



**DIRECT  
VENT**

Product Catalogue

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## 90° PRESSED BEND

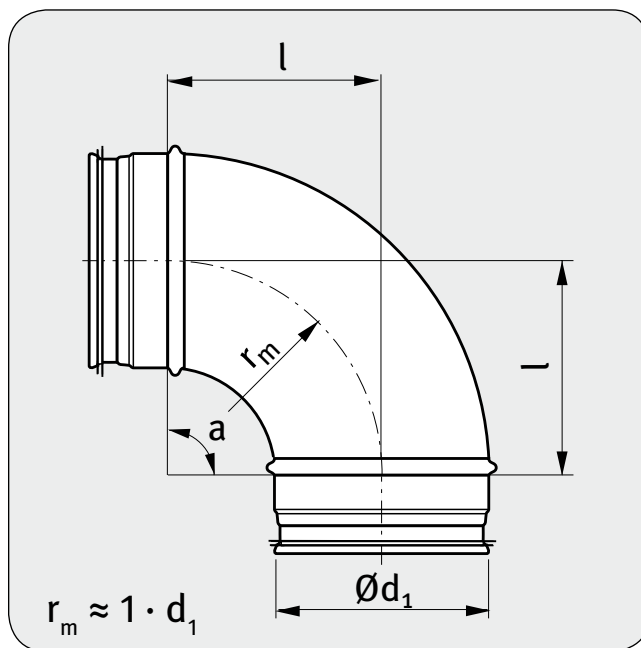
**B / BL 90**



Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (BL)



### PRODUCT CHARACTERISTICS

- pressed
- stitch welded
- gasket (BL) is positioned by returned edges

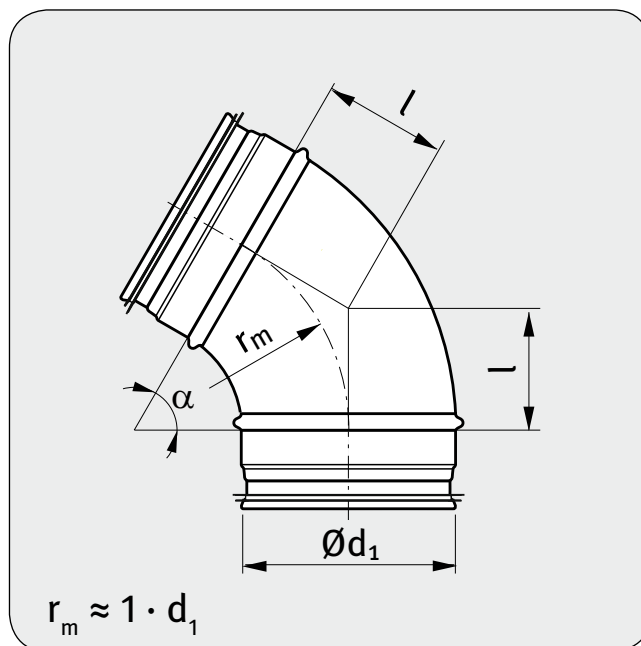
Ød <sub>1</sub> nom	l mm	weight kg	box quantity
80	105	0,26	60
100	100	0,31	250
125	125	0,48	135
140	135	0,66	22
150	150	0,66	80
160	160	0,74	65
180	180	1,02	45
200	200	1,30	32
224	225	1,55	24
250	250	2,06	18

**60° PRESSED BEND****B / BL 60**

Also available without gasket

**MATERIAL**

- galvanized steel
- EPDM rubber gasket (BL)

**PRODUCT CHARACTERISTICS**

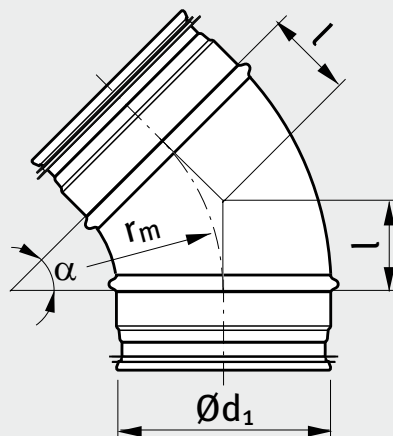
- pressed
- stitch welded
- gasket (BL) is positioned by returned edges

$\varnothing d_1$ nom	l mm	weight kg	box quantity
80	58	0,32	75
100	58	0,33	40
125	72	0,33	22
140	78	0,51	25
150	87	0,50	15
160	92	0,56	20
180	104	0,79	
200	115	0,95	12
224	130	1,10	8
250	144	1,30	24



## 45° PRESSED BEND

**B / BL 45**



$$r_m \approx 1 \cdot d_1$$

Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (BL)

### PRODUCT CHARACTERISTICS

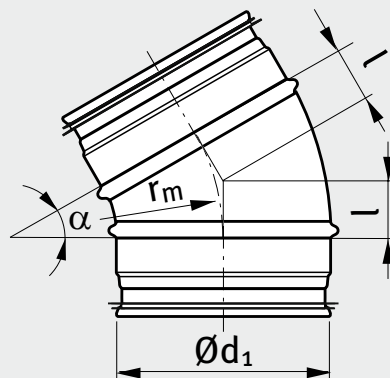
- pressed
- stitch welded
- gasket (BL) is positioned by returned edges

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
80	41	0,17	50
100	41	0,21	60
125	52	0,29	225
140	56	0,43	25
150	62	0,42	138
160	66	0,48	115
180	76	0,65	85
200	83	0,80	60
224	93	0,95	42
250	103	1,22	30



## 30° PRESSED BEND

**B / BL 30**



$$r_m \approx 1 \cdot d_1$$

Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (BL)

### PRODUCT CHARACTERISTICS

- pressed
- stitch welded
- gasket (BL) is positioned by returned edges

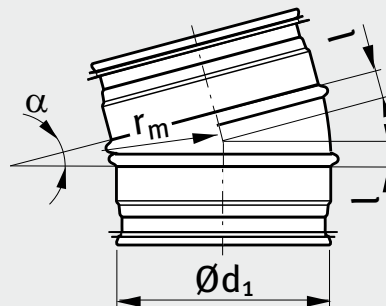
Ød <sub>1</sub> nom	l mm	weight kg	box quantity
80	27	0,15	55
100	27	0,18	75
125	33	0,20	40
140	36	0,36	30
150	40	0,35	25
160	43	0,32	20
180	48	0,51	16
200	54	0,62	18
224	60	0,83	12
250	67	1,05	36





## 15° PRESSED BEND

**B / BL 15**



$$r_m \approx 1 \cdot d_1$$

Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (BL)

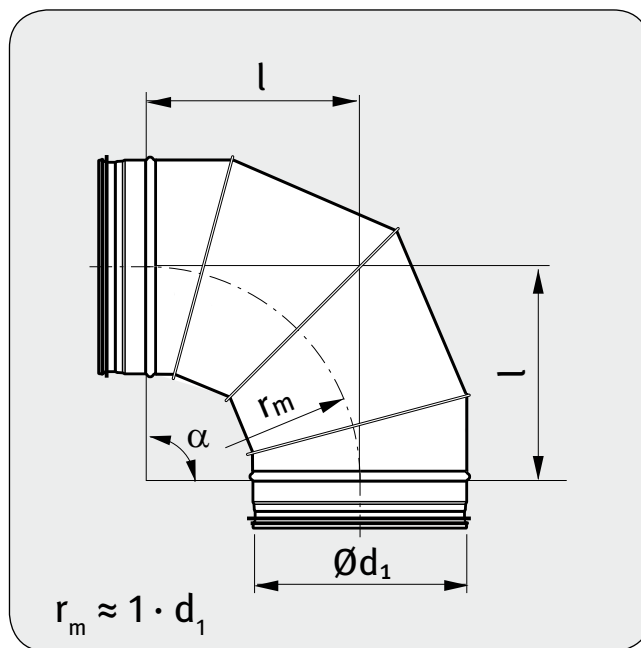
### PRODUCT CHARACTERISTICS

- pressed
- stitch welded
- gasket (BL) is positioned by returned edges

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
80	13	0,11	70
100	13	0,15	50
125	16	0,24	28
140	18	0,29	48
150	20	0,27	16
160	21	0,33	15
180	24	0,37	25
200	26	0,47	16
224	30	0,56	20

**90° SEGMENTED BEND****BF / BFL 90**

Also available without gasket

**MATERIAL**

- galvanized steel
- EPDM rubber gasket (BFL)

**PRODUCT CHARACTERISTICS**

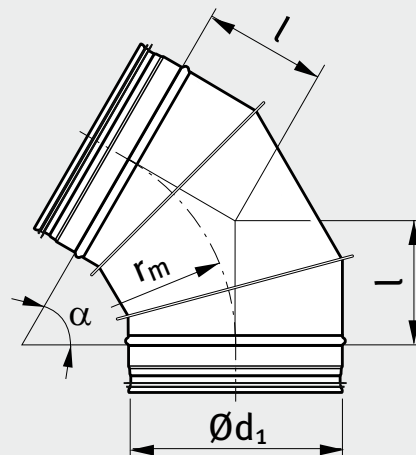
- segments connected with lock
- stitch welded
- gasket (BFL) is positioned by returned edges

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
250	250	2,20	18
280	280	2,50	12
300	300	2,70	8
315	315	3,00	8
355	355	3,75	5
400	400	5,64	16
450	450	7,00	
500	500	8,20	
560	560	10,10	
600	600	11,70	
630	630	12,90	
710	710	19,80	
800	800	26,00	
900	900	33,60	
1000	1000	42,00	
1120	1120	52,60	
1250	1250	64,00	



## 60° SEGMENTED BEND

**BF / BFL 60**



$$r_m \approx 1 \cdot d_1$$

Also available without gasket

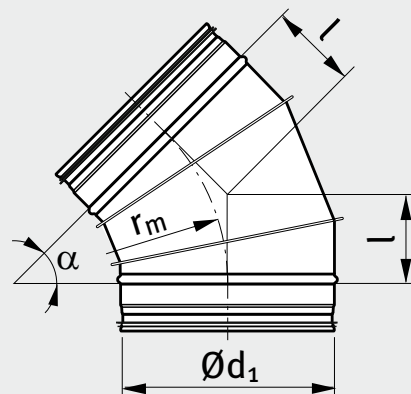
### MATERIAL

- galvanized steel
- EPDM rubber gasket (BFL)

### PRODUCT CHARACTERISTICS

- segments connected with lock
- stitch welded
- gasket (BFL) is positioned by returned edges

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
250	144	1,48	24
280	162	1,80	16
300	173	2,00	15
315	182	2,20	10
355	205	2,80	8
400	231	3,47	6
450	260	4,70	
500	289	6,00	
560	323	7,40	
600	346	8,60	
630	364	9,20	
710	410	11,30	
800	462	14,80	
900	520	19,30	
1000	577	24,20	
1120	647	30,10	
1250	722	36,60	

**45° SEGMENTED BEND****BF / BFL 45**

$$r_m \approx 1 \cdot d_1$$

Also available without gasket

**MATERIAL**

- galvanized steel
- EPDM rubber gasket (BFL)

**PRODUCT CHARACTERISTICS**

- segments connected with lock
- stitch welded
- gasket (BFL) is positioned by returned edges

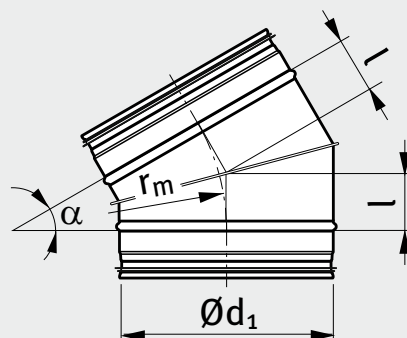
$\text{Ø}d_1$ nom	l mm	weight kg	box quantity
250	104	1,26	30
280	116	1,54	22
300	124	1,77	20
315	130	1,90	14
355	147	2,26	12
400	166	2,96	8
450	186	4,00	
500	207	4,90	
560	232	6,10	
600	249	6,80	
630	261	7,49	
710	294	11,30	
800	331	15,00	
900	373	16,80	
1000	414	19,50	
1120	464	28,50	
1250	518	38,00	





## 30° SEGMENTED BEND

**BF / BFL 30**



$$r_m \approx 1 \cdot d_1$$

Also available without gasket

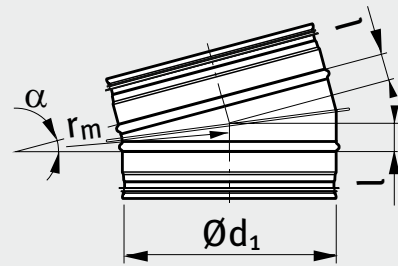
### MATERIAL

- galvanized steel
- EPDM rubber gasket (BFL)

### PRODUCT CHARACTERISTICS

- segments connected with lock
- stitch welded
- gasket (BFL) is positioned by returned edges

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
250	67	1,00	36
280	75	1,10	30
300	80	1,30	20
315	84	1,42	20
355	95	1,70	15
400	107	2,27	10
450	121	3,00	
500	134	3,70	
560	150	4,60	
600	161	5,10	
630	169	5,60	
710	190	8,60	
800	214	11,00	
900	241	10,90	
1000	268	13,40	
1120	300	16,10	
1250	335	19,00	

**15° SEGMENTED BEND****BF / BFL 15**

$$r_m \approx 1 \cdot d_1$$

Also available without gasket

**MATERIAL**

- galvanized steel
- EPDM rubber gasket (BFL)

**PRODUCT CHARACTERISTICS**

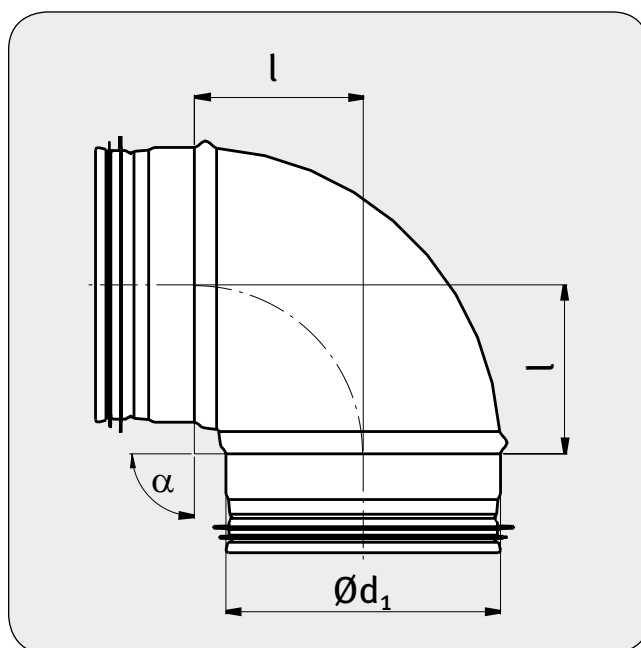
- segments connected with lock
- stitch welded
- gasket (BFL) is positioned by returned edges

$\varnothing d_1$ nom	l mm	weight kg	box quantity
250	33	0,65	12
280	37	0,77	8
300	39	0,85	8
315	41	0,91	28
355	47	1,41	24
400	53	1,70	15
450	59	2,20	
500	66	2,65	
560	74	3,30	
600	79	3,70	
630	83	4,00	
710	93	5,80	
800	105	7,00	
900	118	8,50	
1000	132	10,40	
1120	147	12,50	
1250	165	14,50	



## 90° SHORT PRESSED BEND

**BKL 90**



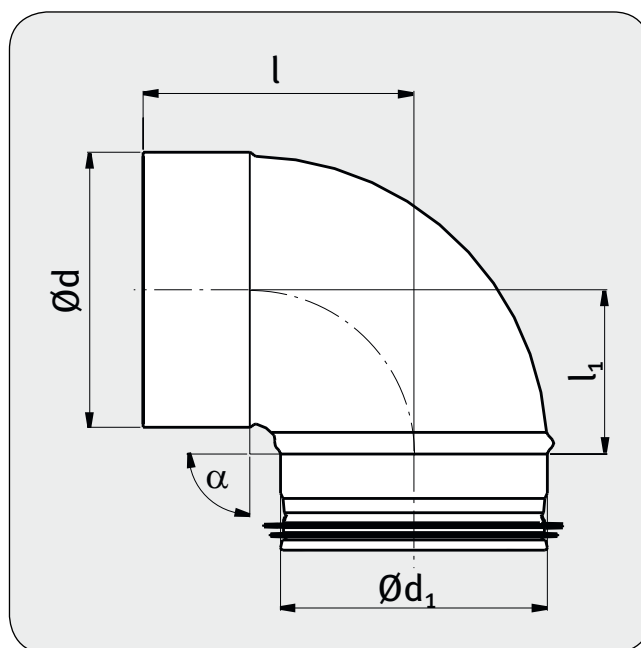
### MATERIAL

- galvanized steel
- EPDM rubber gasket

### PRODUCT CHARACTERISTICS

- pressed
- stitch welded
- short installation length
- gasket is positioned by returned edges

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
80	80	0,14	35
100	62	0,22	50
125	79	0,31	30
160	94	0,64	15

**90° SHORT PRESSED BEND****BKML 90****MATERIAL**

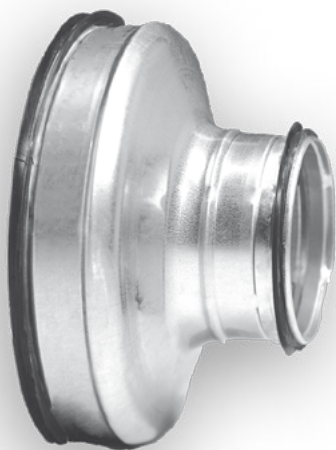
- galvanized steel
- EPDM rubber gasket

**PRODUCT CHARACTERISTICS**

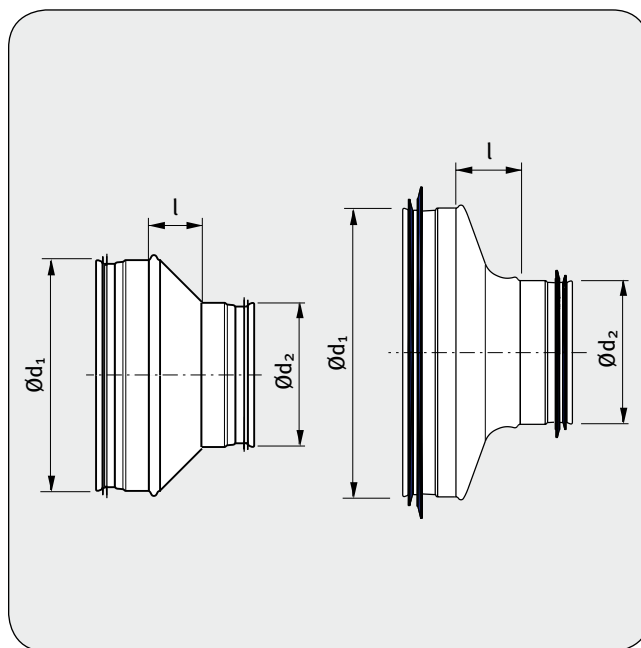
- pressed
- stitch welded
- short installation length
- one female end
- gasket is positioned by returned edges

$\text{Ød}_1$ nom	$\text{Ød}$ mm	$l$ mm	$l_1$ mm	weight kg	box quantity
80	80	123	80	0,13	35
100	100	105	62	0,21	50
125	125	120	79	0,31	30
160	160	136	94	0,63	15



**PRESSED REDUCER****RC / RCPL**

Also available without gasket

**MATERIAL**

- galvanized steel
- EPDM rubber gasket (RCPL)

**PRODUCT CHARACTERISTICS**

- pressed
- made of single element
- short installation length
- gasket (RCPL) is positioned by returned edges

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
100*	80	26	0,18	112
125*	80	38	0,16	63
125*	100	27	0,21	63
150	100	36	0,17	42
150*	125	31	0,15	42
160	80	52	0,30	30
160*	100	46	0,17	35
160*	125	35	0,22	35
160	150	20	0,25	35
180	100	55	0,24	28
180	125	40	0,37	28
180	150	27	0,29	28
180	160	20	0,26	28
200*	100	46	0,22	28
200*	125	55	0,30	24
200	150	37	0,37	28
200*	160	39	0,29	28
200	180	23	0,34	28
224	150	48	0,53	34
224	160	44	0,53	28

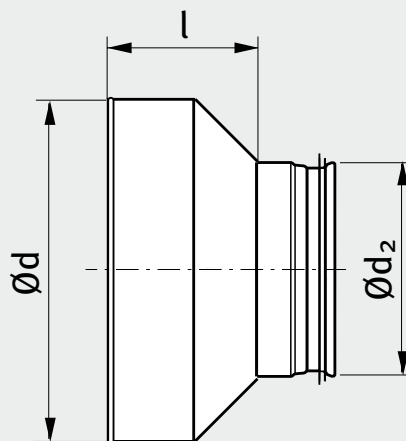
\* With stream-lined transition

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
224	180	32	0,47	34
224	200	24	0,45	30
250	125	70	0,62	28
250	150	62	0,60	30
250*	160	60	0,46	28
250	180	47	0,59	30
250*	200	42	0,46	30
250	224	29	0,57	28
300	200	59	0,73	20
300	250	34	0,71	22
315	160	91	0,86	16
315	200	74	0,83	16
315*	250	50	0,65	16
355	250	69	1,08	15
355	315	33	0,99	16
400	200	118	1,37	8
400	250	94	1,38	8
400	315	54	1,29	8
500	315	95	1,90	18
500	400	68	1,76	18



## PRESSED MALE-FEMALE REDUCER

*RCF / RCFPL*



Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (RCFPL)

### PRODUCT CHARACTERISTICS

- pressed
- made of single element
- short installation length
- one female end
- gasket (RCFPL) is positioned by returned edges

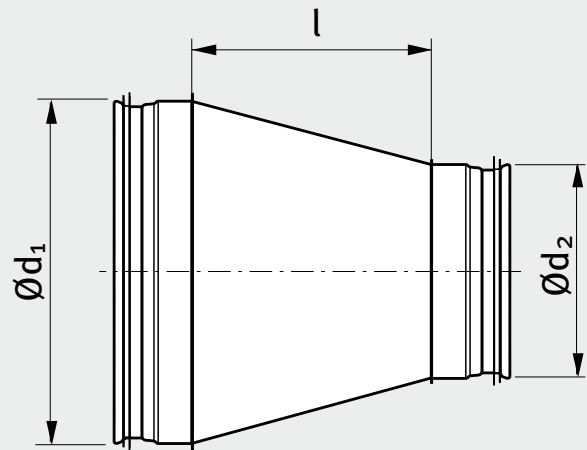
Ød nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
100	80	61	0,16	45
125	80	73	0,16	72
125	100	64	0,14	72
150	100	78	0,16	
150	125	66	0,17	48
160	80	92	0,24	
160	100	83	0,16	35
160	125	71	0,20	35
160	150	57	0,25	
180	100	98	0,24	
180	125	85	0,31	
180	150	68	0,24	
180	160	66	0,27	
200	100	84	0,23	28
200	125	90	0,27	28
200	150	75	0,34	28
200	160	73	0,26	28
200	180	63	0,32	
224	150	92	0,45	

Ød nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
224	160	87	0,49	
224	180	76	0,46	
224	200	66	0,45	
250	125	133	0,57	30
250	150	122	0,56	
250	160	117	0,40	30
250	180	107	0,55	
250	200	103	0,42	30
250	224	89	0,53	
300	200	119	0,68	
300	250	94	0,66	
315	160	153	0,82	20
315	200	134	0,77	16
315	250	108	0,65	18
355	250	136	1,04	
355	315	97	0,89	
400	200	196	1,31	8
400	250	174	1,37	8
400	315	133	1,20	8



## SYMMETRIC HAND MADE REDUCER

*RCL / RCLL*



Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (RCLL)

### PRODUCT CHARACTERISTICS

- segments are connected with lock
- stitch welded
- approximately 18° angle
- gasket (RCLL) is positioned by returned edges

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
100	80	58	0,18	80
125	80	92	0,26	45
125	100	64	0,24	75
140	80	112	0,32	24
140	100	85	0,30	50
140	125	51	0,27	30
150	80	126	0,36	32
150	100	99	0,34	25
150	125	64	0,30	30
150	140	44	0,28	20
160	80	140	0,42	25
160	100	112	0,40	25
160	125	78	0,36	25
160	140	57	0,34	75
160	150	44	0,32	35
180	80	167	0,51	25
180	100	140	0,49	48
180	125	106	0,46	50

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
180	140	85	0,43	40
180	150	71	0,41	52
180	160	58	0,41	50
200	80	195	0,61	20
200	100	167	0,59	30
200	125	133	0,55	32
200	140	112	0,53	35
200	150	99	0,51	40
200	160	85	0,50	40
200	180	58	0,46	30
224	100	200	0,72	20
224	125	166	0,68	20
224	140	145	0,65	28
224	150	132	0,64	28
224	160	118	0,63	20
224	180	90	0,58	20
224	200	63	0,53	26
250	100	236	0,94	20



Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
250	125	202	0,90	18
250	140	181	0,89	15
250	150	167	0,87	20
250	160	154	0,87	18
250	180	126	0,80	12
250	200	99	0,75	20
250	224	66	0,67	24
280	125	243	1,10	12
280	140	222	1,08	33
280	150	209	1,06	14
280	160	195	1,05	16
280	180	167	1,00	16
280	200	140	0,95	16
280	224	107	0,87	18
280	250	71	0,84	18
300	125	270	1,25	8
300	140	250	1,22	14
300	150	236	1,20	14
300	160	222	1,20	12
300	180	195	1,15	14
300	200	167	1,09	16
300	224	135	1,02	16
300	250	99	0,98	16
300	280	58	0,86	18
315	125	291	1,36	8
315	140	270	1,33	8
315	150	257	1,32	8
315	160	243	1,31	8
315	180	216	1,26	8
315	200	188	1,21	10
315	224	155	1,13	8
315	250	119	1,09	12
315	280	78	0,97	12
315	300	51	0,88	12
355	160	298	1,84	6
355	180	270	1,77	8
355	200	243	1,71	7
355	224	210	1,61	10
355	250	174	1,56	10
355	280	133	1,41	10
355	300	106	1,30	9
355	315	85	1,21	8
400	160	365	2,44	12
400	180	337	2,38	11
400	200	310	2,31	
400	224	277	2,23	

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
400	250	241	2,20	
400	280	200	2,01	15
400	300	172	1,90	
400	315	152	1,86	35
400	355	97	1,55	42
450	200	378	2,99	12
450	224	346	2,90	12
450	250	310	2,85	12
450	280	269	2,70	12
450	300	241	2,59	
450	315	221	2,50	
450	355	166	2,24	20
450	400	109	2,64	21
500	200	447	3,66	8
500	224	414	3,56	8
500	250	378	3,51	12
500	280	337	3,36	10
500	300	310	3,25	10
500	315	289	3,16	12
500	355	234	2,89	12
500	400	177	2,69	14
500	450	109	2,37	14
560	250	461	4,47	4
560	280	420	4,32	
560	300	392	4,21	5
560	315	371	4,11	8
560	355	317	3,85	6
560	400	260	3,66	10
560	450	191	2,70	12
560	500	122	2,86	12
600	250	516	5,10	3
600	280	475	4,96	
600	300	447	4,84	
600	315	427	4,76	
600	355	372	4,49	5
600	400	315	4,29	5
600	450	246	3,96	5
600	500	177	3,49	8
600	560	95	2,94	8
630	250	557	5,60	
630	280	516	5,46	
630	300	488	5,34	6
630	315	468	5,25	5
630	355	413	4,99	5
630	400	356	4,79	
630	450	287	4,46	





