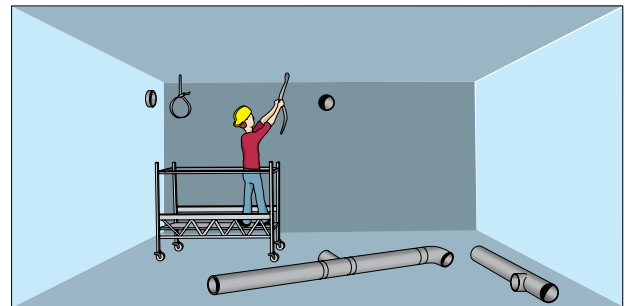


Fig. 10

8. Suspend the duct sections from the hangers.

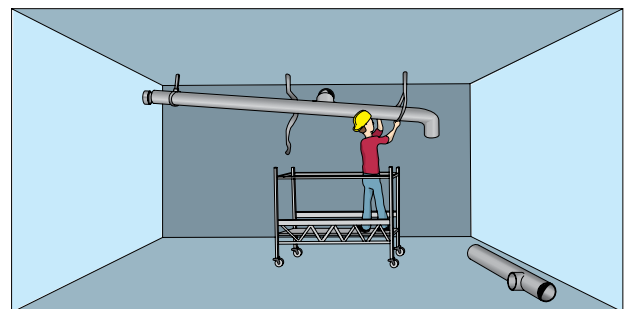


Fig. 11

9. Insertion is facilitated if the entry end is located so that the seal will not be nipped.



Fig. 12

10. Readjustment of Veloduct joints: If it becomes necessary to turn one or both duct components at their joint, and the rivets or screws securing it are removed, the rivet/screw holes left in the duct component will have to be sealed before the joint is relocked. Keep in mind that an open hole in the insertion end of the duct component will leak even though it is concealed by a tube or connection piece.

INSTALLATION INSTRUCTIONS

INSTALLATION OF ROUND TUBES AND FITTINGS (TO TIGHTNESS CLASS D)

11. Removal of fittings or tubes: Turn the component while withdrawing since the seal will otherwise fold and render dismantling difficult.

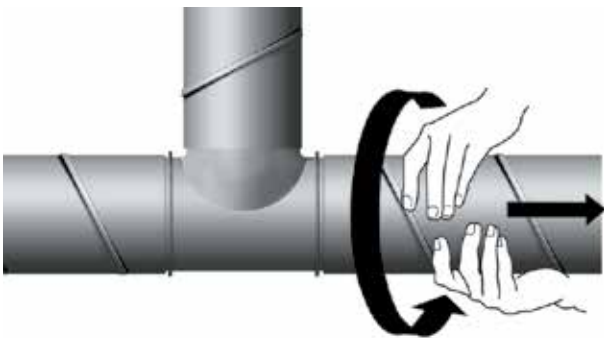


Fig. 13

INSTALLATION OF PRODUCTS WITHOUT SEAL OF APPROVAL

12. Products without seal of approval incorporated into the ducting and fitted in accordance with the provisions of the seal of approval must be sealed so that they will definitely be in conformance with tightness class D. The seal at joints, etc. must be checked visually before fitting into the ducting. A test report must be produced for products with concealed joint seals. Components not provided with VELODUCT seals must be sealed in accordance with relevant parts of the example below. The sealing material should be non-ageing and permanently elastic.

A) Mounting frames and branches for duct fittings and equipment branches (Fig. 14).

Deburr the tube end (1).

Apply an abundant coating of sealing agent to the end of the branch so that a bead of sealing agent will be formed (2).

Push the branch into the tube.

Secure the branch to the tube by means of self-tapping screws/blind rivets.

If sealing compound cannot be applied to the outside of the branch (e.g. in the case of a mounting frame), apply additional sealing compound at the inner end of the branch (3).

If the branch is accessible from the outside (item of equipment), spread out the compound which has been squeezed out (4). If necessary, apply additional compound until a uniform, sealing bead has been

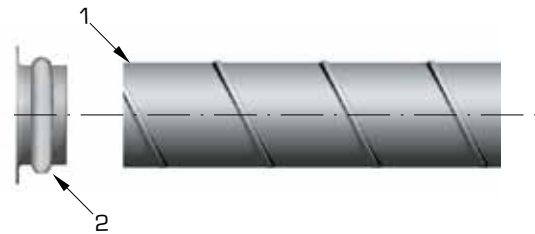


Fig. 14 a

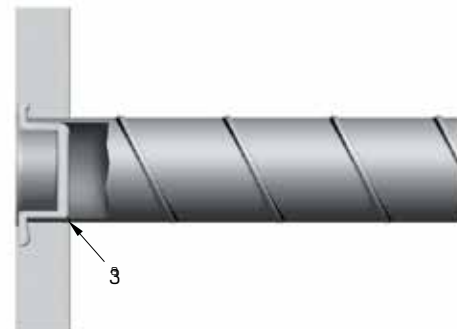


Fig. 14 b

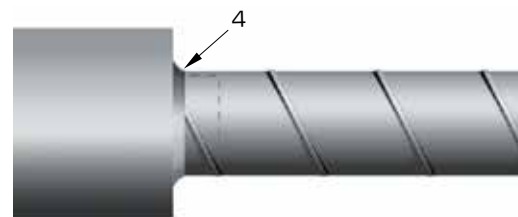


Fig. 14 c

INSTALLATION INSTRUCTIONS

INSTALLATION OF ROUND TUBES AND FITTINGS (TO TIGHTNESS CLASS D)

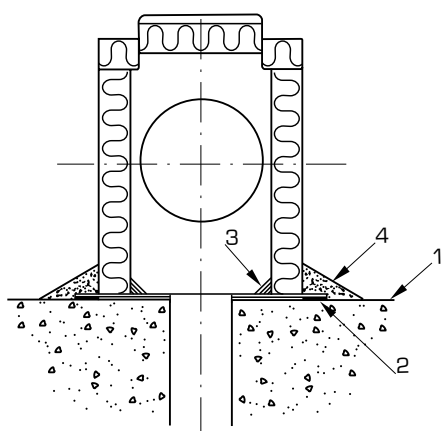
B) Securing of products to the building structure (Fig. 15).

Check that the joint surface (1) is smooth.

Apply a sealing strip to the joint surface of the product (2).

Secure the product to the building structure. Then seal the inside of the joint (3) or, if preferable, on the outside.

Refinish with concrete or similar material, if necessary (4)

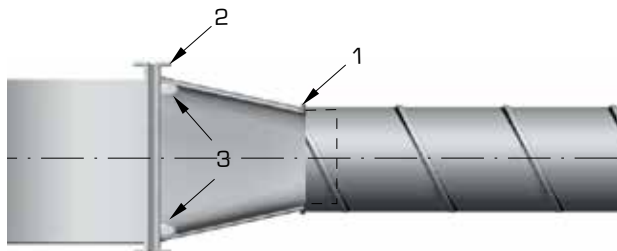


C) Sealing of rectangular joint against items of equipment (transition from a circular duct to an item of equipment with a rectangular connection) as shown in Fig. 16.

If possible, the circular connection (1) of the transition piece should be made by means of a VELODUCT joint.

The rectangular joint (2) should be of the factory-made type and should be fitted in accordance with the manufacturer's instructions for tightness class C.

A flanged joint (bolted joint) must be fitted with a non-ageing sealing strip and external corners under the flange should be carefully sealed with sealing compound (3).



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