## Round fittings

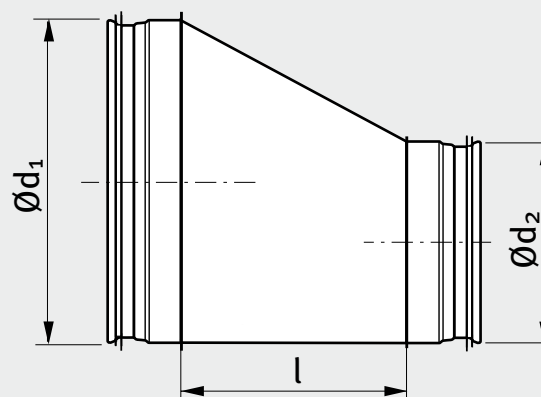
Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
630	500	219	4,00	6
630	560	136	3,43	6
630	600	81	2,97	8
710	355	528	7,11	2
710	400	471	6,92	2
710	450	402	6,60	
710	500	333	6,12	4
710	560	251	5,57	4
710	600	196	5,10	4
710	630	155	4,72	4
800	400	594	8,81	
800	450	526	8,49	
800	500	457	8,02	2
800	560	375	7,46	4
800	600	320	6,99	2
800	630	279	6,62	
800	710	174	6,21	
900	450	663	10,80	
900	500	594	10,30	
900	560	512	9,78	
900	600	457	9,31	
900	630	416	8,94	
900	710	311	8,53	
900	800	187	7,18	

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
1000	500	732	13,10	
1000	560	649	12,50	
1000	600	594	12,00	
1000	630	553	11,70	
1000	710	448	11,20	
1000	800	325	9,91	
1000	900	187	8,17	
1120	560	814	16,40	
1120	600	759	15,90	
1120	630	718	15,50	
1120	710	613	15,10	
1120	800	490	13,80	
1120	900	352	12,10	
1120	1000	215	10,30	
1250	600	938	20,10	
1250	630	897	19,70	
1250	710	792	19,30	
1250	800	668	17,90	
1250	900	531	16,20	
1250	1000	393	14,40	
1250	1120	229	12,20	



## **ECCENTRIC HAND MADE REDUCER**

**RL / RLL**



Also available without gasket

### **MATERIAL**

- galvanized steel
- EPDM rubber gasket (RLL)

### **PRODUCT CHARACTERISTICS**

- segments are connected with lock
- stitch welded
- approximately 35° angle
- gasket (RLL) is positioned by returned edges

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
100	80	58	0,18	
125	80	92	0,26	
125	100	64	0,24	50
140	80	112	0,32	
140	100	85	0,30	
140	125	51	0,27	
150	80	126	0,36	
150	100	99	0,34	
150	125	64	0,30	
150	140	44	0,28	
160	80	140	0,42	
160	100	112	0,40	
160	125	78	0,36	25
160	140	57	0,34	
160	150	44	0,32	
180	80	167	0,51	
180	100	140	0,49	
180	125	106	0,46	

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
180	140	85	0,43	
180	150	71	0,41	
180	160	58	0,41	
200	80	195	0,61	
200	100	167	0,59	
200	125	133	0,55	30
200	140	112	0,53	
200	150	99	0,51	
200	160	85	0,50	30
200	180	58	0,46	
224	100	200	0,72	
224	125	166	0,68	
224	140	145	0,65	
224	150	132	0,64	
224	160	118	0,63	
224	180	90	0,58	
224	200	63	0,53	
250	100	236	0,94	



## Round fittings

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
250	125	202	0,90	
250	140	181	0,89	
250	150	167	0,87	
250	160	154	0,87	18
250	180	126	0,80	
250	200	99	0,75	18
250	224	66	0,67	
280	125	243	1,10	
280	140	222	1,08	
280	150	209	1,06	
280	160	195	1,05	
280	180	167	1,00	
280	200	140	0,95	
280	224	107	0,87	
280	250	71	0,84	
300	125	270	1,25	
300	140	250	1,22	
300	150	236	1,20	
300	160	222	1,20	
300	180	195	1,15	
300	200	167	1,09	
300	224	135	1,02	
300	250	99	0,98	
300	280	58	0,86	
315	125	291	1,36	
315	140	270	1,33	
315	150	257	1,32	
315	160	243	1,31	8
315	180	216	1,26	
315	200	188	1,21	8
315	224	155	1,13	
315	250	119	1,09	12
315	280	78	0,97	
315	300	51	0,88	
355	160	298	1,84	
355	180	270	1,77	
355	200	243	1,71	
355	224	210	1,61	
355	250	174	1,56	
355	280	133	1,41	
355	300	106	1,30	
355	315	85	1,21	
400	160	365	2,44	
400	180	337	2,38	
400	200	310	2,31	30
400	224	277	2,23	

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
400	250	241	2,20	30
400	280	200	2,01	
400	300	172	1,90	
400	315	152	1,86	30
400	355	97	1,55	
450	200	378	2,99	
450	224	346	2,90	
450	250	310	2,85	
450	280	269	2,70	
450	300	241	2,59	
450	315	221	2,50	
450	355	166	2,24	
450	400	109	2,64	
500	200	447	3,66	
500	224	414	3,56	
500	250	378	3,51	
500	280	337	3,36	
500	300	310	3,25	
500	315	289	3,16	10
500	355	234	2,89	
500	400	177	2,69	12
500	450	109	2,37	
560	250	461	4,47	
560	280	420	4,32	
560	300	392	4,21	
560	315	371	4,11	
560	355	317	3,85	
560	400	260	3,66	
560	450	191	2,70	
560	500	122	2,86	
600	250	516	5,10	
600	280	475	4,96	
600	300	447	4,84	
600	315	427	4,76	
600	355	372	4,49	
600	400	315	4,29	
600	450	246	3,96	
600	500	177	3,49	
600	560	95	2,94	
630	250	557	5,60	
630	280	516	5,46	
630	300	488	5,34	
630	315	468	5,25	
630	355	413	4,99	
630	400	356	4,79	8
630	450	287	4,46	



Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
630	500	219	4,00	8
630	560	136	3,43	
630	600	81	2,97	
710	355	528	7,11	
710	400	471	6,92	
710	450	402	6,60	
710	500	333	6,12	
710	560	251	5,57	
710	600	196	5,10	
710	630	155	4,72	
800	400	594	8,81	
800	450	526	8,49	
800	500	457	8,02	4
800	560	375	7,46	
800	600	320	6,99	
800	630	279	6,62	4
800	710	174	6,21	
900	450	663	10,80	
900	500	594	10,30	
900	560	512	9,78	
900	600	457	9,31	
900	630	416	8,94	
900	710	311	8,53	
900	800	187	7,18	

Ød <sub>1</sub> nom	Ød <sub>2</sub> nom	l mm	weight kg	box quantity
1000	500	732	13,10	
1000	560	649	12,50	
1000	600	594	12,00	
1000	630	553	11,70	
1000	710	448	11,20	
1000	800	325	9,91	
1000	900	187	8,17	
1120	560	814	16,40	
1120	600	759	15,90	
1120	630	718	15,50	
1120	710	613	15,10	
1120	800	490	13,80	
1120	900	352	12,10	
1120	1000	215	10,30	
1250	600	938	20,10	
1250	630	897	19,70	
1250	710	792	19,30	
1250	800	668	17,90	
1250	900	531	16,20	
1250	1000	393	14,40	
1250	1120	229	12,20	



## T-PIECE

## TCP / TCPL



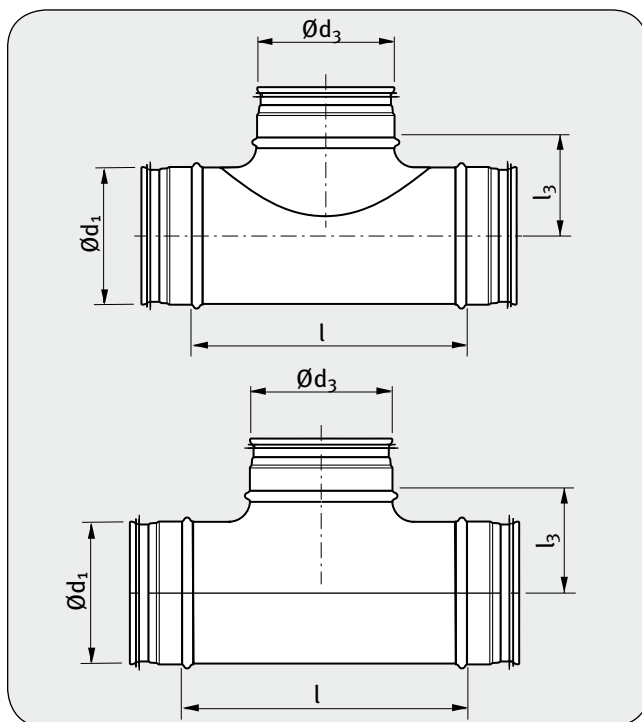
Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (TCPL)

$\varnothing d_1$ nom	$\varnothing d_3$ nom	l mm	$l_3$ mm	weight kg	box quantity
80	80	140	52	0,36	48
100	80	103	65	0,23	40
100	100	130	65	0,32	45
125	80	97	75	0,34	28
125	100	130	78	0,37	30
125	125	165	83	0,44	115
140	80	140	82	0,56	16
140	100	175	85	0,65	16
140	125*	215	70	0,76	20
140	140	230	90	0,78	65
150	80	140	87	0,58	20
150	100	175	90	0,69	20
150	125	215	95	0,76	65
150	140	230	95	0,82	
150	150	260	95	0,94	55
160	80	140	92	0,59	20
160	100	130	95	0,46	20
160	125	166	100	0,53	75

\* Built with PSL saddle without radius



### PRODUCT CHARACTERISTICS

- built with PS / PSL saddle, or a fully pressed top section
- stitch welded
- gasket (TCPL) is positioned by returned edges

$\varnothing d_1$ nom	$\varnothing d_3$ nom	l mm	$l_3$ mm	weight kg	box quantity
160	140	230	100	0,87	60
160	150	260	100	0,99	60
160	160	209	105	0,63	70
180	80	140	102	0,92	60
180	100	175	105	0,80	60
180	125	215	110	0,91	55
180	140	230	110	0,96	50
180	150	260	110	1,08	40
180	160	260	115	1,06	40
180	180	285	115	1,44	40
200	80	140	112	0,77	15
200	100	175	115	0,88	15
200	125	215	115	1,02	48
200	140	230	120	1,07	40
200	150	260	120	1,19	36
200	160	209	125	0,67	48
200	180	285	125	1,35	
200	200	249	125	1,21	40



Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
224	80	140	124	0,85	36
224	100	175	127	1,01	36
224	125	215	132	1,14	30
224	140	230	132	1,20	
224	150	260	132	1,29	
224	160	260	137	1,28	24
224	180	285	137	1,46	22
224	200	346	137	1,69	
250	80	156	137	1,13	36
250	100	175	140	1,22	36
250	125	220	145	1,48	24
250	140	230	145	1,48	
250	150	255	145	1,55	24
250	160	256	150	1,58	24
250	180	306	150	1,79	20
250	200	306	150	1,78	18
250	224	350	150	2,09	18
250	250	296	150	1,65	20
280	80	156	155	1,25	
280	100	175	155	1,37	
280	125	220	160	1,56	
280	140	230	160	1,63	
280	150	255	160	1,72	
280	160	256	165	1,75	
280	180	306	165	1,97	
280	200	306	165	2,01	15
280	224	350	165	2,27	
280	250*	350	140	2,44	
280	280*	390	140	2,67	12
300	80	156	162	1,36	
300	100	175	165	1,47	
300	125	220	170	1,68	
300	140	230	170	1,74	
300	150	255	170	1,86	
300	160	256	175	1,87	
300	180	306	175	2,12	
300	200	306	175	2,15	
300	224	350	175	2,41	
300	250	350	175	2,50	
300	280*	390	150	2,53	
300	300	430	175	3,55	10
315	80	156	170	1,43	20
315	100	175	173	1,50	20
315	125	220	178	1,76	16
315	140	230	178	1,82	
315	150	355	178	2,38	15

Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
315	160	256	182	1,96	16
315	180	306	182	2,21	
315	200	306	182	2,14	14
315	224	350	182	2,51	
315	250	350	182	2,59	12
315	280	390	182	3,00	12
315	300	430	182	3,21	
315	315	363	182	2,20	11
355	100	175	193	1,73	
355	125	220	198	1,96	
355	140	230	198	2,03	
355	150	255	198	2,46	
355	160	256	203	2,45	8
355	180	306	203	2,81	
355	200	306	203	2,82	8
355	224	350	203	3,13	
355	250	350	203	3,18	
355	280*	390	178	3,63	
355	300	430	203	3,87	
355	315	455	203	4,06	
355	355*	470	203	5,14	7
400	100	175	215	2,27	
400	125	225	220	2,81	
400	160	266	225	3,02	
400	200	300	225	3,37	
400	224	350	225	3,74	
400	250	350	225	3,79	
400	280*	390	200	4,23	
400	300	430	225	4,47	
400	315	415	225	4,42	
400	355*	470	225	5,04	
400	400	510	225	6,20	
450	100	175	240	2,76	
450	125	225	245	3,15	
450	160	266	250	3,38	
450	200	300	250	3,75	
450	224	350	250	4,16	
450	250	350	250	4,23	
450	280*	390	225	4,64	
450	300	430	250	4,89	
450	315	415	250	4,82	
450	355	470	250	5,16	
450	400	510	250	5,81	
450	450*	550	225	6,99	
500	100	175	265	3,06	
500	125	225	270	3,35	

\* Built with PSL saddle without radius



## Round fittings

Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
500	160	266	275	3,77	
500	200	300	275	4,14	
500	250	350	275	4,68	
500	300	430	275	5,36	
500	315	415	275	5,30	
500	355	470	275	5,70	
500	400	510	275	6,34	
500	450*	550	250	6,56	
500*	500	552	290	8,27	
560	100	175	295	3,59	
560	125	225	300	3,92	
560	160	266	305	4,41	
560	200	300	305	4,78	
560	250	350	305	5,38	
560	300	430	280	5,86	
560	315	415	305	6,06	
560	355	470	305	6,57	
560	400	510	305	7,08	
560	450*	550	280	7,38	
560	500*	552	280	7,57	
560	560*	610	280	9,69	
600	100	175	315	3,83	
600	125	225	320	4,19	
600	160	266	325	4,73	

Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
600	200	300	325	5,10	
600	250	350	325	5,73	
600	300*	430	300	6,36	
600	315	415	325	6,46	
600	355*	470	300	6,98	
600	400	510	325	7,43	
600	450*	550	300	7,84	
600	500*	552	300	7,91	
600	560*	610	300	8,76	
600	600*	650	300	10,80	
630	100	175	330	4,03	
630	125	225	335	4,41	
630	160	266	340	4,99	
630	200	300	340	5,35	
630	250	350	340	6,00	
630	300*	450	315	7,23	
630	315	415	340	6,77	
630	355*	470	315	7,18	
630	400	510	340	7,69	
630	450*	555	315	8,24	
630*	500	552	340	8,44	
630	560*	610	315	9,11	
630	600*	650	315	9,58	
630*	630	680	340	11,30	

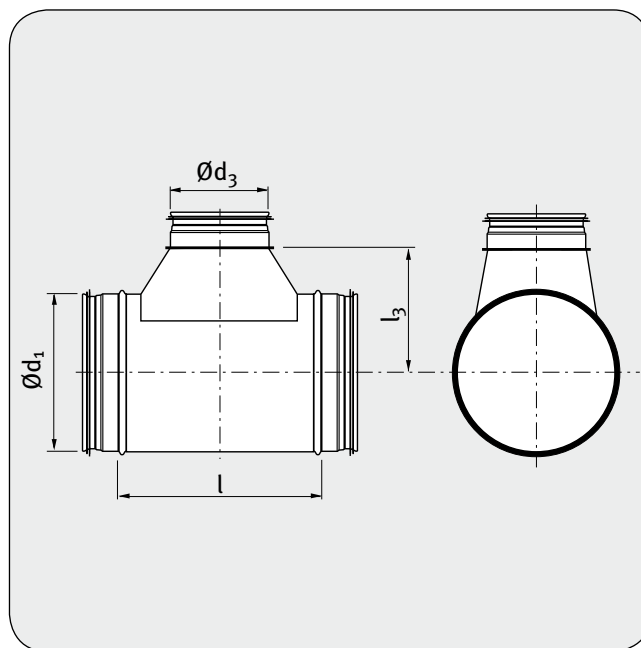
\* Built with PSL saddle without radius





## HAND MADE T-PIECE

## TC / TCL



Also available without gasket

## MATERIAL

- galvanized steel
- EPDM rubber gasket (TCL)

## PRODUCT CHARACTERISTICS

- built with TSTC / TSTCL hand made saddle
- stitch welded
- gasket (TCL) is positioned by returned edges

Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
80	100	215	85	0,44	
80	125	240	85	0,53	
100	125	240	95	0,56	25
100	140	260	100	0,63	
100	150	270	100	0,63	10
100	160	280	100	0,68	10
125	140	260	115	0,72	
125	150	270	115	0,75	8
125	160	280	115	0,77	8
125	180	300	115	0,85	
125	200	335	130	1,01	6
140	125	240	115	0,75	
140	150	270	120	0,85	
140	160	280	120	0,88	
140	180	300	120	0,95	
140	200	335	135	1,09	
140	224	360	135	1,19	
150	160	280	125	0,92	

Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
150	180	300	125	0,99	
150	200	335	140	1,17	
150	224	360	140	1,24	
150	250	385	140	1,40	
160	180	300	130	1,04	
160	200	335	145	1,21	8
160	224	360	145	1,30	
160	250	385	145	1,52	
180	200	335	155	1,32	
180	224	360	155	1,41	
180	250	385	155	1,58	
180	280	425	165	1,98	
200	224	360	165	1,50	
200	250	385	165	1,68	20
200	280	425	175	2,06	
200	300	445	175	2,19	
200	315	460	175	2,11	
224	250	385	180	1,94	



## Round fittings

Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
224	280	425	190	2,21	
224	300	445	190	2,33	
224	315	460	190	2,42	
224	355	510	200	2,80	
250	280	425	200	2,36	
250	300	445	200	2,49	
250	315	460	200	2,55	10
250	355	510	210	2,97	8
250	400	555	210	3,56	6
280	250	385	205	2,27	
280	280	425	215	2,51	10
280	300	445	215	2,65	
280	315	460	215	2,75	
280	355	510	225	3,13	
280	400	555	225	3,74	
280	450	605	225	4,14	
300	280	425	225	2,64	
300	315	460	225	2,87	
300	355	510	235	3,28	
300	400	555	235	3,81	
300	450	605	235	4,29	
315	355	520	245	3,44	6
315	400	565	245	3,99	4
315	450	615	245	4,31	
315	500	670	250	4,68	
355	280	435	245	3,78	
355	355	520	265	4,44	5
355	400	565	265	5,07	
355	450	615	265	5,50	
355	500	670	270	5,99	
355	560	730	270	6,51	
400	140	270	250	2,31	
400	150	280	250	2,40	
400	180	310	250	2,68	
400	280	435	275	4,16	
400	355	520	285	4,85	
400	450	615	285	5,99	
400	500	670	290	6,59	
400	560	730	290	7,11	
400	600	770	290	7,47	
400	630	800	290	7,73	
450	140	270	275	2,52	
450	150	280	275	2,62	
450	180	310	275	2,94	
450	280	435	300	4,72	
450	450	615	310	6,44	

Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
450	500	670	315	7,16	
450	560	730	315	7,78	
450	600	770	315	8,19	
450	630	800	315	8,50	
450	710	880	315	9,85	
500	140	270	300	2,79	
500	150	280	300	2,90	
500	180	310	300	3,18	
500	224	370	315	3,87	
500	280	435	325	4,99	
500	450	615	335	7,15	
500	500	670	340	7,81	
500	560	730	340	8,60	
500	600	770	340	9,19	
500	630	800	340	9,41	
500	710	880	340	11,50	
500	800	970	340	11,80	
560	224	370	345	4,33	
560	280	435	355	5,56	
560	450	615	365	8,01	
560	500	670	370	8,56	
560	560	730	370	9,21	
560	600	770	370	9,80	
560	630	800	370	10,30	
560	710	880	370	12,10	
560	800	970	370	13,70	
560	900	1090	370	15,60	
600	224	370	365	4,62	
600	280	435	375	5,93	
600	300	455	375	6,15	
600	355	520	385	6,99	
600	450	615	385	8,55	
600	500	670	390	9,16	
600	560	730	390	9,63	
600	600	770	390	10,50	
600	630	800	390	10,70	
600	710	880	390	12,60	
600	800	970	390	14,10	
600	900	1090	390	16,10	
630	224	380	380	4,84	
630	280	445	390	6,21	
630	300	465	390	6,44	
630	355	530	400	7,23	
630	450	625	400	8,95	
630	500	680	405	9,72	
630	560	740	405	10,20	



Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
630	600	780	405	10,40	
630	630	810	405	10,80	
630	710	890	405	12,90	
630	800	980	405	14,40	
630	900	1100	405	16,40	
630	1000	1200	405	18,30	
710	250	455	420	6,34	
710	280	495	420	7,00	
710	300	515	430	7,26	
710	315	530	430	7,46	
710	355	580	440	8,24	
710	400	625	440	9,49	
710	450	675	440	10,10	
710	500	730	445	10,90	
710	560	790	445	11,60	
710	600	830	445	12,10	
710	630	860	445	12,30	
710	710	940	445	14,10	
710	800	1030	445	15,70	
710	900	1150	445	17,80	
710	1000	1250	445	19,80	
710	1120	1370	445	23,20	
800	250	455	465	8,49	
800	280	495	475	9,46	
800	300	515	475	9,80	
800	315	530	475	9,99	
800	355	580	485	11,10	
800	400	625	485	12,60	
800	450	675	485	13,40	
800	500	730	490	14,60	
800	560	790	490	15,30	
800	600	830	490	15,80	
800	630	860	490	16,50	
800	710	940	490	18,00	
800	800	1030	490	19,50	
800	900	1150	490	21,50	
800	1000	1250	490	22,60	
800	1120	1370	490	27,60	
800	1250	1500	490	30,80	
900	315	530	525	11,50	
900	355	580	535	12,80	
900	400	625	535	15,00	
900	450	675	535	15,70	
900	500	730	540	16,90	

Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
900	560	790	540	18,20	
900	600	830	540	19,00	
900	630	860	540	19,60	
900	710	940	540	22,20	
900	800	1030	540	23,80	
900	900	1150	540	26,10	
900	1000	1250	540	29,10	
900	1120	1370	540	34,10	
900	1250	1500	540	38,50	
1000	315	530	575	12,70	
1000	355	580	585	14,10	
1000	400	625	585	16,10	
1000	450	675	585	17,30	
1000	500	730	590	18,40	
1000	560	790	590	20,10	
1000	600	830	590	21,00	
1000	630	860	590	22,00	
1000	710	940	590	24,70	
1000	800	1030	590	26,80	
1000	900	1150	590	29,10	
1000	1000	1250	590	31,80	
1000	1120	1370	590	37,40	
1000	1250	1500	590	42,50	
1120	500	730	650	20,50	
1120	560	790	650	22,30	
1120	600	830	650	23,30	
1120	630	860	650	24,10	
1120	710	940	650	27,50	
1120	800	1030	650	29,90	
1120	900	1150	650	32,90	
1120	1000	1250	650	35,00	
1120	1120	1370	650	40,00	
1120	1250	1500	650	45,30	
1250	500	730	715	22,90	
1250	560	790	715	24,60	
1250	600	830	715	25,80	
1250	630	860	715	26,70	
1250	710	940	715	30,40	
1250	800	1030	715	33,10	
1250	900	1150	715	36,50	
1250	1000	1250	715	39,20	
1250	1120	1370	715	43,90	
1250	1250	1500	715	48,40	

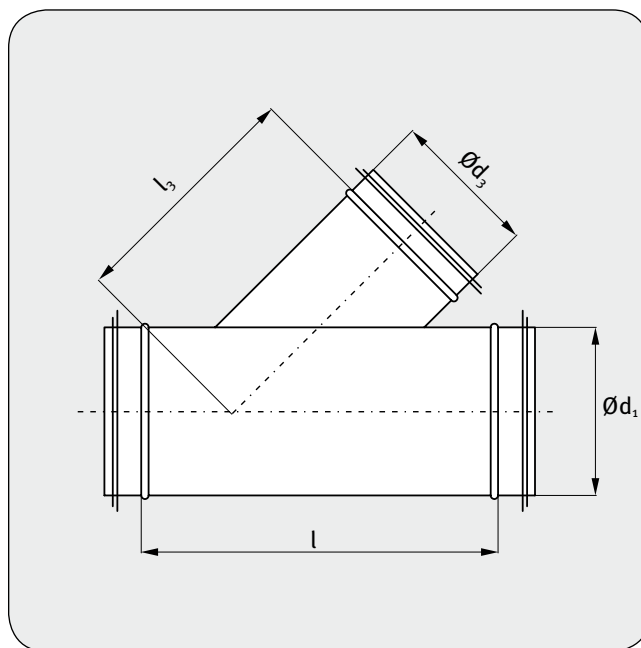


## 45° T-PIECE

TV 45 / TVL 45



Also available without gasket



### MATERIAL

- galvanized steel
- EPDM rubber gasket (TVL 45)

### PRODUCT CHARACTERISTICS

- stitch welded
- take-off is fitted with bossings
- gasket (TVL 45) is positioned by returned edges

$\varnothing d_1$ nom	$\varnothing d_3$ nom	l mm	$l_3$ mm	weight kg	box quantity
80	80	250	165	0,70	15
100	80	250	180	0,80	15
100	100	280	190	0,90	15
125	80	250	200	0,90	12
125	100	280	210	1,10	12
125	125	315	220	1,30	12
140	80	280	210	1,00	
140	100	305	220	1,20	
140	125	340	230	1,40	
140	140	365	250	1,60	
150	80	280	215	1,10	15
150	100	305	225	1,30	15
150	125	340	240	1,50	32
150	140	365	260	1,70	
150	150	380	265	1,80	24
160	80	280	220	1,10	10
160	100	305	230	1,30	15
160	125	340	245	1,50	32

$\varnothing d_1$ nom	$\varnothing d_3$ nom	l mm	$l_3$ mm	weight kg	box quantity
160	140	365	265	1,70	32
160	150	380	270	1,80	32
160	160	390	275	1,90	6
180	80	280	235	1,20	36
180	100	305	245	1,40	36
180	125	340	260	1,60	
180	140	365	280	1,90	30
180	150	380	285	2,00	30
180	160	390	290	2,10	30
180	180	420	300	2,30	24
200	80	280	250	1,30	25
200	100	305	260	1,50	25
200	125	340	270	1,80	25
200	140	365	295	2,00	20
200	150	380	300	2,10	20
200	160	390	305	2,20	20
200	180	420	315	2,50	20
200	200	450	325	2,80	20



Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
224	100	305	275	1,70	22
224	125	340	290	1,90	22
224	140	365	310	2,20	16
224	150	380	315	2,30	16
224	160	390	320	2,40	16
224	180	420	330	2,70	15
224	200	450	340	3,00	15
224	224	480	350	3,20	15
250	100	305	295	2,10	22
250	125	340	310	2,30	18
250	140	365	330	2,60	16
250	150	380	335	2,80	14
250	160	390	340	2,80	14
250	180	420	350	3,00	15
250	200	450	360	3,40	12
250	224	480	370	3,60	10
250	250	520	385	4,10	10
280	125	370	330	2,70	
280	140	390	350	2,90	
280	150	405	355	3,00	16
280	160	420	360	3,10	
280	180	445	370	3,40	15
280	200	475	380	3,80	15
280	224	510	390	4,00	15
280	250	545	405	4,50	15
280	280	590	435	5,10	
300	125	370	350	3,10	
300	140	390	365	3,40	
300	150	405	370	3,60	
300	160	420	375	3,70	
300	180	445	385	4,00	
300	200	475	395	4,40	
300	224	510	405	4,70	
300	250	545	420	5,20	
300	280	590	450	5,90	
300	300	615	460	6,70	
315	140	390	375	3,80	
315	150	405	380	4,00	
315	160	420	385	4,10	
315	180	445	395	4,40	
315	200	475	405	4,90	6
315	224	510	415	5,20	
315	250	545	430	5,80	5
315	280	590	460	6,50	
315	300	615	470	7,00	
315	315	640	480	7,30	4

Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
355	150	405	410	4,40	
355	160	420	415	4,50	
355	180	445	425	4,80	
355	200	475	435	5,40	
355	224	510	445	5,60	
355	250	545	460	6,30	
355	280	590	490	7,10	
355	300	615	500	7,50	
355	315	640	505	7,80	
355	355	695	525	8,80	
400	160	420	445	5,30	
400	180	445	455	5,60	
400	200	475	465	6,20	
400	224	510	475	6,50	
400	250	545	490	7,10	
400	280	590	520	8,00	
400	300	615	530	8,50	
400	315	640	535	8,80	
400	355	695	555	9,80	
400	400	760	580	11,20	
450	180	445	490	6,30	
450	200	475	500	6,90	
450	224	510	510	7,20	
450	250	545	525	7,90	
450	280	590	555	8,70	
450	300	615	565	9,20	
450	315	640	570	9,60	
450	355	695	590	10,60	
450	400	760	615	12,10	
450	450	830	640	13,50	
500	200	475	535	7,50	
500	224	510	550	7,80	
500	250	545	560	8,60	
500	280	590	560	9,50	
500	300	615	600	10,00	
500	315	640	610	10,40	
500	355	695	630	11,50	
500	400	760	650	13,00	
500	450	830	675	14,50	
500	500	900	700	16,10	
560	224	565	590	9,20	
560	250	600	605	10,00	
560	280	640	630	10,80	
560	300	665	640	11,40	
560	315	690	650	11,80	
560	355	750	670	13,00	



## Round fittings

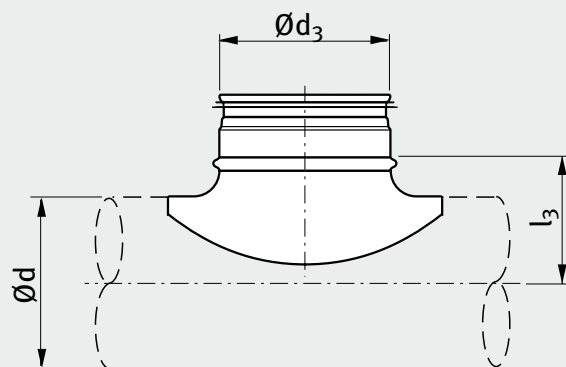
Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
560	400	810	690	14,50	
560	450	880	715	16,10	
560	500	950	740	17,80	
560	560	1040	800	20,40	
600	250	600	630	11,50	
600	280	640	655	12,50	
600	300	665	665	13,10	
600	315	690	675	13,60	
600	355	750	695	15,10	
600	400	810	715	16,70	
600	450	880	740	18,40	
600	500	950	765	20,50	
600	560	1040	825	23,40	
600	600	1090	850	25,80	
630	280	640	680	14,00	
630	300	665	690	14,60	
630	315	690	700	15,10	
630	355	750	720	16,80	
630	400	810	740	18,70	
630	450	880	765	20,60	
630	500	950	790	22,70	
630	560	1040	850	25,80	
630	600	1090	870	27,80	
630	630	1140	885	29,20	
710	300	665	745	16,90	
710	315	690	755	17,40	
710	355	750	775	19,10	
710	400	810	800	21,00	
710	450	880	825	23,20	
710	500	950	850	25,40	
710	560	1040	905	28,60	
710	600	1090	925	30,60	
710	630	1140	940	32,20	
710	710	1250	980	36,70	
800	315	690	820	19,20	
800	355	750	840	21,00	
800	400	810	860	23,10	
800	450	880	885	25,40	
800	500	950	910	27,70	
800	560	1040	970	31,20	
800	600	1090	990	33,90	
800	630	1140	1005	34,90	

Ød <sub>1</sub> nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg	box quantity
800	710	1250	1045	39,60	
800	800	1380	1090	45,00	
900	355	750	910	26,20	
900	400	810	935	28,80	
900	450	880	960	31,50	
900	500	950	985	34,40	
900	560	1040	1040	38,60	
900	600	1090	1060	41,10	
900	630	1140	1075	43,10	
900	710	1250	1115	48,70	
900	800	1380	1160	55,20	
900	900	1520	1210	62,70	
1000	400	810	1005	31,50	
1000	450	880	1030	34,40	
1000	500	950	1055	37,50	
1000	560	1040	1110	41,80	
1000	600	1090	1130	44,50	
1000	630	1140	1145	46,50	
1000	710	1250	1185	52,50	
1000	800	1380	1230	59,30	
1000	900	1520	1280	67,20	
1000	1000	1660	1330	75,50	
1120	500	1005	1140	49,00	
1120	560	1090	1195	54,30	
1120	600	1140	1215	57,40	
1120	630	1190	1230	60,00	
1120	710	1305	1270	67,10	
1120	800	1430	1315	75,20	
1120	900	1570	1365	84,60	
1120	1000	1710	1415	94,40	
1120	1120	1880	1505	109,00	
1250	500	1005	1230	53,60	
1250	560	1090	1290	59,30	
1250	600	1140	1310	62,80	
1250	630	1190	1325	65,40	
1250	710	1305	1365	73,00	
1250	800	1430	1410	81,50	
1250	900	1570	1460	91,50	
1250	1000	1710	1510	101,80	
1250	1120	1880	1595	117,00	
1250	1250	2065	1660	132,30	



## PRESSED SADDLE

**PS / PSL**



Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (PSL)

### PRODUCT CHARACTERISTICS

- pressed
- single element
- aerodynamic flow radius facing the branch
- gasket (PSL) is positioned by returned edges

Ød nom	Ød <sub>3</sub> nom	l <sub>3</sub> mm	weight kg	box quantity
80	80	52	0,13	30
100	80	60	0,14	60
100	100	65	0,18	75
125	80	75	0,13	60
125	100	78	0,18	80
125	125	83	0,25	40
140	80	82	0,13	
140	100	85	0,18	
140	140	90	0,25	32
150	80	87	0,10	
150	100	90	0,18	
150	125	95	0,18	
150	140	95	0,25	
150	150	95	0,25	25
160	80	92	0,10	70
160	100	95	0,18	90
160	125	100	0,18	50
160	140	100	0,25	38

Ød nom	Ød <sub>3</sub> nom	l <sub>3</sub> mm	weight kg	box quantity
160	150	100	0,32	25
160	160	105	0,26	20
180	80	102	0,09	
180	100	105	0,19	
180	125	110	0,25	
180	140	110	0,25	
180	150	110	0,22	
180	160	115	0,27	
180	180	115	0,48	42
200	80	112	0,09	70
200	100	115	0,19	90
200	125	115	0,25	52
200	140	120	0,25	38
200	150	120	0,22	30
200	160	125	0,27	25
200	180	125	0,45	40
200	200	125	0,39	32
224	80	124	0,12	





## Round fittings

Ød nom	Ød <sub>3</sub> nom	l <sub>3</sub> mm	weight kg	box quantity
224	100	127	0,18	90
224	125	132	0,23	50
224	140	132	0,29	
224	150	132	0,21	
224	160	137	0,24	25
224	180	137	0,41	
224	200	137	0,47	
224	224	137	0,64	24
250	80	137	0,12	34
250	100	140	0,18	90
250	125	145	0,23	50
250	140	145	0,29	48
250	150	145	0,21	35
250	160	150	0,24	25
250	180	150	0,41	34
250	200	150	0,47	32
250	224	150	0,63	21
250	250	150	0,80	18
280	80	155	0,12	
280	100	155	0,12	
280	125	160	0,23	
280	140	160	0,27	
280	150	160	0,21	
280	160	165	0,24	
280	180	165	0,40	
280	200	165	0,46	
280	224	165	0,58	
300	80	162	0,12	
300	100	165	0,12	
300	125	170	0,23	
300	140	170	0,27	
300	150	170	0,21	
300	160	175	0,24	
300	180	175	0,40	
300	200	175	0,46	
300	224	175	0,58	
300	250	175	0,71	
300	300	175	1,13	50
315	80	170	0,12	
315	100	173	0,12	90
315	125	178	0,23	54
315	140	178	0,27	56
315	150	178	0,21	35
315	160	182	0,24	25
315	180	182	0,40	35
315	200	182	0,46	32

Ød nom	Ød <sub>3</sub> nom	l <sub>3</sub> mm	weight kg	box quantity
315	224	182	0,58	32
315	250	182	0,71	16
315	300	182	1,10	50
315	315	182	1,22	42
355	100	193	0,12	
355	125	198	0,23	
355	140	198	0,27	
355	150	198	0,21	
355	160	203	0,24	
355	180	203	0,40	
355	200	203	0,44	
355	224	203	0,58	
355	250	203	0,65	
355	300	203	0,94	
400	100	215	0,12	
400	125	220	0,23	
400	150	220	0,24	
400	160	225	0,24	30
400	200	225	0,44	36
400	224	225	0,54	
400	250	225	0,65	20
400	300	225	0,94	60
400	315	225	1,03	40
400	400	225	1,87	20
450	100	240	0,12	
450	125	245	0,23	
450	150	245	0,24	
450	160	250	0,25	
450	200	250	0,42	
450	224	250	0,54	
450	250	250	0,67	
450	300	250	0,83	
450	315	250	0,94	
450	400	250	1,81	
500	100	265	0,12	40
500	125	270	0,23	50
500	150	270	0,24	40
500	160	275	0,25	30
500	200	275	0,42	42
500	224	275	0,54	32
500	250	275	0,67	20
500	300	275	0,83	50
500	315	275	0,93	50
500	400	275	1,75	16
560	100	295	0,12	
560	125	300	0,23	



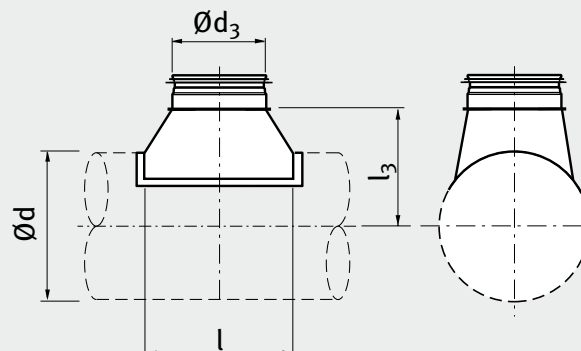
Ød nom	Ød <sub>3</sub> nom	l <sub>3</sub> mm	weight kg	box quantity
560	160	305	0,25	
560	200	305	0,42	
560	224	305	0,54	
560	250	305	0,67	
560	300	305	0,83	
560	315	305	0,93	
560	400	305	1,75	
600	100	315	0,12	
600	125	320	0,23	
600	160	325	0,31	
600	200	325	0,40	
600	224	325	0,54	
600	250	325	0,65	
600	300	325	0,83	

Ød nom	Ød <sub>3</sub> nom	l <sub>3</sub> mm	weight kg	box quantity
600	315	325	0,93	
600	400	325	1,49	
630	100	330	0,12	
630	125	335	0,23	
630	160	340	0,31	
630	200	340	0,40	42
630	224	340	0,54	
630	250	340	0,83	18
630	300	340	0,55	
630	315	340	0,93	15
630	400	340	1,49	20



## HAND MADE SADDLE

## TSTC / TSTCL



### MATERIAL

- galvanized steel
- EPDM rubber gasket (TSTCL)

### PRODUCT CHARACTERISTICS

- hand made
- stitch welded
- gasket (TSTCL) is positioned by returned edges

Ød nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg
80	100	165	85	0,21
80	125	190	85	0,29
100	125	190	95	0,25
100	140	210	100	0,30
100	150	220	100	0,30
100	160	230	100	0,36
125	140	210	115	0,31
125	150	220	115	0,33
125	160	230	115	0,35
125	180	250	115	0,41
125	200	285	130	0,50
140	80	145	115	0,22
140	150	220	120	0,38
140	160	230	120	0,40
140	180	250	120	0,45
140	200	285	135	0,53
140	224	310	135	0,59
150	80	145	120	0,19

Ød nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg
150	160	230	125	0,43
150	180	250	125	0,47
150	200	285	140	0,57
150	224	310	140	0,64
150	250	335	140	0,77
160	180	250	130	0,47
160	200	285	145	0,57
160	224	310	145	0,65
160	250	335	145	0,85
180	80	145	135	0,20
180	125	190	135	0,31
180	140	210	140	0,36
180	150	220	140	0,39
180	160	230	140	0,43
180	200	285	155	0,62
180	224	310	155	0,69
180	250	335	155	0,82
180	280	375	165	1,02



Ød nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg
200	224	310	165	0,66
200	250	335	165	0,79
200	280	375	175	1,00
200	300	395	175	1,09
200	315	410	175	1,13
224	250	335	180	0,84
224	280	375	190	1,01
224	300	395	190	1,11
224	315	410	190	1,18
224	355	460	200	1,44
250	280	375	200	1,03
250	300	395	200	1,12
250	315	410	200	1,13
250	355	460	210	1,46
250	400	505	210	1,83
280	250	335	205	0,86
280	280	375	215	1,03
280	300	395	215	1,12
280	315	410	215	1,19
280	355	460	225	1,44
280	400	505	225	1,80
280	450	555	225	2,11
300	280	375	225	1,03
300	315	410	225	1,20
300	355	460	235	1,45
300	400	505	235	1,73
300	450	555	235	2,10
315	280	375	235	1,11
315	355	460	245	1,53
315	400	505	245	1,80
315	450	555	245	2,01
315	500	610	250	2,24
355	280	375	245	1,36
355	315	410	255	1,55
355	355	460	265	1,91
355	400	505	265	2,18
355	450	555	265	2,46
355	500	610	270	2,77
355	560	670	270	3,11
400	140	210	250	0,44
400	180	250	250	0,66
400	280	375	275	1,34
400	355	460	285	1,89
400	450	555	285	2,58
400	500	610	290	2,96
400	560	670	290	3,29

Ød nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg
400	600	710	290	3,51
400	630	740	290	3,68
450	140	210	275	0,40
450	180	250	275	0,64
450	280	375	300	1,46
450	355	460	310	1,98
450	450	555	310	2,60
450	500	610	315	3,08
450	560	670	315	3,48
450	600	710	315	3,74
450	630	740	315	3,94
450	710	820	315	4,70
500	140	210	300	0,43
500	180	250	300	0,60
500	280	375	325	1,29
500	355	460	335	1,85
500	450	555	335	2,74
500	500	610	340	3,28
500	560	670	340	3,83
500	600	710	340	4,25
500	630	740	340	4,35
500	710	820	340	5,74
500	800	910	340	6,91
560	280	375	355	1,34
560	355	460	365	1,98
560	450	555	365	2,78
560	500	610	370	3,27
560	560	670	370	3,85
560	600	710	370	4,26
560	630	740	370	4,58
560	710	820	370	5,71
560	800	910	370	6,34
560	900	1030	370	8,45
600	280	375	375	1,37
600	355	460	385	1,93
600	450	555	385	2,81
600	500	610	390	3,29
600	560	670	390	3,86
600	600	710	390	4,54
600	630	740	390	4,58
600	710	820	390	5,69
600	800	910	390	6,79
600	900	1030	390	8,36
630	280	375	390	1,39
630	355	460	400	1,86
630	450	555	400	2,83



## Round fittings

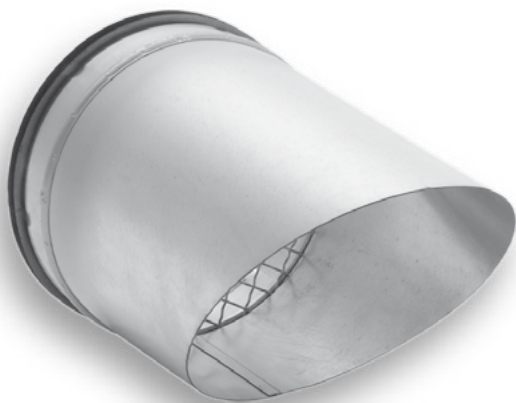
Ød nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg
630	500	610	405	3,42
630	560	670	405	3,87
630	600	710	405	4,27
630	630	740	405	4,45
630	710	820	405	5,68
630	800	910	405	6,76
630	900	1030	405	8,30
630	1000	1130	405	9,71
710	250	335	420	1,26
710	280	375	420	1,50
710	300	395	430	1,64
710	315	410	430	1,74
710	355	460	440	2,08
710	400	505	440	2,61
710	450	555	440	3,01
710	500	610	445	3,52
710	560	670	445	4,11
710	600	710	445	4,52
710	630	740	445	4,81
710	710	820	445	6,00
710	800	910	445	7,10
710	900	1030	445	8,69
710	1000	1130	445	10,20
710	1120	1250	445	12,40
800	250	335	465	1,08
800	280	375	475	1,44
800	300	395	475	1,57
800	315	410	475	1,61
800	355	460	485	2,00
800	400	505	485	2,50
800	450	555	485	2,88
800	500	610	490	3,59
800	560	670	490	3,93
800	600	710	490	4,32
800	630	740	490	4,94
800	710	820	490	5,73
800	800	910	490	6,99
800	900	1030	490	8,32
800	1000	1130	490	8,61
800	1120	1250	490	11,90
800	1250	1380	490	14,00
900	315	410	525	2,00
900	355	460	535	2,43
900	400	505	535	3,41
900	450	555	535	3,59
900	500	610	540	4,24

Ød nom	Ød <sub>3</sub> nom	l mm	l <sub>3</sub> mm	weight kg
900	560	670	540	5,01
900	600	710	540	5,56
900	630	740	540	5,99
900	710	820	540	7,50
900	800	910	540	9,03
900	900	1030	540	11,20
900	1000	1130	540	13,30
900	1120	1250	540	16,40
900	1250	1380	540	19,70
1000	315	410	575	1,95
1000	355	460	585	2,36
1000	400	505	585	2,97
1000	450	555	585	3,54
1000	500	610	590	3,99
1000	560	670	590	5,02
1000	600	710	590	5,66
1000	630	740	590	6,34
1000	710	820	590	7,67
1000	800	910	590	9,31
1000	900	1030	590	11,80
1000	1000	1130	590	14,20
1000	1120	1250	590	17,70
1000	1250	1380	590	21,50
1120	500	610	650	4,25
1120	560	670	650	5,07
1120	600	710	650	5,66
1120	630	740	650	6,12
1120	710	820	650	7,75
1120	800	910	650	9,45
1120	900	1030	650	12,20
1120	1000	1130	650	14,30
1120	1120	1250	650	17,90
1120	1250	1380	650	21,70
1250	500	610	715	4,28
1250	560	670	715	5,11
1250	600	710	715	5,71
1250	630	740	715	6,18
1250	710	820	715	7,83
1250	800	910	715	9,55
1250	900	1030	715	12,50
1250	1000	1130	715	14,50
1250	1120	1250	715	18,2
1250	1250	1380	715	22,0

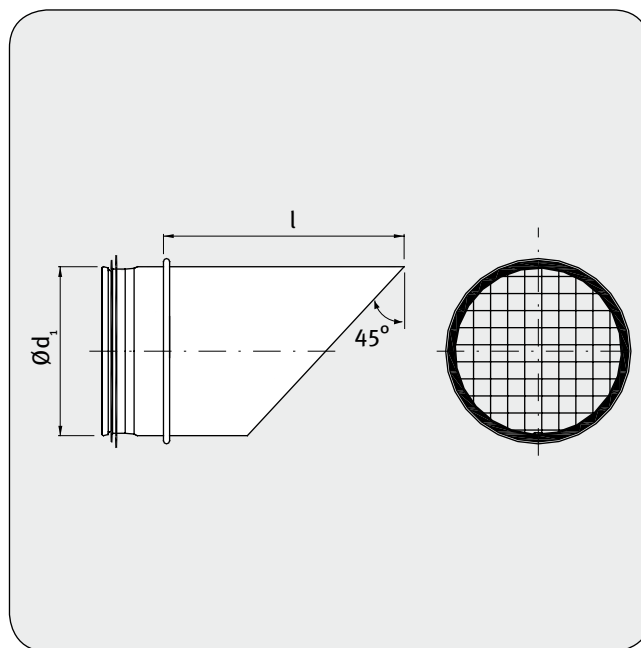


## ANGLE TAKE-OFF WITH MESH

AV / AVL



Also available without gasket



### MATERIAL

- galvanized steel
- EPDM rubber gasket (AVL)

### PRODUCT CHARACTERISTICS

- mesh mounted by spot welding
- stitch welded
- fits spiral duct
- gasket (AVL) is positioned by returned edges

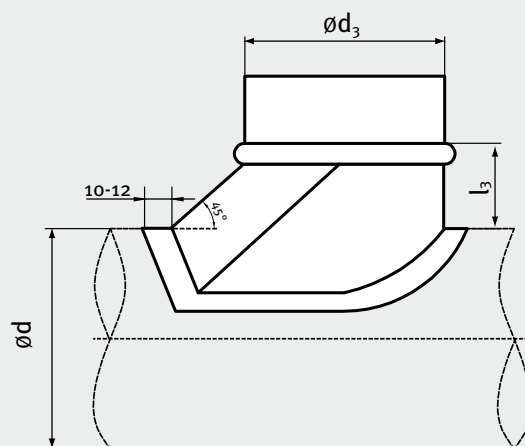
Ød <sub>1</sub> nom	l mm	weight kg	box quantity
80	180	0,17	30
100	200	0,22	85
125	225	0,29	35
140	240	0,34	35
150	250	0,37	30
160	260	0,41	25
180	280	0,48	15
200	300	0,56	18
224	325	0,80	10
250	350	1,00	35
280	380	1,20	28
300	400	1,30	22
315	415	1,40	16
355	455	1,70	16

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
400	500	2,50	12
450	550	3,00	8
500	600	3,60	6
560	660	4,30	4
600	700	4,80	
630	730	5,20	2
710	810	8,40	2
800	900	10,00	
900	1000	12,00	
1000	1100	15,00	
1120	1220	19,00	
1250	1350	23,00	



## CURVED BOOT

**TBS**



### MATERIAL

- galvanized steel

### PRODUCT CHARACTERISTICS

- stitch welded
- installed on circular duct

$\varnothing d$ nom	$\varnothing d_3$ nom	$l_3$ mm	box quantity
80	80	40	
100	80	40	
100	100	50	35
125	80	40	
125	100	50	30
125	125	62	50
140	80	40	
140	100	50	
140	125	62	
150	80	40	
150	100	50	30
150	125	62	50
150	150	75	22
160	80	40	20
160	100	50	30
160	125	62	45
160	150	75	20
160	160	75	
180	80	40	
180	100	50	
180	125	62	
180	150	75	

$\varnothing d$ nom	$\varnothing d_3$ nom	$l_3$ mm	box quantity
180	160	75	
180	180	75	
200	80	40	30
200	100	50	30
200	125	62	50
200	150	75	20
200	160	75	30
200	180	75	
200	200	75	25
224	80	40	
224	100	50	
224	125	62	
224	150	75	
224	160	75	
224	180	75	
224	200	75	
224	224	100	
250	80	40	34
250	100	50	34
250	125	62	40
250	150	75	20
250	160	75	30



Ød nom	Ød <sub>3</sub> nom	l <sub>3</sub> mm	box quantity
250	180	75	22
250	200	75	22
250	224	100	15
250	250	100	64
280	80	40	
280	100	50	
280	125	62	
280	150	75	
280	160	75	
280	180	75	
280	200	75	
280	224	100	
280	250	100	
280	280	100	
300	80	40	
300	100	50	44
300	125	62	
300	150	75	22
300	160	75	
300	180	75	
300	200	75	25
300	224	100	
300	250	100	16
300	280	100	
300	300	100	50
315	80	40	
315	100	50	44
315	125	62	20
315	150	75	55
315	160	75	30
315	180	75	20
315	200	75	
315	224	100	18
315	250	100	18
315	280	100	
315	300	100	50
315	315	100	60
355	80	40	
355	100	50	30
355	125	62	20
355	150	75	80
355	160	75	80
355	180	75	80
355	200	75	30
355	224	100	70
355	250	100	70
355	280	100	
355	300	100	50

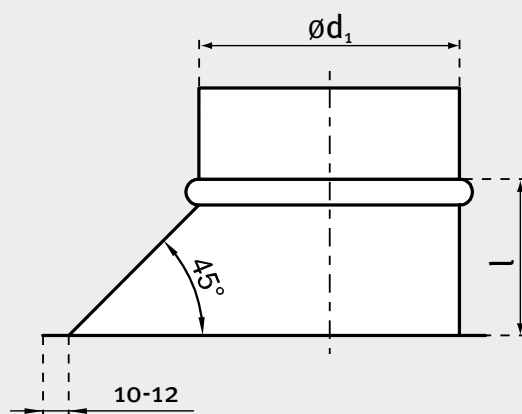
Ød nom	Ød <sub>3</sub> nom	l <sub>3</sub> mm	box quantity
355	315	100	30
355	355	150	25
400	80	40	
400	100	50	
400	125	62	
400	150	75	
400	160	75	
400	180	75	
400	200	75	
400	224	100	
400	250	100	20
400	280	100	
400	300	100	50
400	315	100	50
400	355	150	25
400	400	150	
450	80	40	
450	100	50	
450	125	62	
450	150	75	30
450	160	75	
450	180	75	
450	200	75	25
450	224	100	
450	250	100	64
450	280	100	
450	300	100	40
450	315	100	20
450	355	150	25
450	400	150	
450	450	150	
500	80	40	
500	100	50	25
500	125	62	25
500	150	75	
500	160	75	
500	180	75	
500	200	75	
500	224	100	
500	250	100	10
500	280	100	
500	300	100	50
500	315	100	
500	355	150	25
500	400	150	10
500	450	150	
500	500	150	





## FLAT SHOE

## TBSF



### MATERIAL

- galvanized steel

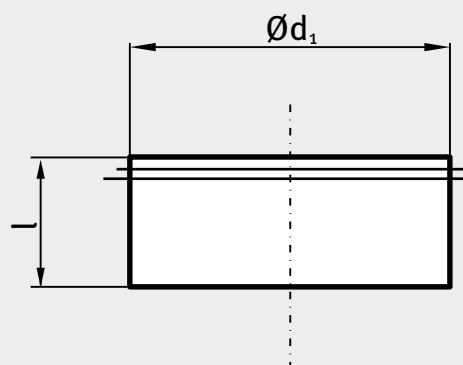
### PRODUCT CHARACTERISTICS

- stitch welded
- installed on rectangular duct

Ød <sub>1</sub> nom	l mm	box quantity
80	40	
100	50	110
125	62	60
150	75	60
160	75	40
180	75	22
200	75	20
224	100	20
250	100	64
280	100	
300	100	40
315	100	35
355	150	32
400	150	15
450	150	10
500	150	12



## MALE CONNECTOR

*SSST*

## MATERIAL

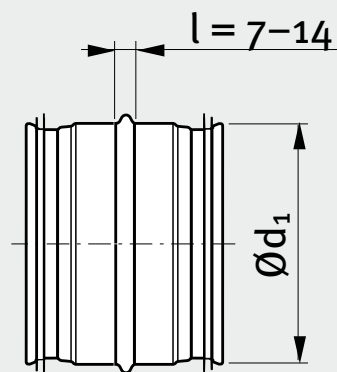
- galvanized steel
- EPDM rubber gasket

## PRODUCT CHARACTERISTICS

- stitch welded
- gasket is positioned by returned edges

Ød nom	l mm	box quantity
80	45	350
100	45	240
125	45	160
140	45	120
150	45	110
160	45	90
180	45	125
200	45	90
224	45	70
250	65	40
280	65	130
300	67	125
315	67	110
355	67	100

Ød nom	l mm	box quantity
400	81	70
450	81	50
500	81	40
560	81	45
600	81	40
630	81	35
710	107	22
800	107	20
900	107	20
1000	120	18
1120	120	20
1250	120	16

**MALE COUPLING****NP / NPL**

Also available without gasket

**MATERIAL**

- galvanized steel
- EPDM rubber gasket (NPL)

**PRODUCT CHARACTERISTICS**

- stitch welded
- used for joining spiral ducts
- gasket (NPL) is positioned by returned edges

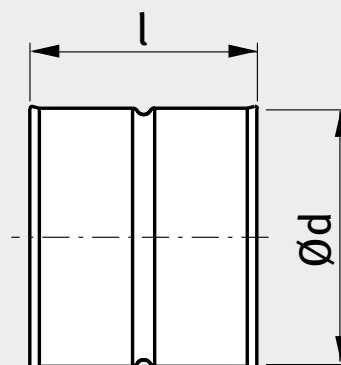
Ød nom	weight kg	box quantity
80	0,09	80
100	0,12	100
125	0,15	70
140	0,16	55
150	0,18	75
160	0,19	65
180	0,25	55
200	0,30	40
224	0,30	30
250	0,52	20
280	0,56	65
300	0,64	60
315	0,66	55
355	0,76	45

Ød nom	weight kg	box quantity
400	1,10	30
450	1,34	20
500	1,52	16
560	1,90	14
600	2,10	14
630	2,24	12
710	2,65	8
800	3,10	12
900	4,52	
1000	5,30	6
1120	7,03	
1250	7,70	



## FEMALE COUPLING

MF



## MATERIAL

- galvanized steel

## PRODUCT CHARACTERISTICS

- stitch welded
- used for joining fittings
- turned-over edge on most popular diameters

Ød nom	l mm	weight kg	box quantity
80*	95	0,08	80
100*	95	0,10	100
125*	95	0,13	60
140	95	0,17	55
150*	95	0,18	70
160*	95	0,20	60
180	95	0,22	55
200*	95	0,25	35
224	95	0,27	30
250*	140	0,42	18
280	130	0,50	65
300	130	0,51	60
315*	140	0,54	50
355	130	0,62	45

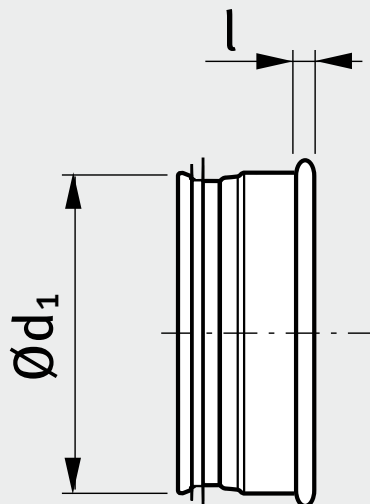
\* With turned-over edge

Ød nom	l mm	weight kg	box quantity
400*	180	0,96	30
450	170	1,17	20
500*	180	1,46	16
560	170	1,57	14
600	170	1,65	14
630	170	1,74	12
710	210	1,96	8
800	210	2,24	35
900	210	4,00	
1000	210	4,43	
1120	250	5,90	
1250	250	6,52	



## DUCT END CAP

**ES / ESL**



Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (ESL)

### PRODUCT CHARACTERISTICS

- fits inside spiral duct

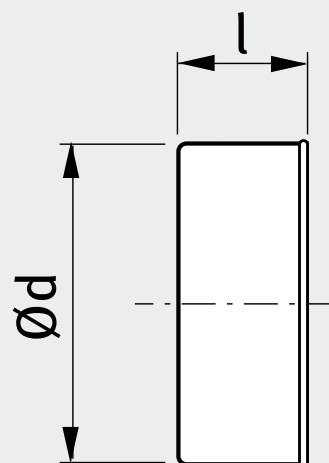
Ød <sub>1</sub> nom	l mm	weight kg	box quantity
80	10	0,08	80
100	10	0,12	110
125	10	0,14	72
140	10	0,19	50
150	10	0,17	50
160	10	0,24	40
180	10	0,28	30
200	10	0,32	50
224	10	0,40	40
250	10	0,37	25
280	4	0,62	30
300	10	0,70	25
315	10	0,80	16
355	12	0,91	20

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
400	12	1,26	10
450	4	1,48	35
500	12	2,00	36
560	4	2,04	28
600	4	2,38	
630	4	2,90	20
710	4	3,21	12
800	4	5,00	10
900	4	5,26	
1000	4	9,25	
1120	4	7,92	
1250	4	10,00	



## FITTING END CAP

EPF



## MATERIAL

- galvanized steel

## PRODUCT CHARACTERISTICS

- fits outside a fitting

Ød nom	l mm	weight kg	box quantity
80*	48	0,07	75
100*	48	0,11	55
125*	48	0,14	80
140	48	0,16	60
150	48	0,14	55
160*	48	0,17	45
180	48	0,24	40
200*	46	0,21	40
224	46	0,35	40
250*	68	0,50	30
280	60	0,61	30
300	60	0,63	30
315*	60	0,67	22
355	60	0,84	25

\* With turned-over edge

\*\* Hand made

Ød nom	l mm	weight kg	box quantity
400*	91	1,17	12
450	80	1,48	50
500**	80	1,81	35
560	80	2,14	35
600	80	2,37	
630**	80	2,54	20
710	100	3,00	14
800**	100	3,54	10
900	100	6,10	
1000**	100	7,30	
1120	120	9,40	
1250**	120	11,30	



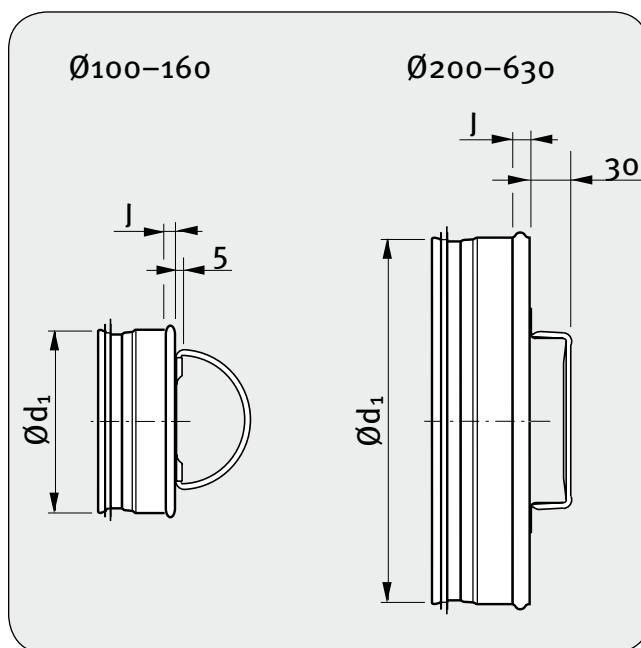
## DUCT END CAP WITH HANDLE

**ESHL**



### MATERIAL

- galvanized steel
- EPDM rubber gasket



### PRODUCT CHARACTERISTICS

- cleaning cover which fits inside spiral duct
- handle mounted by spot welding

Ød <sub>1</sub> nom	l mm	weight kg	handle
100	10	0,17	1 folding
125	10	0,19	1 folding
140	10	0,24	1 folding
150	10	0,22	1 folding
160	10	0,29	1 folding
180	10	0,32	1 fixed
200	10	0,36	1 fixed
224	10	0,44	1 fixed
250	10	0,58	2 fixed
280	4	0,70	2 fixed
300	10	0,78	2 fixed
315	10	0,88	2 fixed
355	10	0,99	2 fixed
400	12	1,34	2 fixed
500	12	1,72	2 fixed
630	4	2,62	2 fixed



## FITTING END CAP WITH HANDLE

EPFH

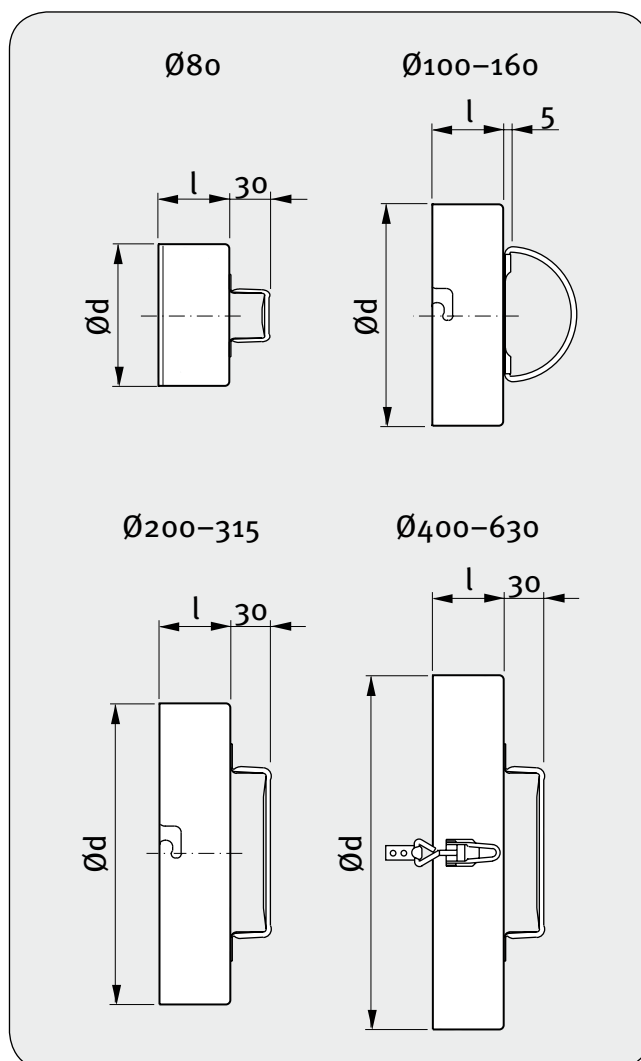


## MATERIAL

- galvanized steel

## PRODUCT CHARACTERISTICS

- cleaning cover which fits outside a fitting
- dimensions Ø100 – Ø315
  - equipped with notches for bayonet locking
- dimensions Ø400 - 630
  - equipped with eccentric locks



Ød nom	l mm	weight kg	handle	locking
80	48	0,09	1 fixed small	–
100	40	0,15	1 folding	bayonet
125	40	0,17	1 folding	bayonet
160	40	0,22	1 folding	bayonet
200	40	0,32	1 fixed	bayonet
250	60	0,55	2 fixed	bayonet
315	60	0,74	2 fixed	bayonet
400	80	1,26	2 fixed	eccenter
500	80	1,87	2 fixed	eccenter
630	80	2,71	2 fixed	eccenter





## FLAT TAKE-OFF

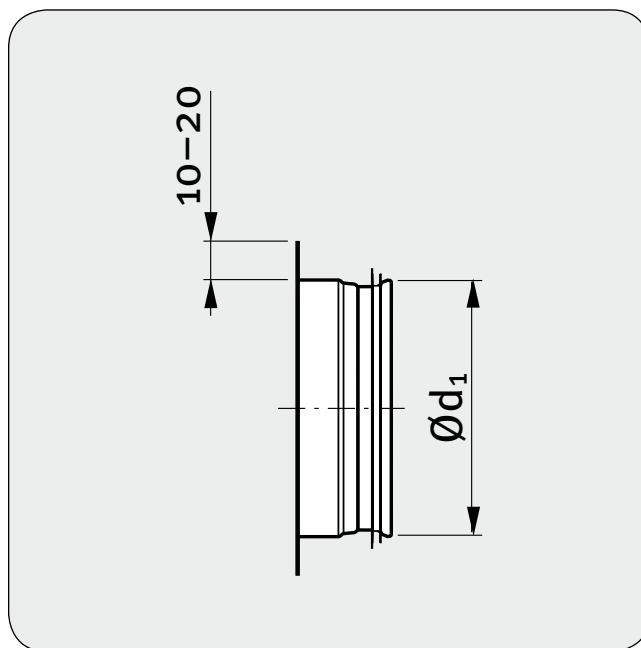
IL / ILL



Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (ILL)



### PRODUCT CHARACTERISTICS

- stitch welded
- without radius
- gasket (ILL) is positioned by returned edges

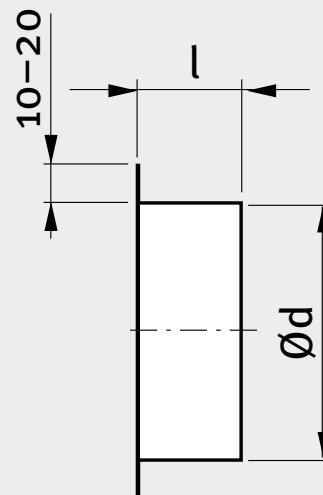
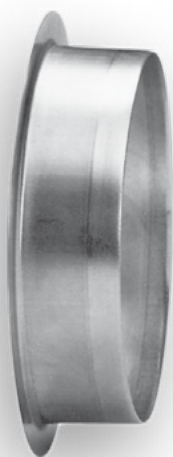
Ød <sub>1</sub> nom	weight kg	box quantity
80	0,08	70
100	0,07	90
125	0,11	120
140	0,15	50
150	0,15	45
160	0,16	85
180	0,19	70
200	0,21	50
224	0,36	35
250	0,36	44
280	0,30	36
300	0,36	28
315	0,54	25
355	0,41	25

Ød <sub>1</sub> nom	weight kg	box quantity
400	0,58	12
450	0,71	50
500	0,83	45
560	0,96	40
600	0,99	30
630	1,13	30
710	1,58	20
800	2,11	15
900	2,70	
1000	3,23	
1120	4,10	
1250	4,55	



## FEMALE FLAT TAKE-OFF

ILF



## MATERIAL

- galvanized steel

## PRODUCT CHARACTERISTICS

- stitch welded
- without radius
- female end - fits outside a fitting

Ød nom	l mm	weight kg	box quantity
80	45	0,08	60
100	45	0,06	85
125	45	0,08	60
140	45	0,15	50
150	45	0,15	50
160	45	0,16	40
180	45	0,19	70
200	45	0,21	25
224	45	0,26	
250	65	0,31	35
280	65	0,30	35
300	65	0,41	25
315	65	0,46	25
355	65	0,41	25
400	90	0,58	50
450	90	0,71	40
500	90	0,83	40
560	90	0,96	30
600	90	0,99	
630	90	1,13	30

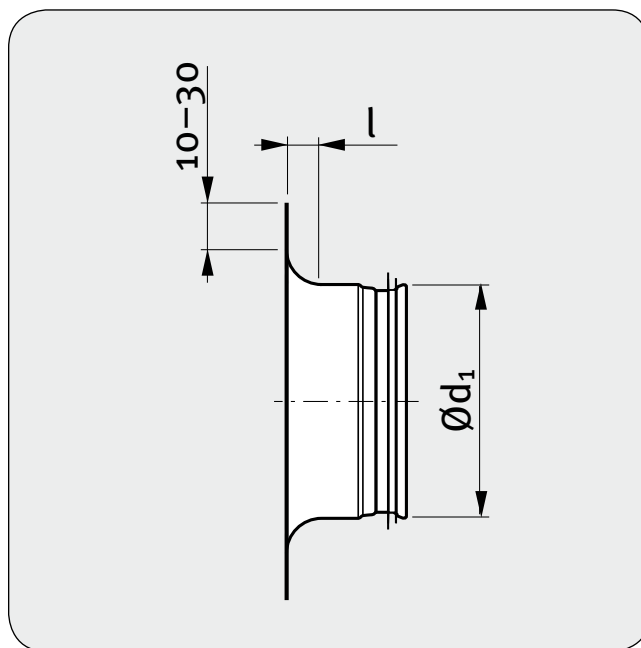


## TAKE-OFF WITH RADIUS

ILR / ILRL



Also available without gasket



### MATERIAL

- galvanized steel
- EPDM rubber gasket (ILRL)

### PRODUCT CHARACTERISTICS

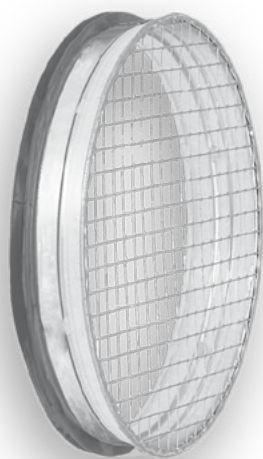
- pressed
- single element
- with radius
- gasket (ILRL) is positioned by returned edges

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
80	12	0,10	40
100	15	0,11	50
125	20	0,14	70
140	20	0,22	55
150	20	0,24	55
160	25	0,19	42
180	25	0,30	35
200	25	0,26	30
224	25	0,46	50
250	25	0,57	18
300	25	0,68	18
315	25	0,72	18
355	25	0,53	12
400	25	0,97	42
500	25	1,35	34
630	25	1,77	20



## TAKE-OFF WITH MESH

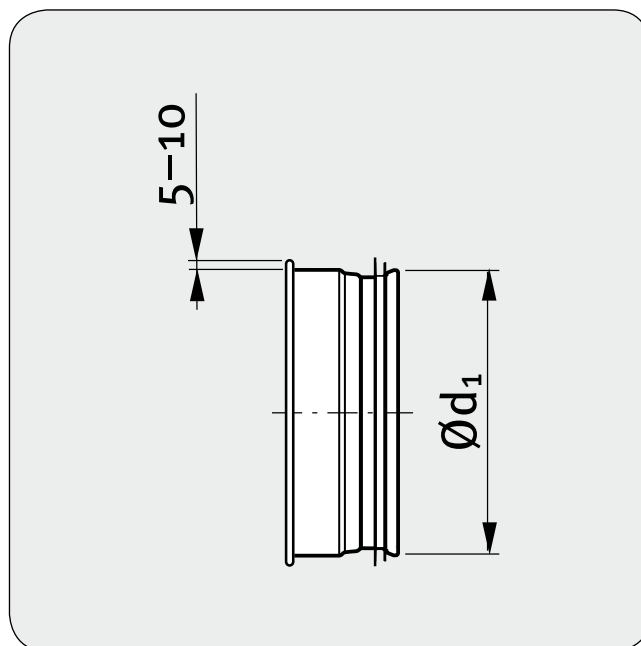
ESN / ESNL



Also available without gasket

## MATERIAL

- galvanized steel
- EPDM rubber gasket (ESNL)



## PRODUCT CHARACTERISTICS

- mesh mounted by spot welding
- stitch welded
- 10 x 10 mm mesh
- to terminate an inlet duct

Ød <sub>1</sub> nom	weight kg	box quantity
80	0,09	75
100	0,10	60
125	0,13	45
140	0,17	28
150	0,16	28
160	0,17	28
180	0,21	30
200	0,25	30
224	0,31	25
250	0,38	25

Ød <sub>1</sub> nom	weight kg	box quantity
280	0,37	16
300	0,51	15
315	0,57	15
355	0,54	50
400	0,75	50
450	0,92	50
500	1,09	25
560	1,26	30
600	1,34	20
630	1,55	20



## NON-INSULATED ALUMINUM FLEXIBLE DUCT

**FLD**



### PRODUCT CHARACTERISTICS

- standard 10 m long ducts fitted into 0,5 m cardboard boxes
- low transportation and storage cost
- easy assembly
- no need to use special tools for cutting or fixing
- does not emit toxic gases in high temperatures
- product's fire resistance is certified by European certificates
- PN-EN 13180:2004 norm compliant

### USE

This duct has been designed to transport air in both AC and ventilation duct systems. Attenuates system's vibration. Reduces the need to use fittings.

### DESIGN

Three-layer laminate with Polyester. Extremely resistant to mechanical damage. The duct is reinforced with a steel spiral wire (lead 24 mm).

TYPE	FLD
Spiral lead	24 mm
Diameter range	82 - 458 mm
Operating temperature range	-30/+140 °C
Maximum air speed	30 m/s
Maximum operating Pressure	2500 Pa
Standard length	10 m
Cardboard Package	0,5 m

**Note** - duct characteristics on Page 63



## INSULATED ALUMINUM FLEXIBLE DUCT

## FLDFSLS / FLDPI



FLDFSLS



FLDPI

### PRODUCT CHARACTERISTICS

- standard 10 m long ducts fitted into 1 m cardboard boxes
- low transportation and storage cost
- easy assembly
- no need to use special tools for cutting or fixing
- does not emit toxic gases in high temperatures
- product's fire resistance is certified by European certificates
- PN-EN 13180:2004 norm compliant

### USE

Flexible duct with thermal insulation and sound attenuation is designed especially to transport air in ventilation and AC systems. Thanks to perforation of the internal duct, the noise generated by installation is reduced. Reduces system's vibrations. Reduces the need to use fittings.

### DESIGN

Internal layer of the FLDFSLS/FLDPI duct is made of lightly perforated FLD duct. Insulation material is mineral wool, while the external cover is made of three-layer laminate reinforced by carbon fiber. FLDFSLS duct has additional vaporproof layer of perforated foil, between the internal duct and insulation layer, made of polyester.

TYPE	FLDFSLS / FLDPI
Internal duct	FLD (Perforated)
Insulation 20 kg/m <sup>3</sup>	25 mm mineral wool
External cover	Aluminum, Polyester
Diameter range	82 - 458 mm
Operating temperature range	-30/+140 °C
Maximum air speed	30 m/s
Maximum operating Pressure	2000 Pa
Standard length	10 m
Cardboard Package	1 m

**Note** - duct characteristics on Page 63

**NON-INSULATED ALUMINUM FLEXIBLE DUCT****FHD****PRODUCT CHARACTERISTICS**

- completely non-combustible flexible aluminum duct
- thanks to thicker aluminum layer the duct's stiffness and durability are increased as compared to a traditional flexible duct
- standard 10 m long ducts are individually fitted into 0,5 m cardboard boxes
- low transportation and storage cost
- easy assembly
- no need to use special tools for cutting or fixing
- does not emit toxic gases in high temperatures
- product's fire resistance is certified by European certificates
- PN-EN 13180:2004 norm compliant

**USE**

This duct has been designed to transport air in both AC and ventilation duct systems. It can also be used to transport hot air of temperature **up to +250°C**. Completely non-flammable. Attenuates system's vibration. Reduces the need to use fittings.

**DESIGN**

Two layer aluminum foil glued with non-flammable glue. Fused steel wire spiral with 24 mm lead. Total thickness 0,10 mm, total density 230 g/m<sup>3</sup>.

TYPE	FHD
Spiral lead	24 mm
Diameter range	102 - 458 mm
Operating temperature range	-30/+250 °C
Maximum air speed	30 m/s
Maximum operating pressure	3000 Pa
Standard length	10 m
Cardboard package	0,5 m

**Note** - duct characteristics on Page 63





## INSULATED ALUMINUM FLEXIBLE DUCT

**FIHD**



### PRODUCT CHARACTERISTICS

- completely non-combustible flexible aluminum duct
- internal layer does not contain any Polyester
- thanks to thicker aluminum layer the duct's stiffness, hardness and durability are increased as compared to a traditional flexible duct
- standard 10 m long ducts are individually fitted into 1 m cardboard boxes
- low transportation and storage cost
- easy assembly
- no need to use special tools for cutting or fixing
- does not emit toxic gases in high temperatures
- product's fire resistance is certified by European certificates
- PN-EN 13180:2004 norm compliant

### USE

This flexible and thermally insulated duct has been especially designed for ventilation and AC market. Thanks to its thermal resistance and non combustibility, it can also be used to transport hot air of temperature **up to +250°C** including distribution of hot air from fireplaces. Attenuates system's vibration. Reduces the need to use fittings and provides thermal insulation.

### DESIGN

The internal layer of FIHD duct (insulated) is made of non-perforated FHD duct. Two layer aluminum foil glued with non-flammable glue. Fused steel wire spiral with 24 mm lead. Insulation material is mineral wool and the external cover is made of multi layer laminated aluminum reinforced with carbon fibre.

TYPE	FIHD
Internal duct	FHD (non Perforated)
Insulation 20 kg/m <sup>3</sup>	25 mm mineral wool
External cover	reinforced aluminum, Polyester
Diameter range	102 - 458 mm
Operating temperature range	-30/+250 °C
Maximum air speed	30 m/s
Maximum operating pressure	3000 Pa
Standard length	10 m
Cardboard package	1 m

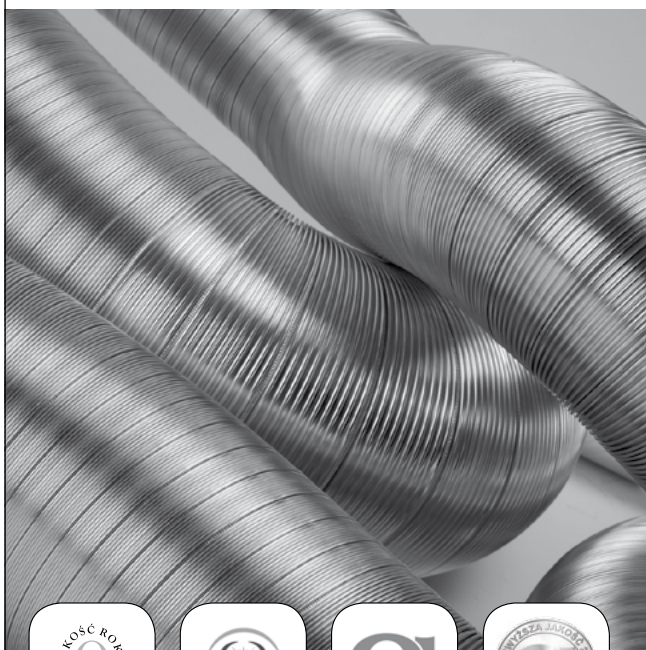
**Note** - duct characteristics on Page 63





## SEMI-RIGID ALUMINUM DUCT

**S-FLEX®**



### USE

Semi-rigid aluminum duct. Due to a wide range of possible uses, this product can be used in AC and ventilation systems as well as for other industrial purposes.

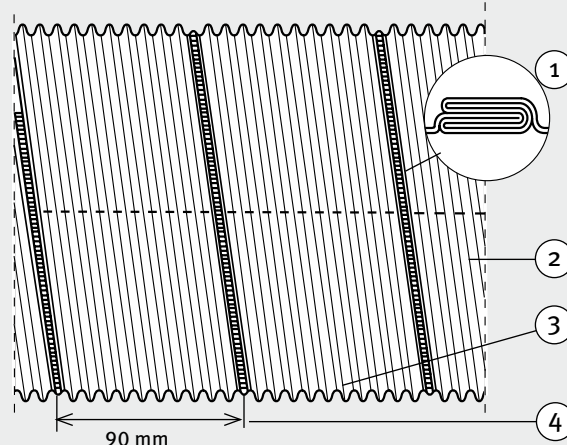
### DESIGN

S-Flex is a product used in construction of ventilation and air conditioning installations. Due to its high mechanical durability, the product proves indispensable also in the installations of industrial facilities. Perfected technical parameters, high flexibility and special design enable to install ducts without the necessity to use special tools or fittings.

TYPE	S-FLEX®
Material	aluminum
Aluminum tape thickness	0,09 mm
Diameter range	80 - 400 mm
Operating temperature range	-30/+280 °C
Maximum air speed	25 m/s
Maximum operating pressure	2000 Pa
Standard length	3 m
Compressed duct length	0,8 m (at maximum compression 0,6 m)

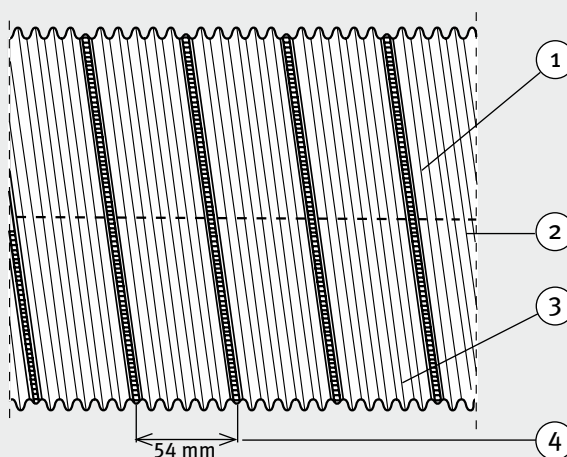
Note - duct characteristics on Page 63

### S-flex® duct



1. High-quality durable interlock seam
2. Aluminium tape thickness 0,09 mm
3. 10 compression grooves
4. S-Flex duct is manufactured from wide (90mm) aluminium tape. Thanks to this the number of seams is limited by 40%, the duct is more flexible and durable and easy to compress.

### Traditional duct



1. Non-durable seam
2. Material thickness below 0,10 mm
3. 5 compression grooves
4. A traditional duct is manufactured from a narrow 54 mm wide aluminium tape. It means more seams (up to 55 seams on 3 m standard length), making the duct less flexible, more prone to damages and less compressible.



## PVC FLEXIBLE DUCT

**FD**



### PRODUCT CHARACTERISTICS

- standard 10 m long ducts are individually fitted into 0,5 m cardboard boxes
- low transportation and storage cost
- easy assembly
- no need to use special tools for cutting or fixing
- does not emit toxic gases in high temperatures
- smooth internal surface
- extremely resistant to mechanical damage
- PN-EN 13180:2004 norm compliant

### USE

This duct is designed to be installed in low and medium pressure ventilation and AC systems. Attenuates system's vibration. Reduces the need to use fittings. This duct is characterized by high flexibility and durability in case of multiple reshaping and relocations.

### DESIGN

140 micrometers thick multilayer reinforced PVC. Fused steel wire spiral with 24 mm lead.

140 micrometers thick – gray

#### TYPE

#### FD

Spiral lead	24 mm
Diameter range	82 - 406 mm
Operating temperature range	-10/+75 °C
Maximum air speed	30 m/s
Maximum operating pressure	3000 Pa
Standard length	10 m
Cardboard package	0,5 m

**Note** - duct characteristics on Page 63



PVC LAMINATED ALUMINUM FLEXIBLE DUCT

FLDD



PRODUCT ADVANTAGES

- high mechanical durability and resistance to high temperatures
- standard 10 m long ducts are individually fitted into 0.75 m cardboard boxes
- low transportation and storage cost
- easy assembly
- no need to use special tools for cutting or fixing
- PN-EN 13180:2004 norm compliant

USE

FLDD duct is designed to transport air in duct systems. Thanks to the internal aluminum coating, FLDD is resistant to high temperatures. The external PVC coating ensures mechanical durability. This duct is characterized by high flexibility and durability in case of multiple reshaping and relocations.

DESIGN

Multilayer aluminum and polyester laminate with additional 70 micrometers thick PVC coating. Fused steel wire spiral with 24 mm lead.

TYPE	FLDD
Spiral lead	24 mm
Diameter range	82 - 508 mm
Operating temperature range	-10/+140 °C
Maximum air speed	30 m/s
Maximum operating pressure	3000 Pa
Standard length	10 m
Cardboard package	0,75 m

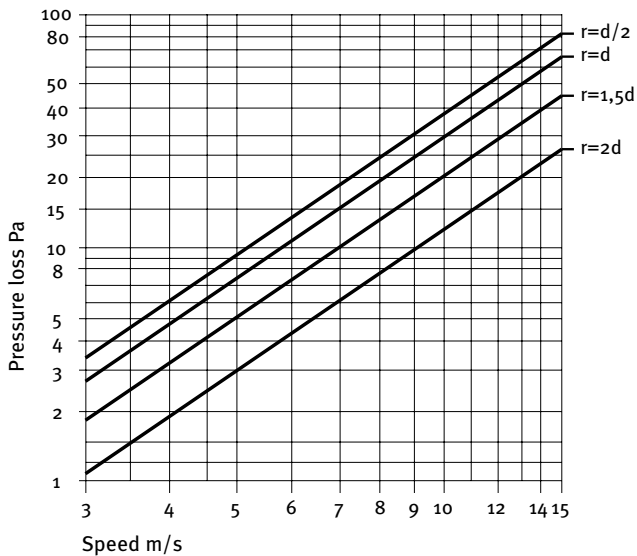
Note - duct characteristics on Page 63



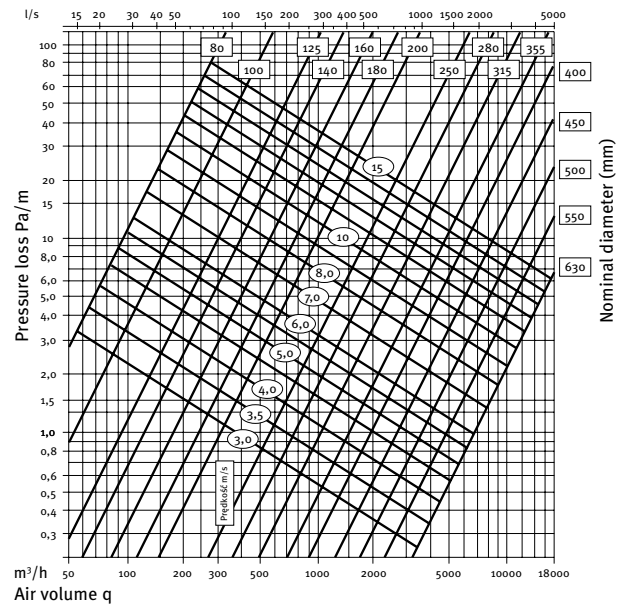
## FLEXIBLE DUCT SPECIFICATIONS

FLD, FLDFSL, FLDPI, S-FLEX, FD, FLDD, FHD, FIHD

### Local pressure loss on bends and elbows - chart



### Linear pressure loss chart



length FLDFSL L=2000 (mm)

dB (A)	reduction of the noise level through the ducts walls		noise attenuation	
frequency (Hz)	1/3 ova	1/1 ova	1/3 ova	1/1 ova
100	16,1		31,6	
125	19,7	18,4	28,5	29,1
160	21,0		27,9	
200	18,8		29,1	
250	17,5	15,2	31,6	31,5
315	12,3		37,3	
400	13,9		38,4	
500	11,1	10,8	39,0	38,9
630	8,8		39,3	
800	9,5		39,2	
1000	9,0	9,3	41,0	40,9
1250	9,3		43,6	
1600	10,3		44,3	
2000	11,1	11,1	48,2	46,7
2500	12,2		49,5	
3150	13,9		43,9	
4000	17,6	16,3	35,4	32,8
5000	19,3		29,1	

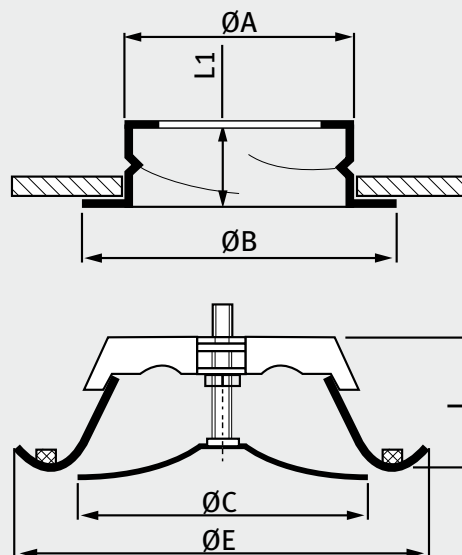
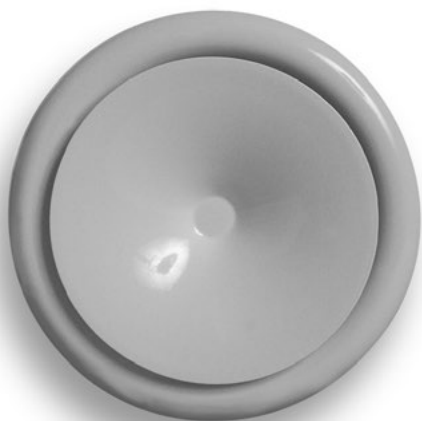
boxes per pallet (pc)

diameter	FLD	FLDPI	FLDFSL	FHD	FIHD	FLDD
82	300	90	90	300	90	300
102	280	48	48	240	48	240
127	204	44	44	170	44	170
152	130	30	30	130	30	130
163	130	27	27	130	27	130
178	88	27	27	77	27	77
203	88	24	24	77	24	77
229	54	14	14	54	14	54
254	54	14	14	54	14	54
277	35	12	12	35	12	35
305	35	12	12	35	12	35
315	35	12	12	35	12	35
356	30	12	12	30	12	30
406	24	8	8	25	8	25
458	16	4	4	16	4	16



## SUPPLY AIR VALVE

SR-S



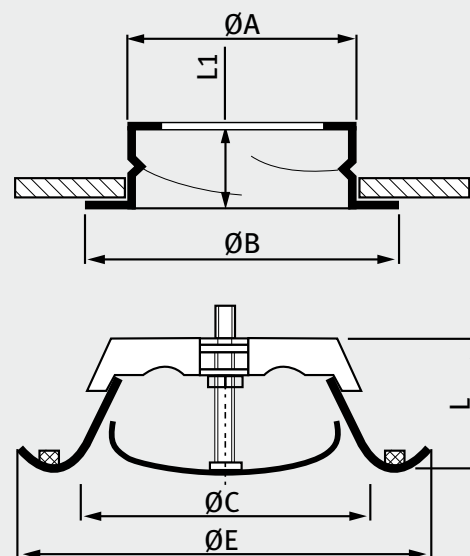
- supply air valve designed for ceiling mounting on ventilation ducts
- made of galvanized steel
- painted white (RAL 9010)
- easy adjustment of air flow by rotating central part
- blocking nut allows for setting the minimum slot
- special design provides low noise level
- high quality and modern design
- fast and easy installation

valve diameter	ØA mm	ØB mm	ØC mm	ØE mm	L mm	L1 mm
80	79	118	78	115	55	50
100	98	125	95	137	55	50
125	123	150	115	164	60	50
150	148	176	138	202	60	50
160	159	185	148	212	60	50
200	198	225	203	248	60	50
250	248	290	250	305	75	50



## EXHAUST AIR VALVE

SR-E



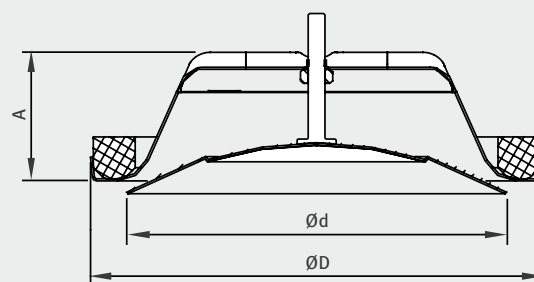
- exhaust air valve designed for ceiling mounting on ventilation ducts
- made of galvanized steel
- painted white (RAL 9010)
- easy adjustment of air flow by rotating central part
- blocking nut allows for setting the minimum slot
- special design provides low noise level
- high quality and modern design
- fast and easy installation

valve diameter	ØA mm	ØB mm	ØC mm	ØE mm	L mm	L1 mm
80	79	118	62	115	55	50
100	98	125	76	142	55	50
125	123	150	100	167	65	50
150	148	176	120	202	65	50
160	159	185	128	212	65	50
200	198	225	157	255	65	50
250	248	290	215	305	75	50



## SUPPLY AIR VALVE

NSV



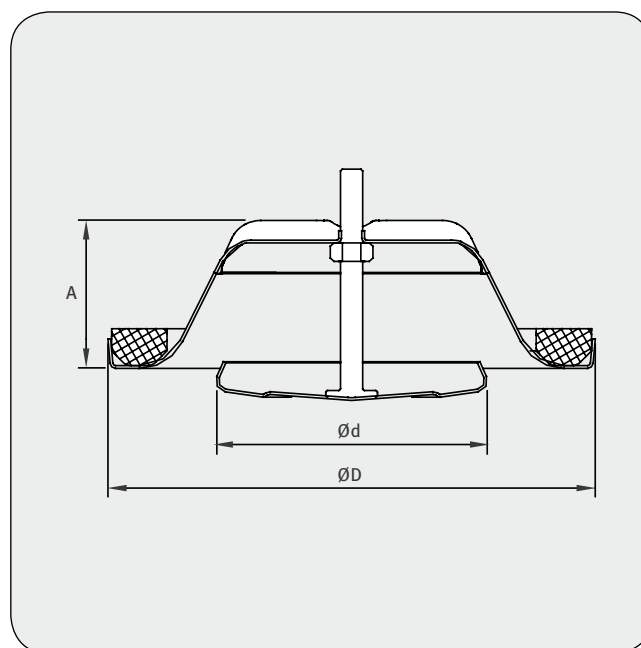
- supply air valve designed for ceiling mounting on ventilation ducts
- made of galvanized steel
- painted white (RAL 9010)
- easy adjustment of air flow by rotating central part
- blocking nut allows for setting the minimum slot
- special design provides low noise level
- high quality and modern design
- mounting frame allows for easy installation in ventilation systems
- fast and easy installation

valve diameter	ØD mm	Ød mm	A mm	weight kg
80	112	93	37	0,14
100	132	110	40	0,19
125	162	135	46	0,26
150	193	158	54	0,37
160	193	158	54	0,37
200	245	205	64	0,55



## EXHAUST AIR VALVE

NEV



- exhaust air valve designed for ceiling mounting on ventilation ducts
- made of galvanized steel
- painted white (RAL 9010)
- easy adjustment of air flow by rotating central part
- blocking nut allows for setting the minimum slot
- special design provides low noise level
- high quality and modern design
- mounting frame allows for easy installation in ventilation systems
- fast and easy installation

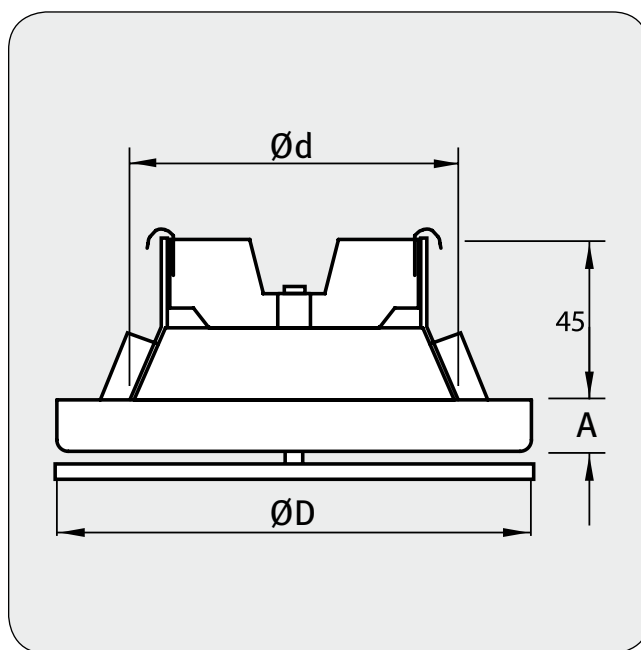
valve diameter	ØD mm	Ød mm	A mm	weight kg
80	112	60	37	0,12
100	132	75	40	0,16
125	163	99	46	0,23
150	193	119	54	0,34
160	193	119	54	0,34
200	245	158	64	0,51





## SUPPLY AIR VALVE

## SF-S



- supply air valve designed for ceiling mounting on ventilation ducts
- made of galvanized steel, attenuated with sound-absorbing material
- painted white (RAL 9010)
- easy adjustment of air flow by rotating central part
- blocking nut allows for setting the minimum slot

- special design of rotary plate filled with attenuating material provides low noise level
- high quality and modern design
- valve can be installed directly on duct or plenum box
- fast and easy installation

valve diameter	ØD mm	Ød mm	A mm
80	106	80	15
100	135	100	15
125	160	125	15
160	191	160	15
200	238	200	18

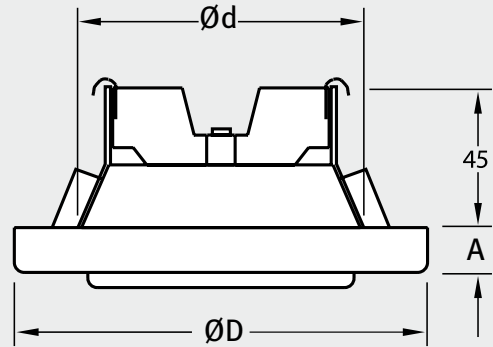
sound attenuation  $\Delta L$  (dB)

	medium band, Hz							
	63	125	250	500	1k	2k	4k	8k
SF-S 80	24	19	15	11	2	3	6	7
SF-S 100	22	17	13	10	2	2	7	8
SF-S 125	18	16	12	8	3	3	7	8
SF-S 160	18	15	11	9	4	5	7	9



## EXHAUST AIR VALVE

SF-E



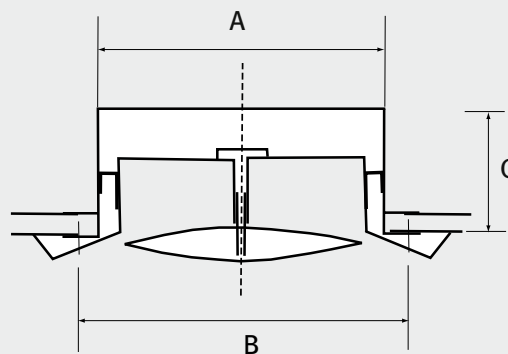
- exhaust air valve for ceiling or wall mounting
- made of galvanized steel
- painted white (RAL 9010)
- easy adjustment of air flow by rotating central part
- blocking nut allows for setting the minimum slot
- special design provides low noise level
- high quality and modern design
- valve can be installed directly on duct
- fast and easy installation

valve diameter	ØD mm	Ød mm	A mm
80	106	80	15
100	135	100	15
125	160	125	15
160	191	149	15
200	238	200	18



## AIR VALVE (CrNi STEEL)

VS



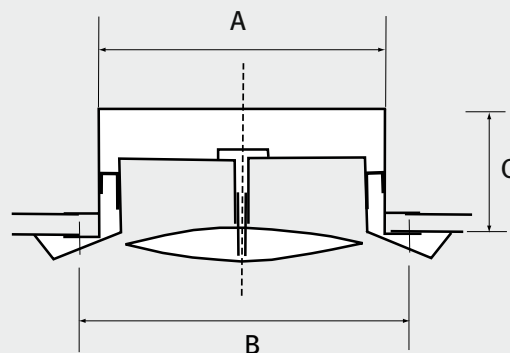
- VS air valve can operate as supply or exhaust valve
- made of CrNi steel – no corrosion occurrence
- non-painted – polished surface
- easy adjustment of air flow by rotating central part
- blocking nut allows for setting the minimum slot
- special design provides low noise level
- high quality and modern design
- long mounting frame made of CrNi steel
- fast and easy installation

valve diameter	ØD mm	ØB mm	C mm
100	97	118	52
125	120	141	52
150	145	162	62
160	155	172	62
200	195	228	74



## PLASTIC AIR VALVE

**VP**



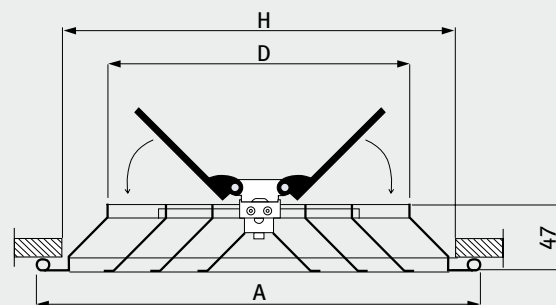
- VP air valve can operate as supply or exhaust valve
- made of polypropylene – no corrosion occurrence
- non-painted
- easy adjustment of air flow by rotating central part
- blocking nut allows for setting the minimum slot
- special design provides low noise level
- high quality and modern design
- long mounting frame made of polypropylene
- fast installation thanks to adjustable metal plates

valve diameter	ØD mm	Ød mm	A mm
100	97	118	50
125	120	141	50
150	145	162	50
200	195	220	50



## ROUND CEILING DIFFUSER

**CDCK**



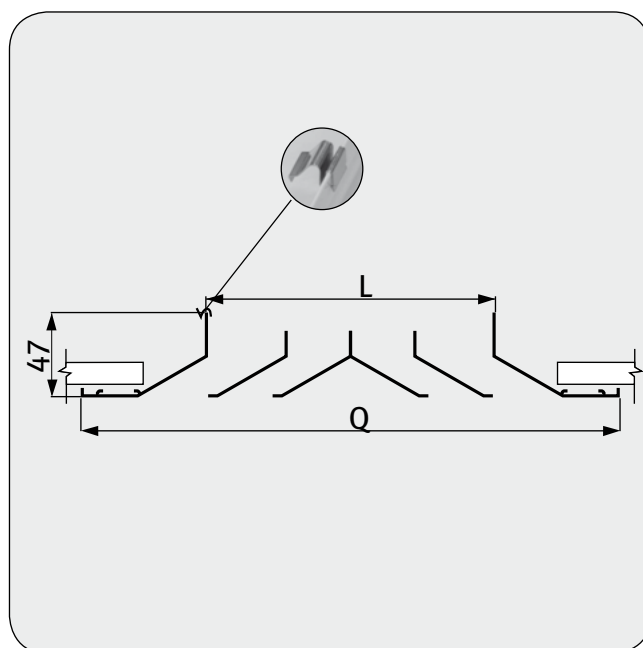
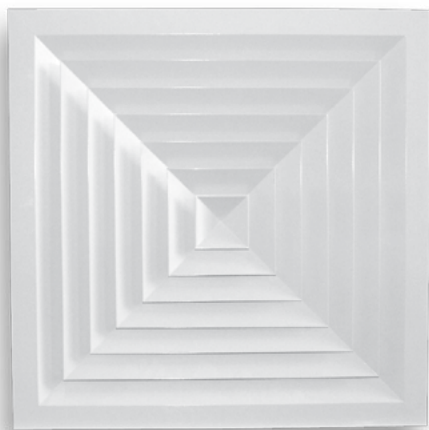
- diffuser elements are made of pressed aluminum
- integrated damper made of plastic
- painted white (RAL 9016)
- flat diffuser panel
- light weight
- removable lamellas
- easy installation and adjustment thanks to unique technical design
- suitable for hot or cold air supply and exhaust
- suitable for systems with variable air volume

diffuser diameter	A mm	D mm	H mm
150	257	149	225
200	307	199	275
250	357	249	325
300	407	299	375
350	457	349	425



## FOUR-WAY DIFFUSER

**HB40**



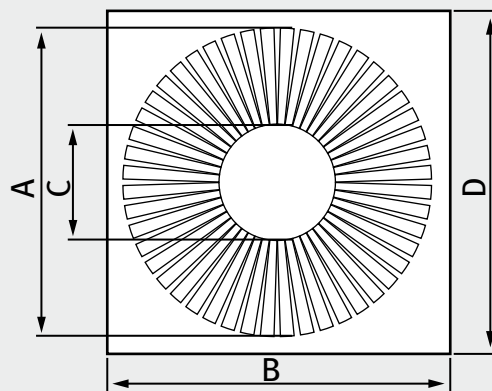
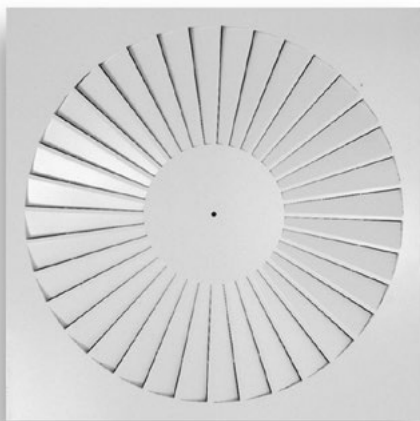
- made of pressed aluminum
- painted white (RAL 9010)
- lamellas set at 30° angle
- air flow distributed in four directions
- suitable for hot or cold air supply and exhaust
- light weight
- lamellas can be disassembled – easy access to diffuser's interior
- easy assembly by pressing snap fastener

diffuser size Q mm	neck size L mm
295x295	145x145
370x370	220x220
445x445	295x295
520x520	370x370
595x595	445x445

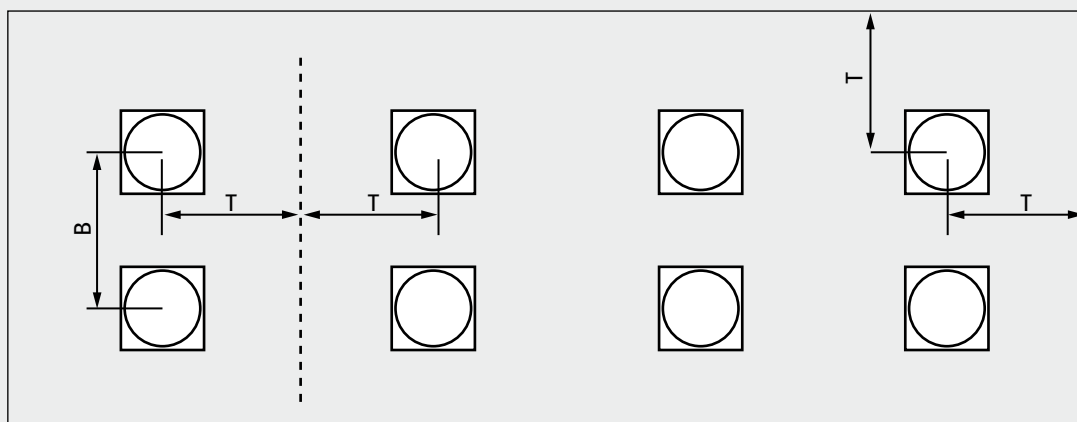


## SWIRL DIFFUSER

**SW**



### SW diffusers displacement



B- intervals between rows, T - airflow range

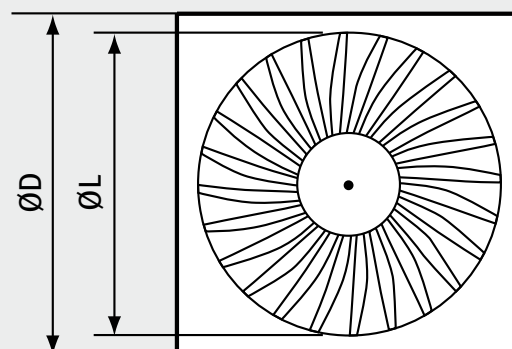
- diffuser elements are made of pressed galvanized steel
- even air distribution is provided by 36 radially located lamellas
- swirl air supply provides fast room temperature equalization
- painted white (RAL 9010)
- suitable for hot or cold air supply and exhaust
- easy installation – dimension is suitable for standard suspended ceiling

diffuser size	A mm	B mm	C mm	ØC mm
595 x 595	540	595	595	200

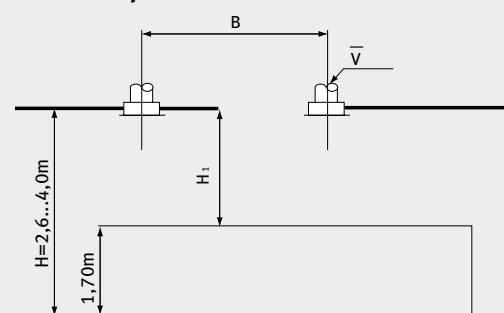


## SWIRL DIFFUSER

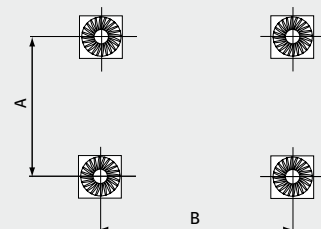
## SDB



### SDB diffusers displacement



$V$  (m<sup>3</sup>/h) - air volume  
 $H_1$  (m) - distance from the people area



A, B (m) - interval between two diffusers

- diffuser elements are made of pressed galvanized steel
- fixed blades provide even air distribution
- swirl air supply provides fast room temperature equalization

- painted white (RAL 9010)
- suitable for hot or cold air supply and exhaust
- easy installation in standard suspended ceiling

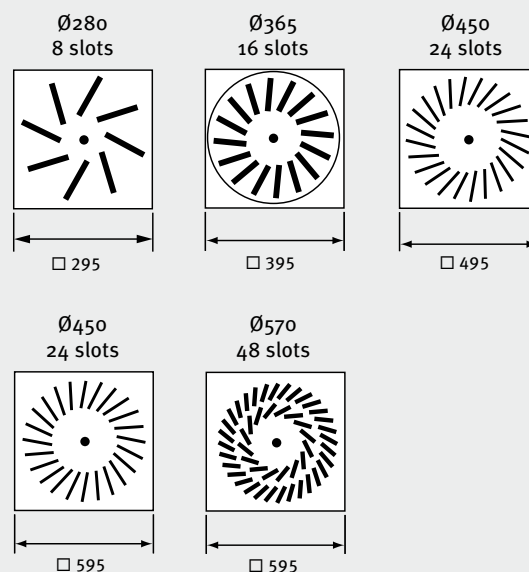
diffuser size	ØL mm	ØD mm
300	254	595
400	336	595
500	440	595
600	530	595





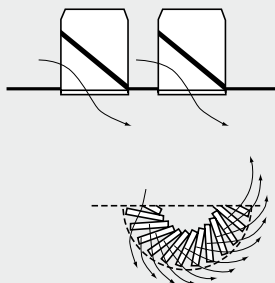
## SWIRL DIFFUSER

**SDC**

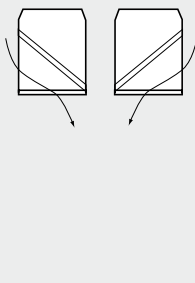


### adjustable lamellas position

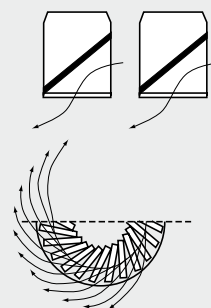
air flow outwards



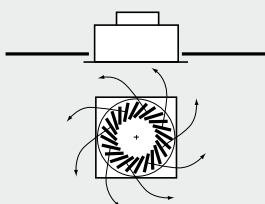
vertical air flow



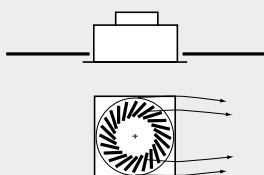
air flow inwards



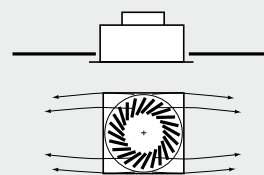
air flow direction for sizes: 280x8, 365x16, 450x24, 570x24



all lamellas are set  
at air flow outwards



half of lamellas are set  
for air flow outwards, the other  
half for air flow inwards



lamellas on opposite  
quarters are set at air flow inwards  
or outwards

- diffuser elements are made of pressed galvanized steel
- adjustable lamellas are made of high quality plastic
- 8 to 48 adjustable lamellas disposed radially provide even air distribution

- painted white (RAL 9010)
- suitable for air supply and exhaust

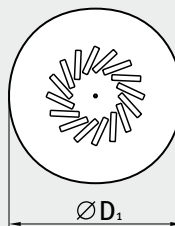


## SWIRL DIFFUSER

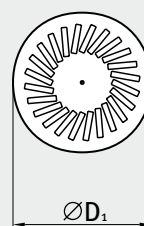
## DVR



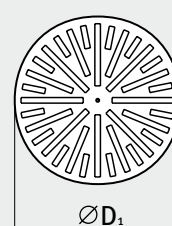
400 x 16  
16 slots



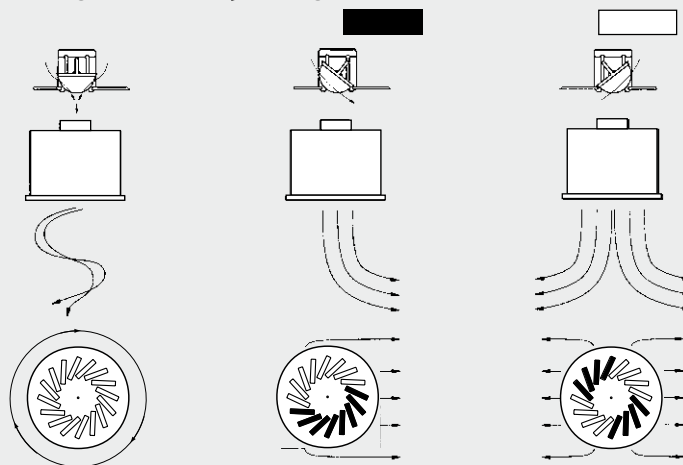
500 x 24  
24 slots



600 x 32  
32 slots

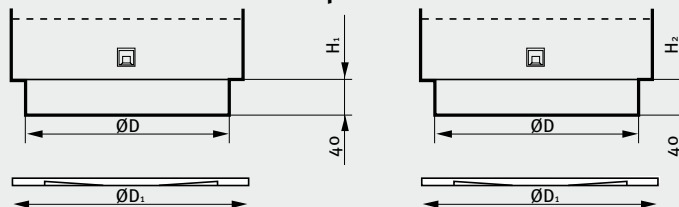


### standard lamellas settings and corresponding air flow direction:



- made of pressed galvanized steel
- painted white (RAL 9010)
- adjustable plastic lamellas
- 16 to 32 radially disposed lamellas provide even air distribution
- easy installation with just one R1 bolt

### front plate:

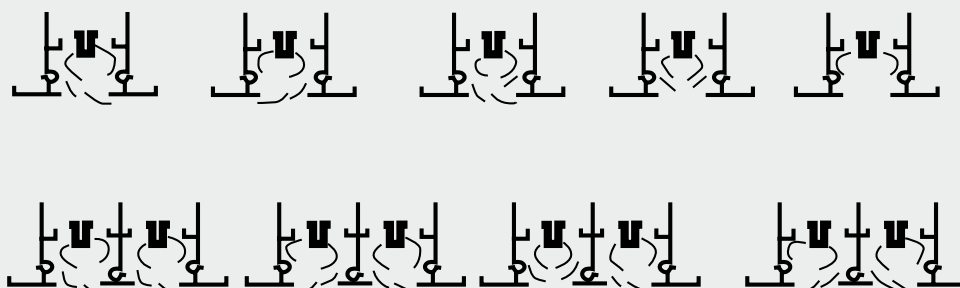
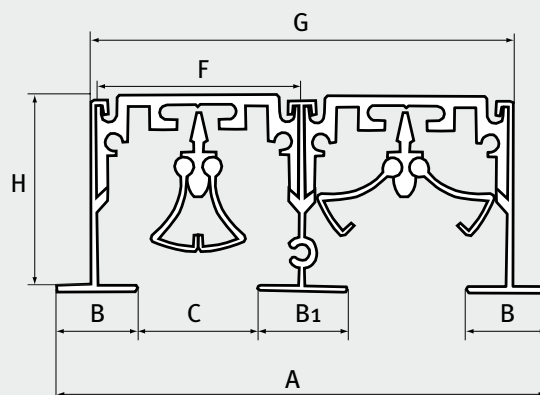


diffuser size	ØD <sub>1</sub> mm	ØD mm
400x16	400	370
500x24	500	488
600x32	600	590



## SLOT DIFFUSER

## SDML



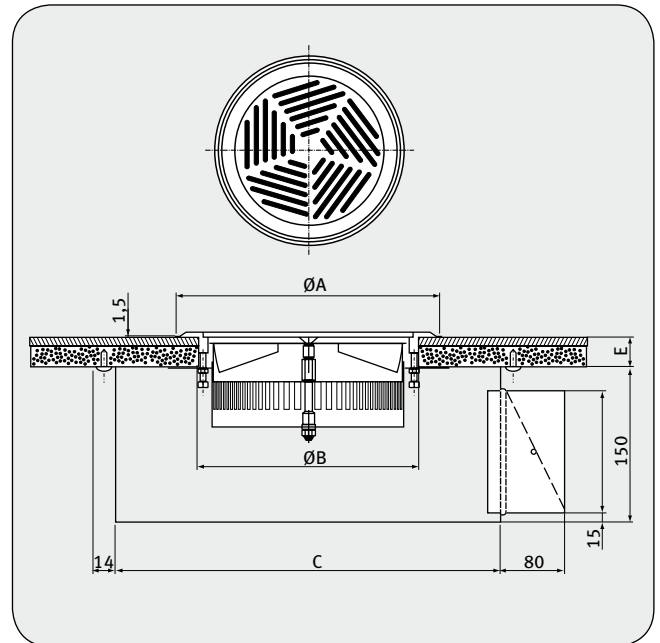
- diffuser elements are made of pressed aluminum
- painted white (RAL 9016)
- suitable for hot or cold air supply and exhaust
- easy adjustment of air flow direction
- suitable for systems with variable air volume
- light weight

type	A mm	B mm	C mm	B1 mm	F mm	G mm	H mm	L mm
2 slots	123	28	24	19	42	88	37	1022
3 slots	167	28	24	19	42	131	37	1022
4 slots	215	28	24	19	42	178	37	1022



## SWIRL FLOOR DIFFUSER

**FDS**



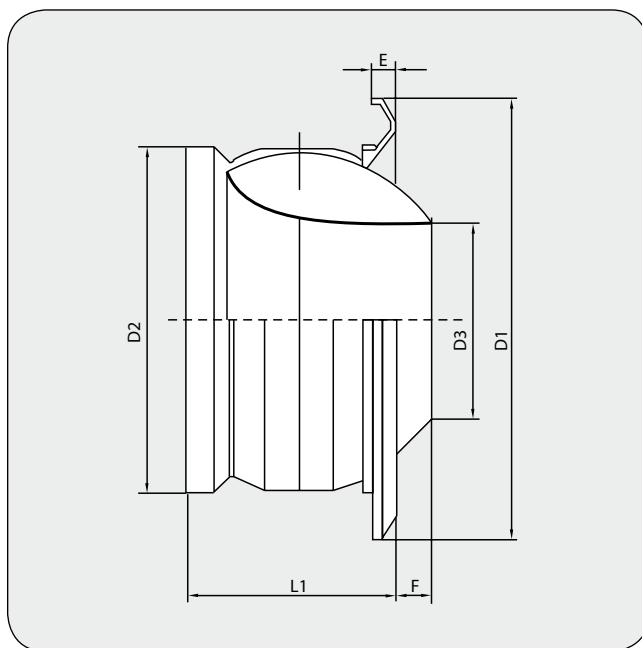
- circular swirl air supply diffuser for floor mounting
- diffuser made of cast aluminium, dirt trap and diffuser base made of galvanized steel
- high induction level
- special design allows for diffuser cleaning
- colour: anodized non-painted surface
- fast and easy installation
- available sizes: Ø150, Ø200

type	dimensions mm				
	A	B	C	E (min)	E (max)
FDS 150	190	150	225	32	14
FDS 200	240	200	275	32	14



## JET DIFFUSER

**JNS**



- material: aluminium and galvanized steel
- application: industrial and public buildings
- range up to 30m
- low noise level and high efficiency
- adjustable air flow direction
- painted white (RAL 9010)

diffuser diameter	D1 mm	D2 mm	D3 mm	E mm	F mm	L1 mm
100	162	98	50	10	-2	78
125	185	123	64	10	4	89
160	216	158	82	11	10	106
200	273	198	108	16	14	127
250	318	248	136	16	23	159
315	400	313	174	23	29	189
400	483	398	230	24	47	223
500	596	498	286	27,5	60	290

diffuser diameter	applicable duct diameter						
	200	250	315	500	630	800	1000
100	•						
125		•					
160			•	•	•	•	
200				•	•	•	
250				•	•	•	
315				•	•	•	
400					•	•	
500						•	•



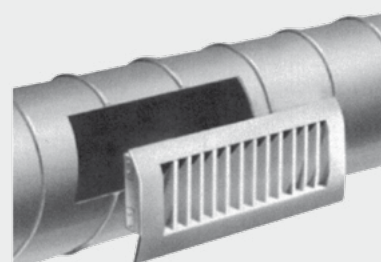
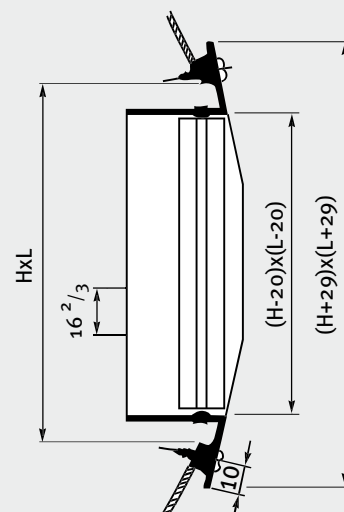
## ROUND DUCT GRILLE

**SGD**



- grille installed directly on round duct without any additional accessories
- suitable for 150-1400 mm round ducts
- made of galvanized steel
- adjustable lamellas
- suitable for large rooms with visible ducting installations, i.e. warehouses, production halls, gyms
- available also in double-row version (DGD)

**Also available:**  
**PSGD damper for SGD grille**

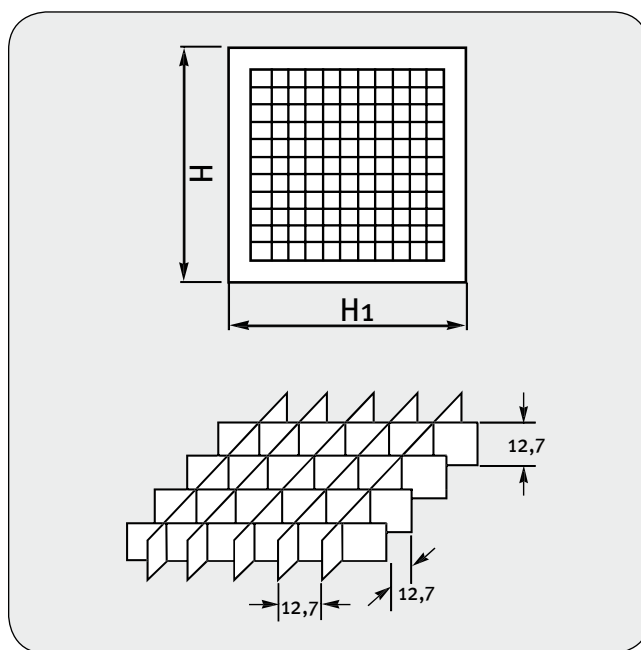
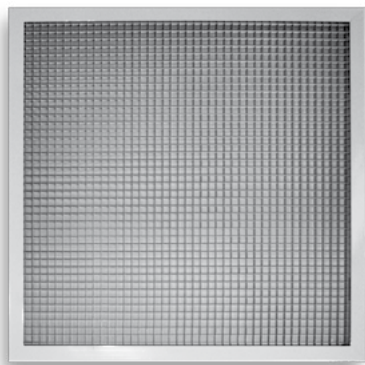


size LxH mm	duct Ø mm	
	min	max
425x75	150	400
525x75	150	400
625x75	150	400
425x125	315	900
525x125	315	900
625x125	315	900
425x225	600	1400
525x225	600	1400
625x225	600	1400



## EGG CRATE GRILLE

## EGC



- made of aluminium
- painted white (RAL 9010)
- core size - 12.7x12.7 mm
- easy assembly – size suitable for standard suspended ceiling

grille type

H  
mm

H1  
mm

EGC

595

595



## REGULATING DAMPER

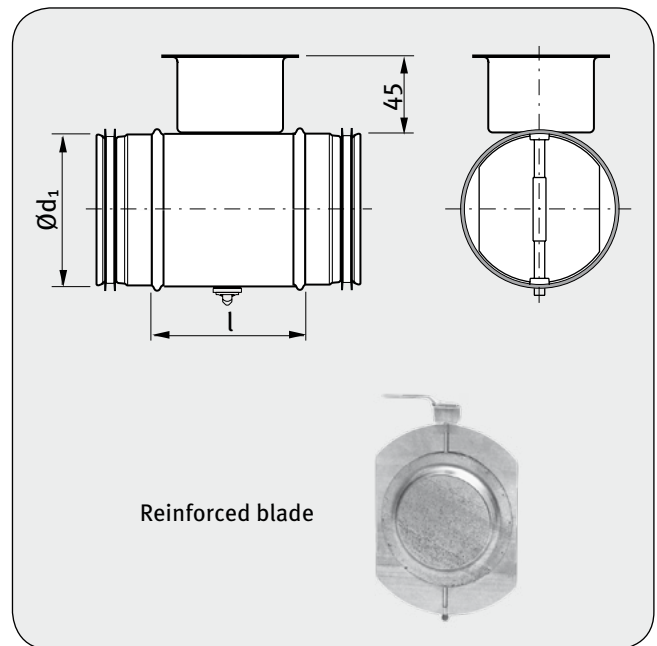
**DR / DRL**



Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (DRL)



### PRODUCT CHARACTERISTICS

- stitch welded
- equipped with stepless, adjustable 0 - 90° blade
- admits an insulation thickness of approx. 50 mm
- reinforced blade starting from diameter Ø500

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
80	100	0,34	25
100	100	0,40	35
125	100	0,46	25
140	100	0,54	24
150	100	0,60	20
160	100	0,65	20
180	100	0,69	24
200	100	0,80	16
224	100	0,90	60
250	100	1,28	45
280	100	1,40	36
300	100	1,62	32

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
315	100	1,70	30
355	100	2,01	24
400	100	2,82	15
450	100	3,70	10
500	115	4,70	
560	115	5,51	
600	115	5,90	
630	115	6,21	
800	230	18,20	
1000	230	24,40	





## CLOSING DAMPER

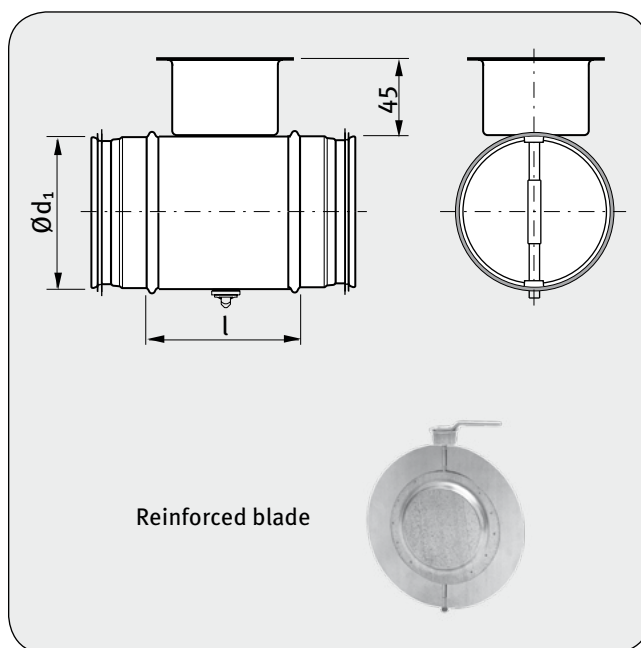
DS / DSL



Also available without gasket

## MATERIAL

- galvanized steel
- EPDM rubber gasket (DSL)



## PRODUCT CHARACTERISTICS

- stitch welded
- equipped with stepless, adjustable 0 - 90° blade
- admits an insulation thickness of approx. 50 mm
- reinforced blade starting from diameter Ø400

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
80	100	0,35	25
100	100	0,40	35
125	100	0,49	25
140	100	0,54	24
150	100	0,57	20
160	100	0,67	20
180	100	0,73	24
200	100	0,86	16
224	100	1,10	60
250	100	1,31	45
280	100	1,51	36
300	100	1,65	32

Ød <sub>1</sub> nom	l mm	weight kg	box quantity
315	100	1,81	30
355	100	2,00	24
400	100	2,91	15
450	100	3,90	10
500	115	4,92	
560	115	6,01	
600	115	6,40	
630	115	6,92	
800	230	19,00	
1000	230	30,00	



## AIRTIGHT CLOSING DAMPER

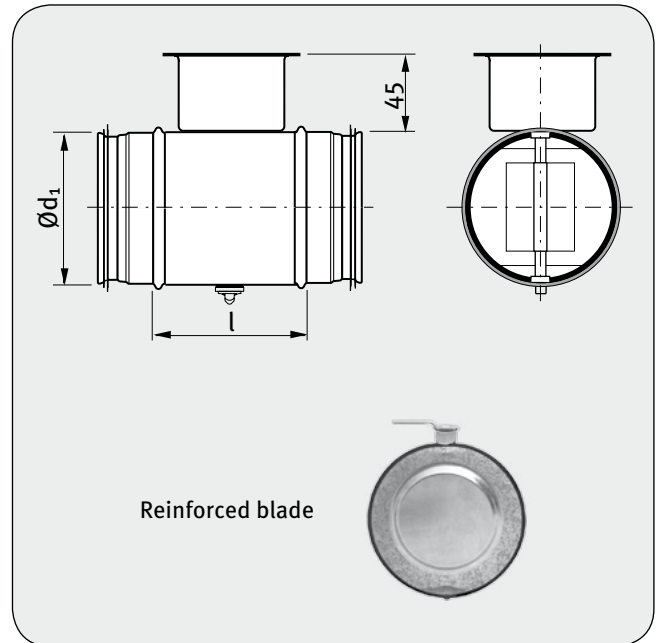
**DT / DTL**



Also available without gasket

### MATERIAL

- galvanized steel
- EPDM rubber gasket (DTL)
- EPDM rubber blade gasket for airtight dampers



### PRODUCT CHARACTERISTICS

- stitch welded
- turning blade with EPDM rubber seal, which tightens against the inside of the damper when closed
- admits an insulation thickness of approx. 50 mm
- reinforced blade starting from diameter Ø500

Ød <sub>1</sub> nom	l mm	weight kg	sealing class past closed blade	box quantity
80	100	0,30	4	25
100	100	0,38	4	35
125	100	0,53	4	25
140	100	0,60	4	24
150	100	0,63	4	20
160	100	0,74	4	20
180	100	0,82	4	24
200	100	1,04	4	16
224	100	1,27	4	60
250	100	1,52	4	45

Ød <sub>1</sub> nom	l mm	weight kg	sealing class past closed blade	box quantity
280	100	1,77	4	36
300	100	1,96	4	32
315	100	2,14	4	30
355	100	2,44	4	24
400	100	3,65	4	15
450	100	4,84	4	15
500	115	6,07	4	
560	115	7,47	4	
600	115	8,11	4	
630	115	8,80	4	



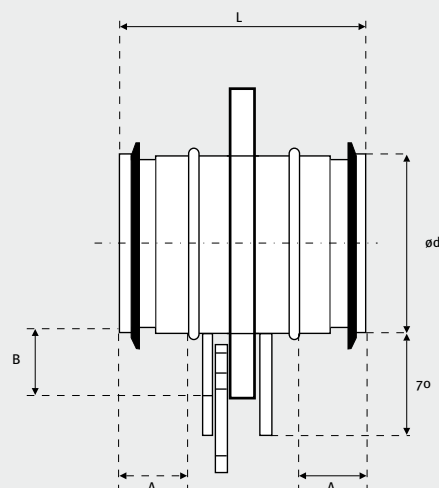
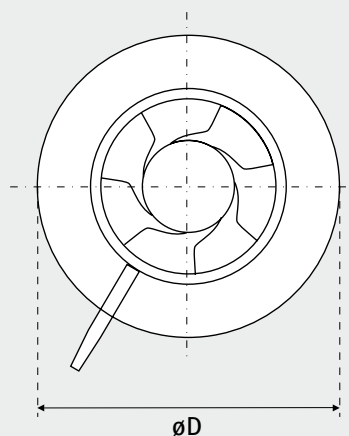
## IRIS DAMPER

## IRIS



### DESCRIPTION

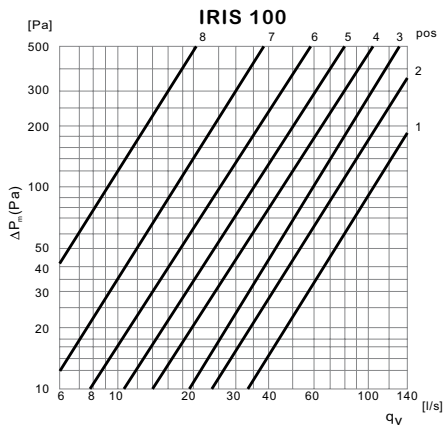
With IRIS damper, the intensity of air flow may be smoothly adjusted. Adjustment is done with a handle located on the damper which changes the diameter of the opening in the damping orifice. The damper is supplied with two endings which may be used to connect instruments measuring intensity of air flow. The damper is also supplied with a gasket, which tightens connection with the system.



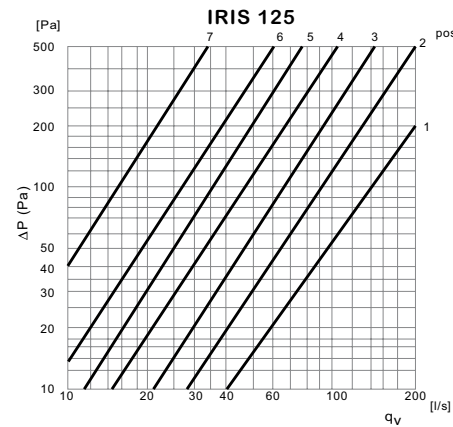
type	Ød mm	ØD mm	L mm	A mm	B mm
100	99	165	110	30	32
125	124	210	110	30	42
150	149	230	120	30	35
160	159	230	110	30	35
200	199	285	110	30	42
250	249	335	135	40	42
300	299	410	140	35	42
315	314	410	135	40	47
400	398	525	190	60	62



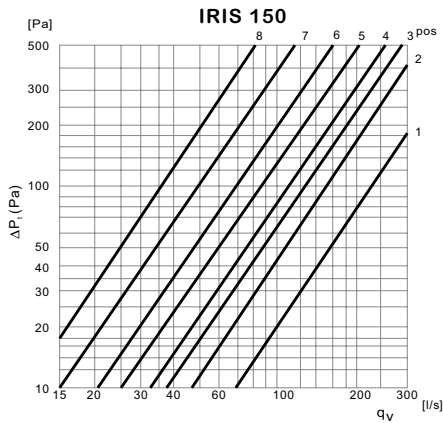
## IRIS DAMPER SPECIFICATIONS



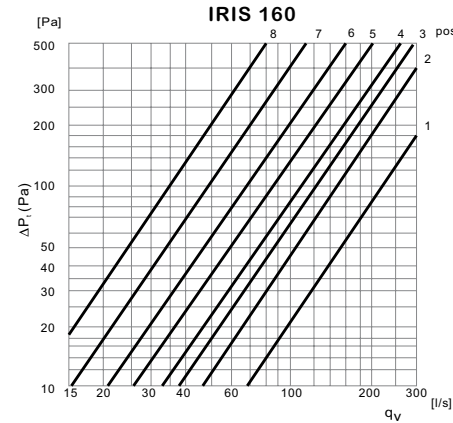
pos	k
1	10,4
1,5	7,9
2	7,5
2,5	6,6
3	6,0
3,5	5,2
4	4,5
4,5	3,8
5	3,4
5,5	2,9
6	2,5
6,5	2,1
7	1,7
7,5	1,2
8	0,9



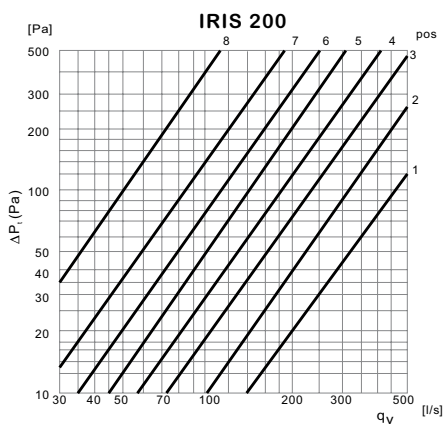
pos	k
1	13,8
1,5	10,4
2	8,8
2,5	7,3
3	6,5
3,5	5,5
4	4,7
4,5	4,0
5	3,5
5,5	3,1
6	2,7
6,5	2,2
7	1,5



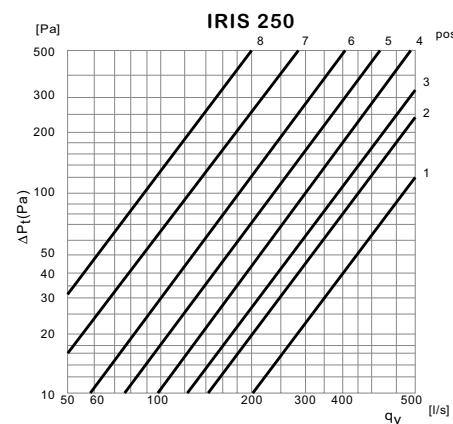
pos	k
1	22,1
1,5	17,2
2	14,8
2,5	13,4
3	12,5
3,5	11,5
4	10,7
4,5	9,5
5	8,5
5,5	7,5
6	6,8
6,5	5,6
7	4,9
7,5	4,0
8	3,5



pos	k
1	22,1
1,5	17,2
2	14,8
2,5	13,4
3	12,5
3,5	11,5
4	10,7
4,5	9,5
5	8,5
5,5	7,5
6	6,8
6,5	5,6
7	4,9
7,5	4,0
8	3,5

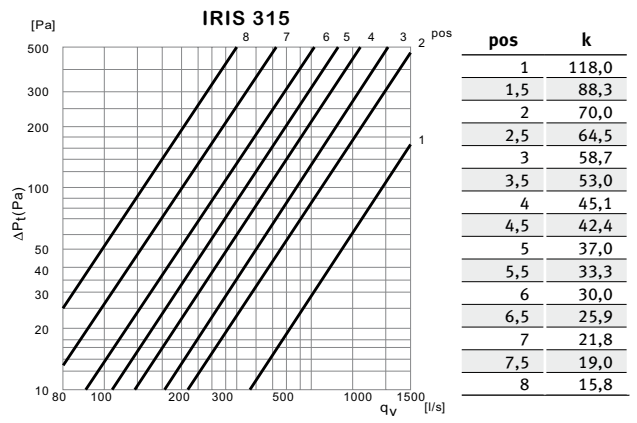
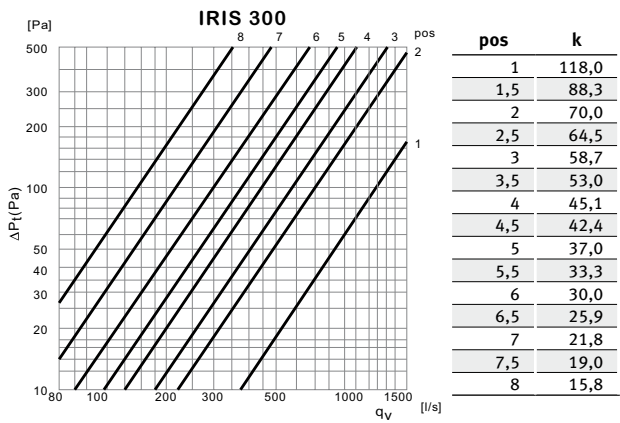


pos	k
1	44,2
1,5	36,6
2	30,9
2,5	26,9
3	23,2
3,5	20,6
4	18,2
4,5	15,9
5	14,0
5,5	12,3
6	11,0
6,5	9,6
7	8,4
7,5	6,5
8	5,0

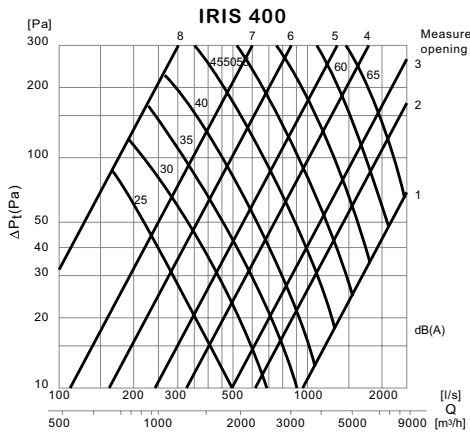


pos	k
1	64,4
1,5	53,5
2	45,6
2,5	41,8
3	38,7
3,5	34,5
4	30,7
4,5	27,3
5	24,1
5,5	21,4
6	18,4
6,5	15,8
7	12,8
7,5	10,9
8	8,9

$$q_v = k \sqrt{\Delta p_m}$$



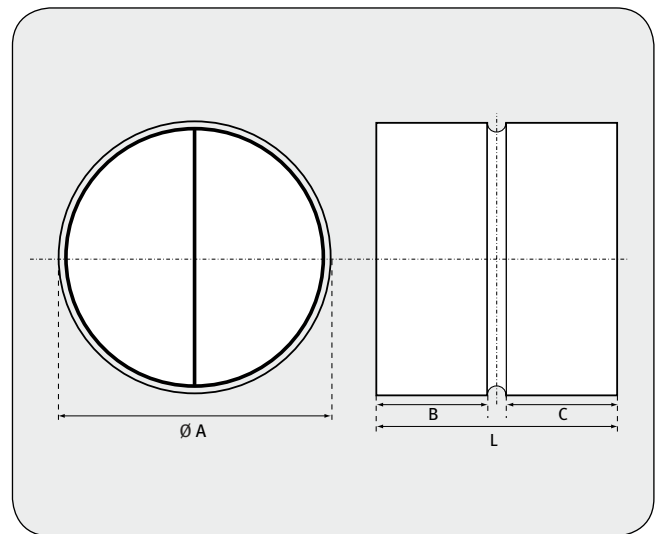
$$q_v = k \sqrt{\Delta p_m}$$



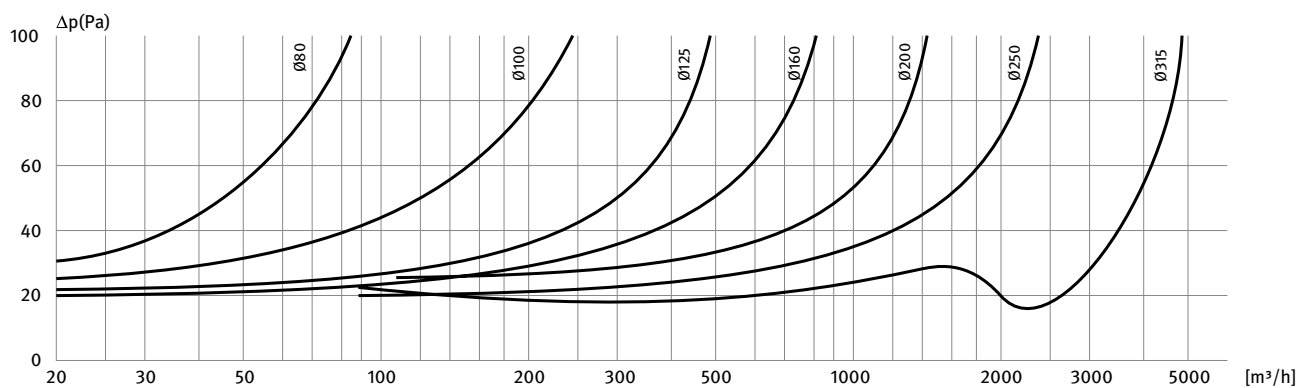


## BACK DRAFT DAMPER

**RSKA**



### PRESSURE LOSS DIAGRAM



### MATERIAL

- galvanized steel
- rubber gasket

### PRODUCT CHARACTERISTICS

- blade is equipped with closing spring
- may be installed in any position

### DESCRIPTION

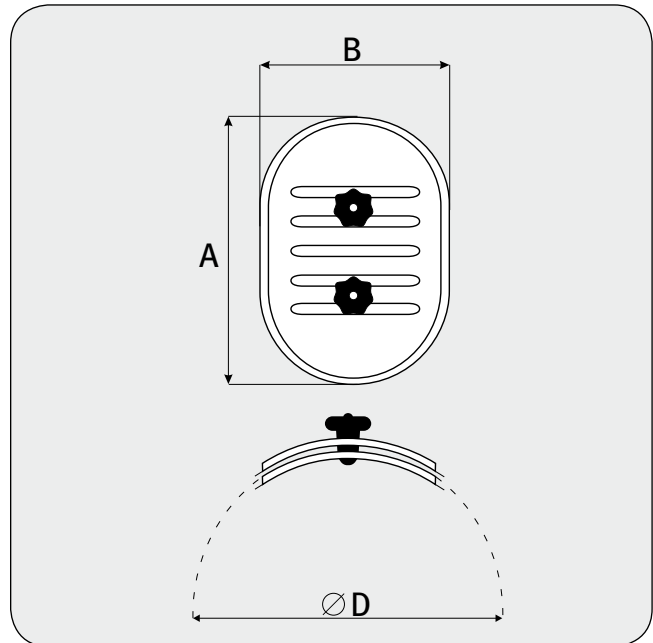
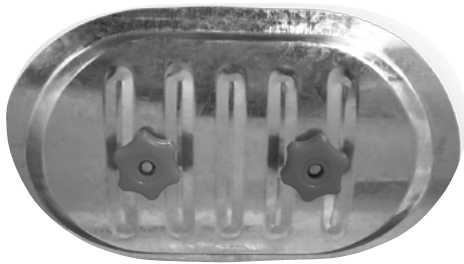
Back draft damper for round ducts is made of galvanized steel. The damper's blades (oscillating) are closed by a spring which allows for damper assembly in any position. Used to allow air flow in only one direction.

type	A mm	L mm	B mm	C mm
100	100	88	38	38
125	125	88	38	38
150	150	88	38	38
160	160	88	38	38
200	200	88	38	38
250	250	128	59	59
315	315	128	59	59
355	355	197	75	75
400	400	197	75	75



## CURVED ACCESS DOOR FOR ROUND DUCT

**IPLR**



### MATERIAL

- galvanized steel
- rubber gasket

### PRODUCT CHARACTERISTICS

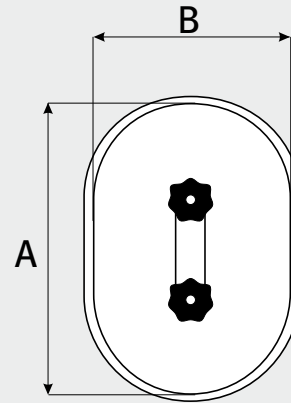
- suitable for assembly on round ducts
- easily accessible access door panel for cleaning ducts
- easy installation
- template is included, which allows cutting suitable size of opening in round duct

D mm	A mm	B mm
100	180	80
125	180	80
160	250	150
200	250	150
250	250	150
315	250	150
355	250	150
400	250	150
400	400	300
450	400	300
500	400	300
560	400	300
630	400	300
710	400	300
800	400	300



## FLAT ACCESS DOOR FOR RECTANGULAR DUCT

**IPF**



### MATERIAL

- galvanized steel
- rubber gasket

### DESCRIPTION

All doors are equipped with gasket, thanks to which fitting of a door on duct is sufficiently tight. Special template facilitates mounting.

### PRODUCT CHARACTERISTICS

- suitable for assembly on rectangular ducts
- easily accessible access door panel for cleaning ducts
- easy installation
- template is included, which allows cutting suitable size of opening in round duct

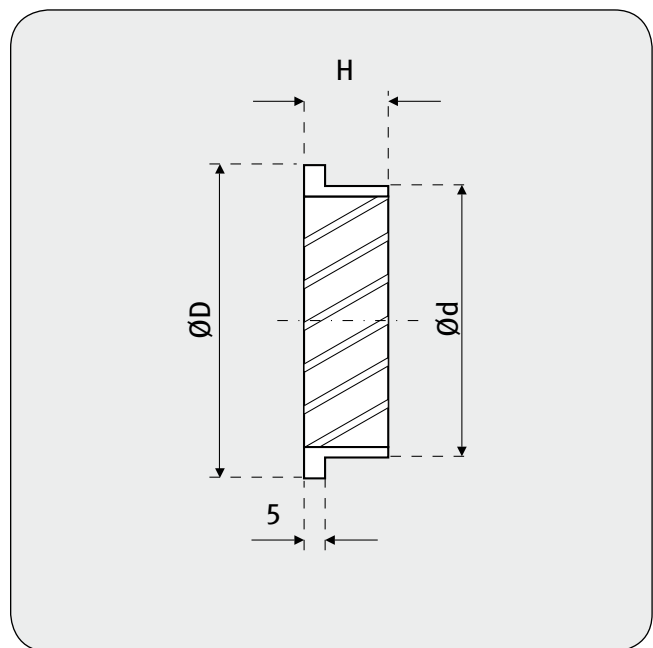
A mm	B mm
100	200
180	80
250	150
300	200
400	300
500	300
500	400





## ROUND AIR INTAKE / EXHAUSTER

## KWO-AL



### MATERIAL

- cast aluminum

### PRODUCT CHARACTERISTICS

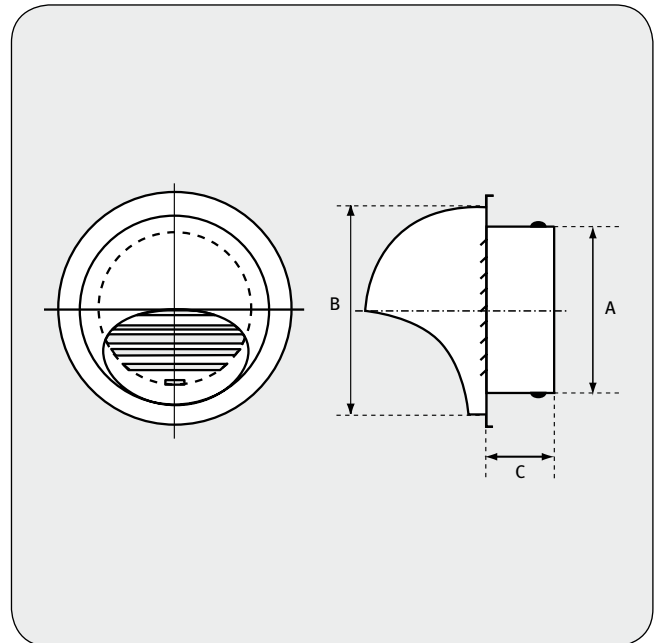
- KWO-AL may work as intake or exhauster
- made of aluminum - no corrosion
- non-painted
- insect protection mesh installed from inside

Ød mm	ØD mm	H mm	weight kg	box quantity
100	125	20	0,23	165
125	150	20	0,32	108
160	185	20	0,39	72
200	225	20	0,58	52
250	275	20	0,97	28
315	350	20	1,89	16
400	435	35	3,00	8



## ROUND AIR INTAKE / EXHAUSTER (CrNi steel)

**VLA**



### MATERIAL

- CrNi steel

### PRODUCT CHARACTERISTICS

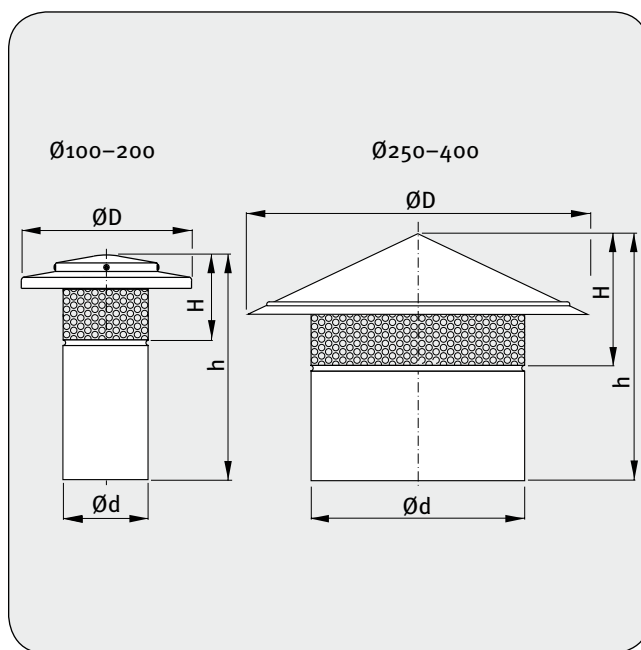
- VLA may work as air intake or exhauster
- made of CrNi steel - no corrosion
- non-painted
- cover provides protection against weather conditions
- high quality and modern design
- fast and easy installation

type	ØD mm	ØA mm	ØB mm	C mm	box quantity
VLA-100	100	97	133	52	36
VLA-125	125	120	165	52	36
VLA-150	150	145	192	62	12
VLA-160	160	155	192	62	12
VLA-200	200	195	253	62	8
VLA-250	250	245	300	70	4



## ROOF HOOD

**HU**



### MATERIAL

- galvanized steel

### PRODUCT CHARACTERISTICS

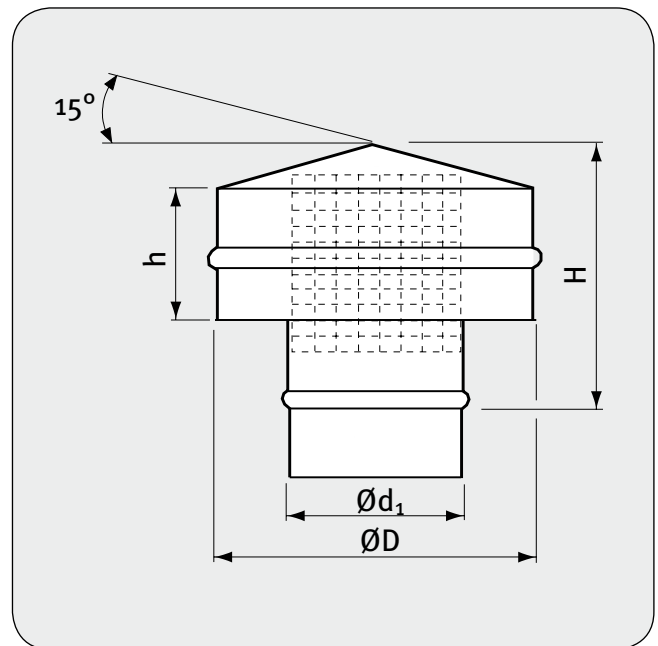
- outlet additionally secured with perforated steel
- manufactured with female connection, which fits outside a ventilation duct

Ød nom	ØD mm	H mm	h mm	weight kg	box quantity
100	200	99	264	0,51	18
125	225	102	267	0,65	12
160	260	105	270	0,81	12
200	315	114	273	1,09	7
250	400	156	291	1,45	18
315	500	185	303	1,99	10
400	600	226	344	2,70	12



## ROOF HOOD

**VH**



### MATERIAL

- galvanized steel

### PRODUCT CHARACTERISTICS

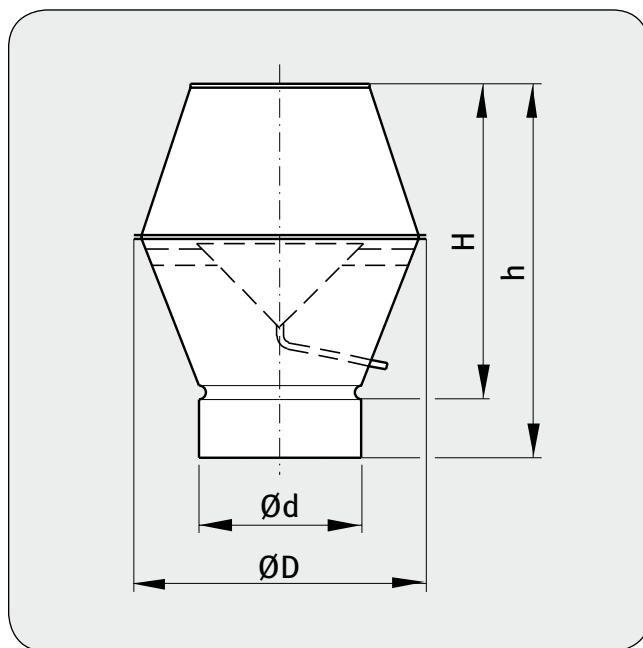
- as a standard manufactured with male coupling (on order can be delivered with flange or connection as desired)
- can also be delivered in intermediate dimensions

$\varnothing d_1$ nom	$\varnothing D$ mm	H mm	h mm	weight kg	box quantity
80	180	60	133	0,70	
100	180	60	133	0,70	
125	224	60	139	0,90	
160	290	60	148	1,10	48
200	360	100	197	1,90	18
250	450	100	228	2,60	15
315	570	100	244	4,10	6



## ROOF HOOD

**HN**



### MATERIAL

- galvanized steel

### PRODUCT CHARACTERISTICS

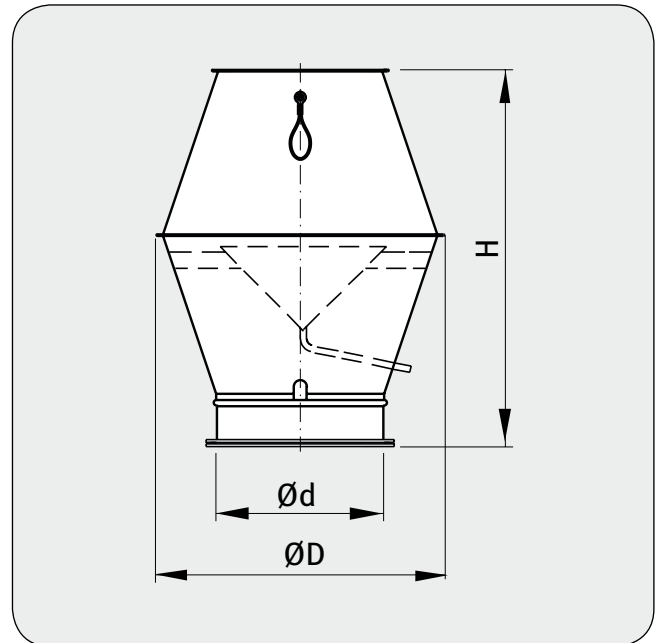
- as a standard - manufactured with female connection, which fits outside a duct
- as an option - can be ordered with other connections
- equipped with water drip pipe, to drain water out of the hood's internal rain funnel

Ød nom	ØD mm	H mm	h mm	weight kg	box quantity
80	130	160	310	0,66	15
100	180	220	360	0,96	15
125	225	240	380	1,26	30
160	280	340	475	1,95	18
200	345	420	555	2,92	10
250	430	505	640	4,31	6
315	550	620	755	6,75	2



## ROOF HOOD

**HF**



### MATERIAL

- galvanized steel

### PRODUCT CHARACTERISTICS

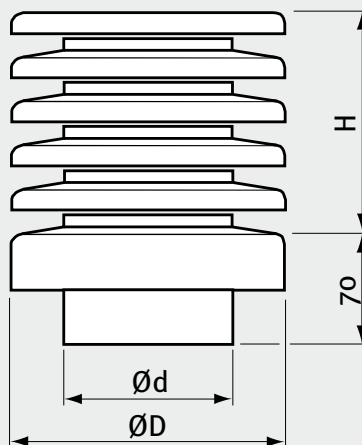
- as a standard - manufactured with flange connection, which includes a mating flange
- as an option - can be ordered with other connections
- equipped with water drip pipe, to drain water out of the hood's internal rain funnel
- delivered with three turnable lifting and anchoring wire-loops

Ød nom	ØD mm	H mm	weight kg
400	685	905	11,10
500	855	1055	20,00
630	1075	1295	38,00
800	1360	1640	63,00
1000	1600	2110	89,10
1250	2020	2615	118,00



## ROOF HOOD

## VHL



### MATERIAL

- galvanized steel

### PRODUCT CHARACTERISTICS

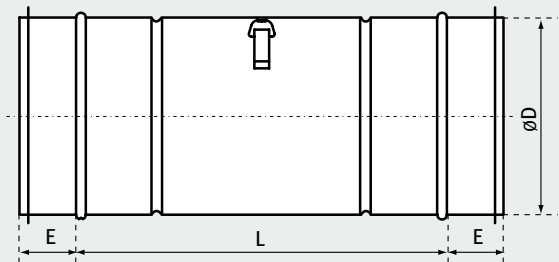
- can be installed with duct dimensions corresponding to Ød or ØD

Ød nom	ØD mm	H mm	weight kg	box quantity
100	160	110	1,00	16
125	200	145	1,50	
160	250	180	2,00	
200	315	250	2,90	
250	315	250	3,20	2
315	400	290	6,40	
400	500	370	10,10	
500	630	410	15,90	



## ROUND DUCT FILTER

**OFK**



### DESCRIPTION

OFK round duct filter is used for initial filtration of flowing air in round duct systems. Filtering element is EU4 class insert secured with galvanized steel mesh. Casing is made of galvanized steel, with gaskets on both ends. Construction ensures easy and fast assembly.

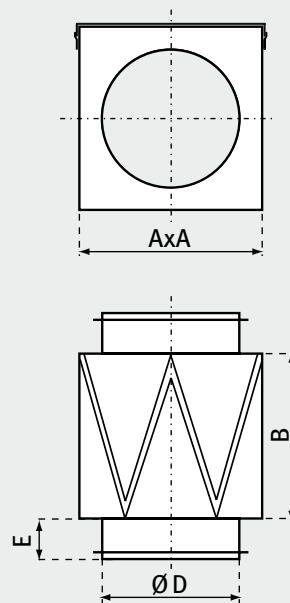
type	diameter ØD mm	L mm	E mm	box quantity
OFK 100	100	120	40	37
OFK 125	125	120	40	27
OFK 160	160	120	40	24
OFK 200	200	120	40	27
OFK 250	250	120	40	36
OFK 315	315	120	40	25
OFK 355	355	120	40	20
OFK 400	400	140	50	10
OFK 450	450	140	50	-
OFK 500	500	140	50	-





## ROUND DUCT FILTER

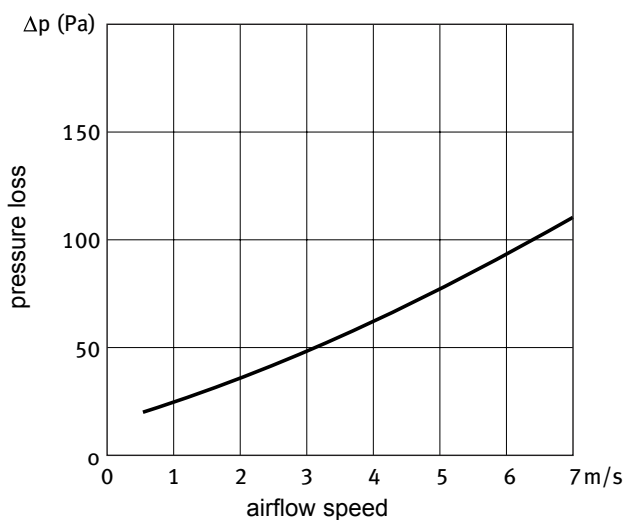
**FKO**



### DESCRIPTION

Duct filters are designed to be installed in round duct systems of standard diameters (100 – 450 mm). Casing is made of galvanized steel, connectors are equipped with rubber gaskets and the filter cartridge (EU4 class) is secured with galvanized steel mesh. The filter is used for initial filtration of air intake.

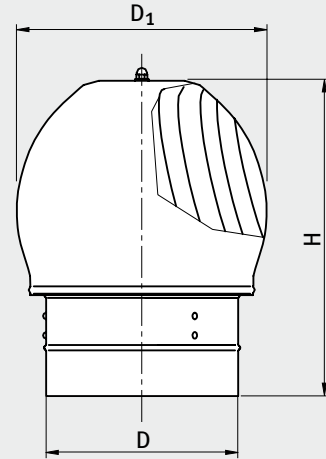
type	A mm	B mm	ØD mm	E mm
FKO 100	180	180	100	40
FKO 125	180	180	125	40
FKO 140	180	180	140	40
FKO 150	210	180	150	40
FKO 160	210	180	160	40
FKO 180	250	180	180	40
FKO 200	250	180	200	40
FKO 224	300	180	224	40
FKO 250	300	180	250	40
FKO 300	360	180	300	40
FKO 315	360	180	315	40
FKO 355	410	180	355	40
FKO 400	460	180	400	50
FKO 450	510	180	450	60
FKO 500	560	180	500	60





## CENTROWENT CHIMNEY ROOT

CA / CN



## DESCRIPTION

Rotary chimney cowl Centrowent is a device which, in a dynamic way, uses force of the wind to increase chimney draught. The turbine always rotates in the same direction, regardless of the wind strength, or its direction. It is to be mounted on gravity based ventilation chimney duct endings.

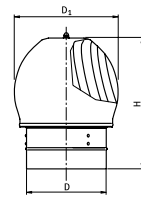
## CHARACTERISTICS

- no corrosion – collar made of galvanized steel
- light weight – aluminum or stainless steel fan rotor
- quiet operation – rotor bearings
- easy cleaning – rotor fixed to axle with screw
- logistics – each piece in separate box
- CA - rotor made of aluminum
- CN - rotor and flange made of stainless steel



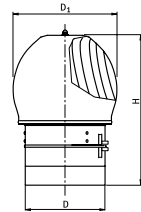
chimney root, coupling

diameter (mm)	Ø130	Ø150	Ø160	Ø200	Ø250	Ø300	Ø315	Ø400	Ø450	Ø500
D (mm)	130	150	160	200	250	300	315	400	450	500
H (mm)	193	217	222	283	365	412	433	540	540	650
D1 (mm)	195	225	240	300	360	430	452	550	610	675



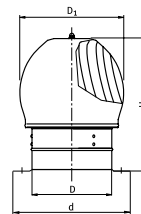
chimney root, coupling, split

diameter (mm)	Ø130	Ø150	Ø160	Ø200	Ø250	Ø300	Ø315	Ø400	Ø450	Ø500
D (mm)	130	150	160	200	250	300	315	400	450	500
H (mm)	313	337	342	409	475	532	553	640	660	720
D1 (mm)	195	225	240	300	360	430	452	550	610	675



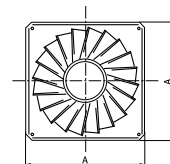
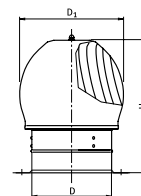
chimney root with flange

diameter (mm)	Ø130	Ø150	Ø160	Ø200	Ø250	Ø300	Ø315	Ø400	Ø450	Ø500
D (mm)	130	150	160	200	250	300	315	400	450	500
d (mm)	190	210	220	260	310	360	375	460	510	560
H (mm)	193	217	222	283	365	412	433	540	540	650
D1 (mm)	195	225	240	300	360	430	452	550	610	675



chimney root with base

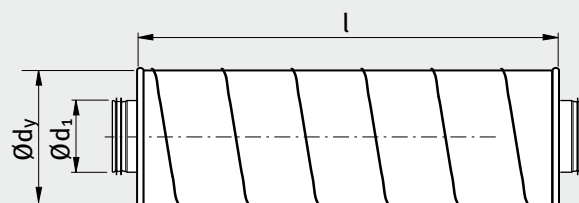
diameter (mm)	Ø130	Ø150	Ø160	Ø200	Ø250	Ø300	Ø315	Ø400	Ø450	Ø500
D (mm)	130	150	160	200	250	300	315	400	450	500
A (mm)	333	333	333	333	390	440	460	540	590	640
H (mm)	193	217	222	283	365	412	433	540	540	650
D1 (mm)	195	225	240	300	360	430	452	550	610	675





## CIRCULAR SILENCER

**SLL**



### USE

Circular silencers are designed to suppress the noise in ventilation and air conditioning duct systems

### DESIGN

The external cover is made of circular duct. The attenuating layer is made of mineral wool and is separated from the duct system by fibre cloth and perforated galvanized steel sheet. Available with 50 mm and 100 mm insulation thicknesses.

#### Insulation thickness - 50 mm

Ød <sub>1</sub> nom	length nom	attenuation in dB for centre frequency								Ød <sub>y</sub> mm	l mm	weight kg
		63	125	250	500	1k	2k	4k	8k			
80	300	1	5	8	15	25	25	21	15	180	300	2,00
80	600	2	8	14	28	49	50	47	24	180	600	3,00
80	900	3	10	21	40	50	50	50	34	180	900	5,00
80	1200	4	13	27	50	50	50	50	43	180	1200	7,00
100	300	1	5	7	15	25	25	21	13	200	360	2,00
100	600	1	7	12	25	43	48	35	20	200	660	3,00
100	900	2	10	17	34	50	50	49	28	200	960	5,00
100	1200	3	12	22	44	50	50	50	35	200	1260	7,00
125	300	0	4	5	13	23	20	16	11	224	365	3,00
125	600	1	5	10	22	39	37	26	16	224	665	4,00
125	900	1	7	14	30	50	50	37	21	224	965	7,00
125	1200	2	9	18	39	50	50	47	26	224	1265	9,00



## Silencers

Ød <sub>1</sub> nom	length nom	attenuation in dB for centre frequency								Ød <sub>y</sub> mm	l mm	weight kg
		63	125	250	500	1k	2k	4k	8k			
160	300	0	3	5	11	22	16	11	7	260	375	3,00
160	600	1	4	8	19	37	28	17	11	260	675	6,00
160	900	1	5	12	27	50	39	24	14	260	975	8,00
160	1200	2	6	15	35	50	50	30	17	260	1275	10,00
200	300	0	2	4	9	19	11	7	5	315	300	4,00
200	600	1	3	8	15	28	19	12	8	315	600	7,00
200	900	2	4	11	21	37	28	16	10	315	900	10,00
200	1200	2	5	14	27	46	36	21	13	315	1200	12,00
250	600	1	2	6	14	26	14	8	7	355	600	9,00
250	900	1	3	9	19	38	19	11	9	355	900	12,00
250	1200	2	4	11	24	50	24	13	11	355	1200	15,00
315	600	2	5	9	14	12	6	4	5	500	600	12,00
315	900	3	6	13	20	19	10	6	7	500	900	18,00
315	1200	4	8	16	27	25	15	9	10	500	1200	24,00
400*	600	4	5	8	10	7	4	4	6	600	600	16,00
400*	900	4	5	10	17	13	6	6	8	600	900	22,00
400*	1200	5	6	13	24	18	8	7	10	600	1200	32,00
500*	900	4	4	10	14	8	4	6	6	710	900	26,00
500*	1200	3	5	11	21	12	6	7	9	710	1200	39,00
630*	900	2	3	7	12	5	4	4	5	800	900	44,00
630*	1200	2	4	8	17	7	4	5	7	800	1200	56,00
800*	1200	2	3	8	11	5	4	5	6	1000	1200	69,00
800*	1500	2	3	10	16	6	5	6	7	1000	1500	86,00

\* Supplied with two loose couplings

### Insulation thickness - 100 mm

Ød <sub>1</sub> nom	length nom	attenuation in dB for centre frequency								Ød <sub>y</sub> mm	l mm	weight kg
		63	125	250	500	1k	2k	4k	8k			
315	600	2	5	9	14	12	6	4	5	510	600	12,00
315	900	3	6	13	20	19	10	6	7	510	900	18,00
315	1200	4	8	16	27	25	15	9	10	510	1200	24,00
400*	600	4	5	8	10	7	4	4	6	625	600	16,00
400*	900	4	5	10	17	13	6	6	8	625	900	22,00
400*	1200	6	6	13	24	18	8	7	10	625	1200	32,00
500*	900	4	4	10	14	8	4	6	6	735	900	26,00
500*	1200	3	5	11	21	12	6	7	9	735	1200	39,00
630*	900	2	3	7	12	5	4	4	5	880	900	44,00
630*	1200	2	4	8	17	7	4	5	7	880	1200	56,00
800*	1200	2	3	8	11	5	4	5	6	1030	1200	69,00
800*	1500	2	3	10	16	6	5	6	7	1030	1500	86,00

\* Supplied with two loose couplings

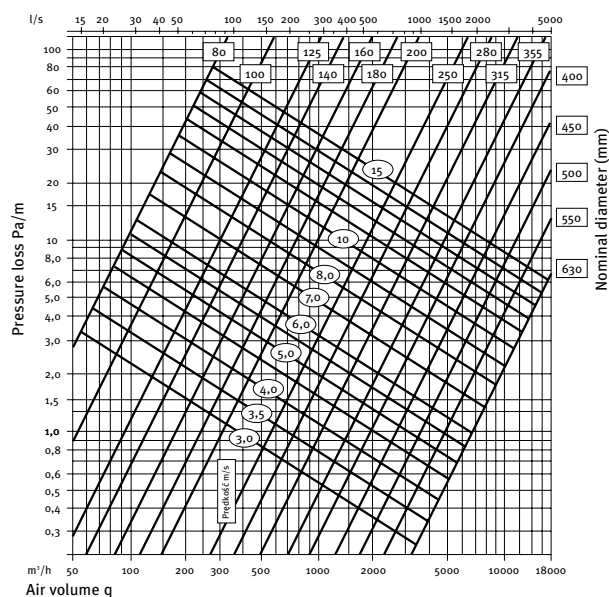


## FLEXIBLE CIRCULAR SILENCER

SF



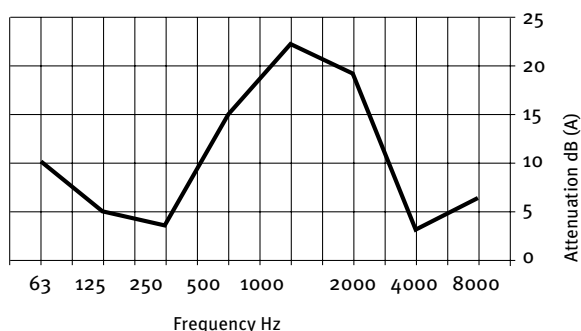
### Linear resistance graph



### PRODUCT ADVANTAGES

- standard 1 m long silencers fitted into 0,5 m cardboard boxes
- low transportation and storage cost
- easy assembly
- no need to use special tools for cutting or fixing
- does not emit toxic gases in high temperatures

1 meter long silencer



### USE

Flexible circular silencer is designed to be used in ventilation and air conditioning duct systems. Attenuates noise and system vibrations. Reduces the need to use fittings.

### DESIGN

The internal layer is made of multi layer perforated flexible aluminum duct. The silencer is insulated with 25 mm thick mineral wool layer with density of 20 kg/m³. The external layer is made of aluminum-Polyester laminate reinforced with fibre wire. The product has properly prepared endings which make its assembly in duct system easier.

The silencer is installed with fixing clips.

### TYPE

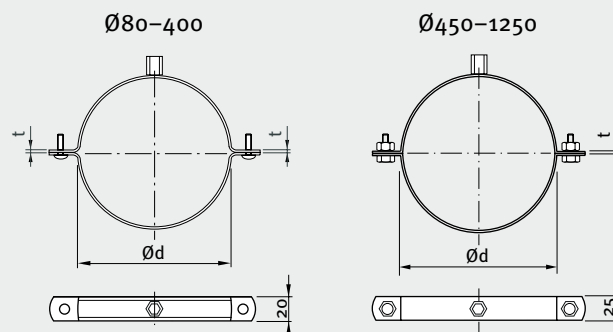
### SF

Diameter range	82 - 406 mm
Operating temperature range	-30/+140 °C
Maximum air speed	30 m/s
Maximum operating pressure	2500 Pa
Standard length	1 m
Cardboard package	0.5 m



## CIRCULAR SUSPENSION

## DRSN



**Ø80-400**  
slotted quick closure  
screw PH3 M6×20  
connection nut M8+M10

**Ø450-1250**  
Ø10 hole  
bolt and nut H17 M10×30  
connection nut M8+M10

### DESIGN/USE

Used for suspension of circular ducting.  
Combined connection nut M8/M10 and slotted quick closure for Ø 80-400.



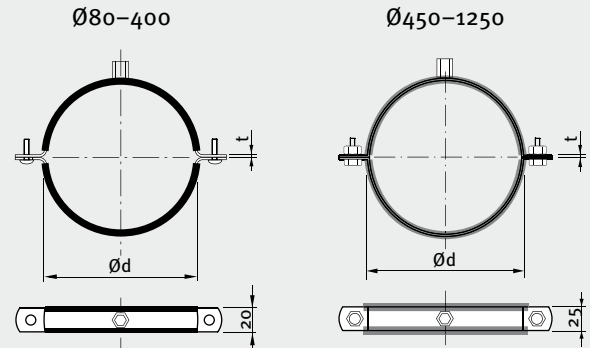
Ød nom	t mm	weight kg	box quantity
80	1,5	0,13	60
100	1,5	0,15	60
125	1,5	0,17	60
140	1,5	0,19	60
150	1,5	0,19	60
160	1,5	0,20	60
180	1,5	0,22	60
200	1,5	0,24	40
224	1,5	0,26	40
250	1,5	0,28	40
280	1,5	0,32	40
300	1,5	0,34	40
315	1,5	0,36	30
355	1,5	0,41	30

Ød nom	t mm	weight kg	box quantity
400	1,5	0,45	30
450	2,5	0,83	40
500	2,5	0,91	30
560	2,5	1,00	24
600	2,5	1,06	20
630	2,5	1,10	20
710	2,5	1,36	18
800	2,5	1,49	18
900	2,5	1,64	18
1000	2,5	1,82	18
1120	2,5	2,00	18
1250	2,5	2,20	18



## CIRCULAR SUSPENSION

## DRSNR



**Ø80-400**  
slotted quick closure  
screw PH3 M6×20  
connection nut M8+M10

**Ø450-1250**  
Ø10 hole  
bolt and nut H17 M10×30  
connection nut M8+M10

### DESIGN/USE

Used for suspension of circular ducting.  
With vibration-damping internal rubber lining.  
Combined connection nut M8/M10 and slotted quick closure for Ø 80-400.



Ød nom	t mm	weight kg	box quantity
80	1,5	0,17	60
100	1,5	0,19	60
125	1,5	0,23	60
140	1,5	0,25	60
150	1,5	0,26	60
160	1,5	0,27	60
180	1,5	0,30	60
200	1,5	0,32	40
224	1,5	0,35	40
250	1,5	0,43	40
280	1,5	0,47	40
300	1,5	0,50	40
315	1,5	0,52	30
355	1,5	0,59	30

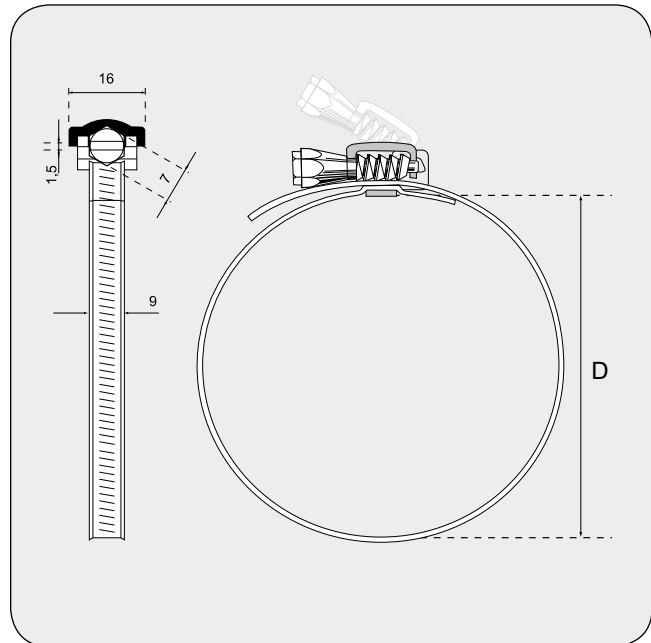
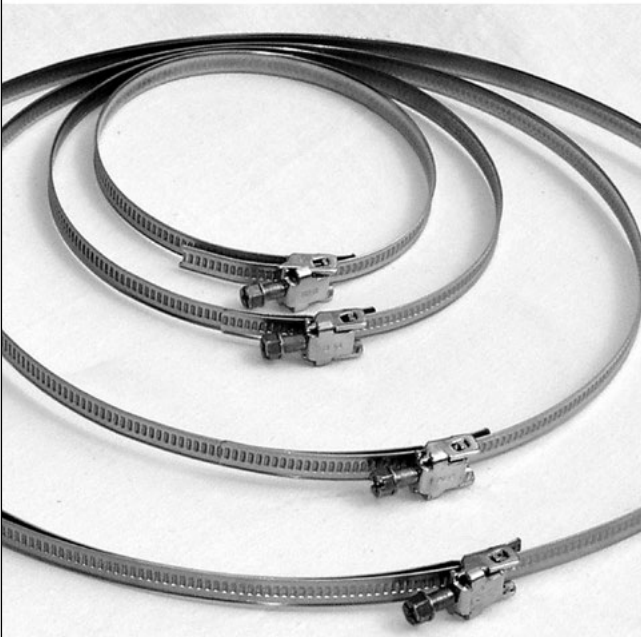
Ød nom	t mm	weight kg	box quantity
400	1,5	0,65	30
450	2,5	1,03	10
500	2,5	1,13	10
560	2,5	1,25	10
600	2,5	1,30	10
630	2,5	1,40	10
710	2,5	1,70	10
800	2,5	1,80	10
900	2,5	2,00	10
1000	2,5	2,20	10
1120	2,5	2,40	10
1250	2,5	2,70	10





## METAL BAND CLIP

## MDC



### DESIGN/USE

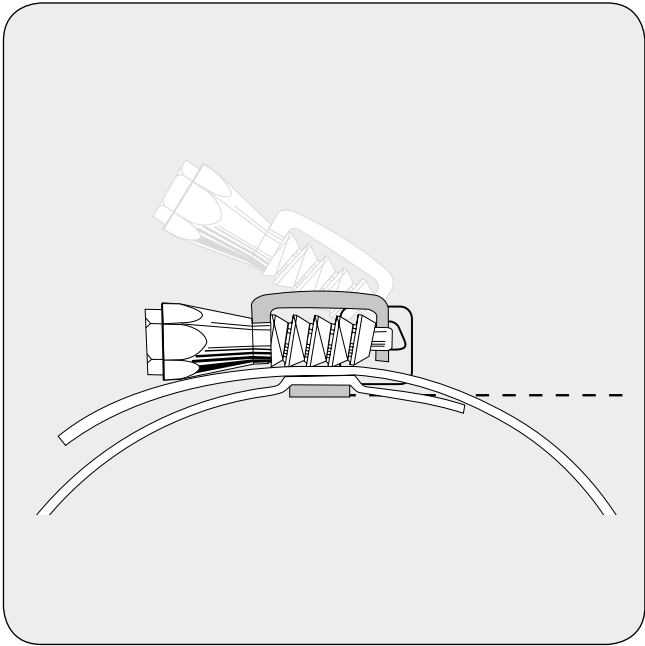
MDC metal band clips are made of 9 mm wide stainless steel tape. Their properly shaped edges prevent damaging the ducts during assembly. May be used with any type of flexible ducts. Band clip is installed with special fast opening and closing FDBL fastener.

diameter range D mm	box quantity
MDC 60 – 110	50
MDC 60 – 135	50
MDC 60 – 165	50
MDC 60 – 215	50
MDC 60 – 270	50
MDC 60 – 325	50



TAPE FOR BAND CLIPS / FASTENERS

FDB / FDBL



FDB - DESIGN/USE

FDB is a 9 mm wide stainless steel tape. It is rolled and 30 meters long. Its properly shaped edges prevent damaging the ducts during assembly. The tape is dosed from handy plastic packages. It enables the user to install a clip band on any flexible duct diameter thanks to FDBL fastener. The rolled FDB metal tape is an economic, convenient and fast way to create band clips.

FDBL - CLIP FASTENER FOR FDB TAPE

FDBL fasteners are used to make band clips for any diameter of flexible duct using FDB tape. This solution allows to avoid the need of having many diameter bands in stock. Special design of FDBL fastener allows for quick locking and unlocking, which makes assembly of band on a duct much easier.

Box – 50 pcs

TYPE		FDB
Material		stainless steel
Width		9 mm
Tape length		30 m



## NYLON BAND CLIP

CMN



### DESIGN/USE

CMN nylon band clips are an economic alternative for metal bands, when installing flexible ducts. Thanks to their design and easy use, they are extremely easy to install, make the work much faster and hold the duct securely on connected pipe. Nylon bands can be used within the temperature range: - 55°C to + 100°C. They are available in lengths ranging from 550 mm to 1188 mm. If other lengths are required, bands can be easily connected without using any tools.

Box – 100 pcs

maximum length mm

550

800

920

1188



SUPRESSING BAND

OM



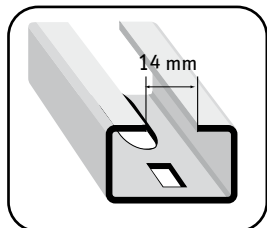
DESCRIPTION

Supressing bands for fan installation in round duct systems

type	diameter mm
OM 100	100
OM 125	125
OM 150	150
OM 160	160
OM 200	200
OM 250	250
OM 315	315
OM 355	355
OM 400	400
OM 500	500

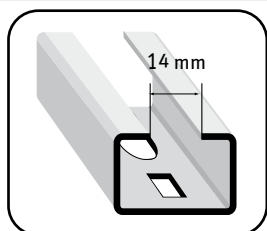


## SUPPORT CHANNEL



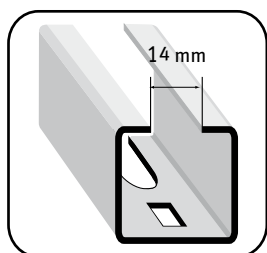
**W 2 PROFILE**

Metal thickness: 2,0 mm  
Size: 20x35 mm  
Length: 2 m, 5 m  
Weight: 1,08 kg/m  
Package: 2 m long: 125 pcs  
5 m long: 100 pcs



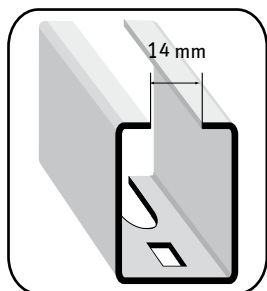
**W 105 PROFILE**

Metal thickness: 1,5 mm  
Size: 20x30 mm  
Length: 2 m, 5 m  
Weight: 0,87 kg/m  
Package: 2 m long: 125 pcs  
5 m long: 100 pcs



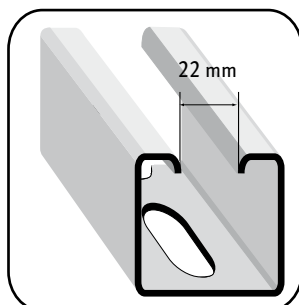
**W 106 PROFILE**

Metal thickness: 1,7 mm  
Size: 30x30 mm  
Length: 2 m, 5 m  
Weight: 1,34 kg/m  
Package: 2 m long: 50 pcs  
5 m long: 100 pcs



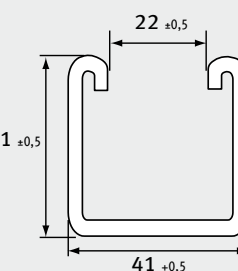
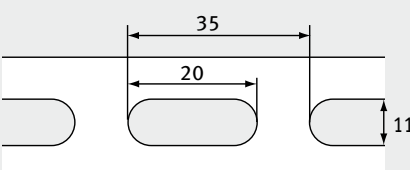
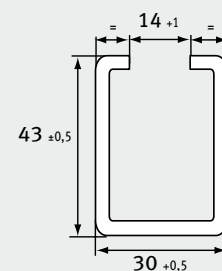
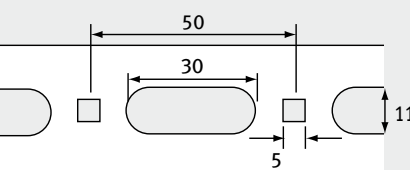
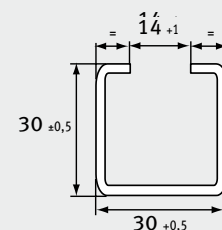
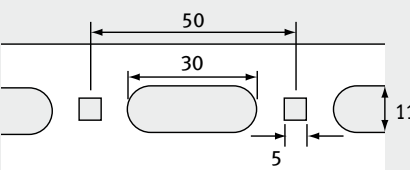
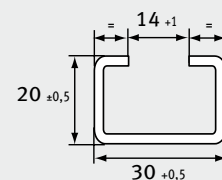
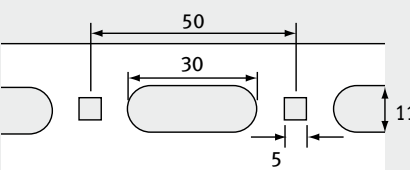
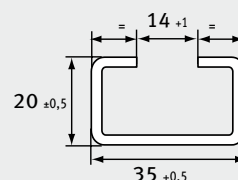
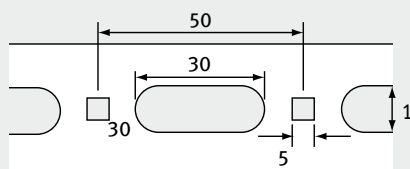
**W 107 PROFILE**

Metal thickness: 1,7 mm  
Size: 43x30 mm  
Length: 2 m, 5 m  
Weight: 1,71 kg/m  
Package: 2 m long: 50 pcs  
5 m long: 50 pcs



**W 41 PROFILE**

Metal thickness: 2,5 mm  
Size: 41x41 mm  
Length: 5 m  
Weight: 2,67 kg/m  
Package: 50 pcs





## WCLGM TYPE SUSPENSION

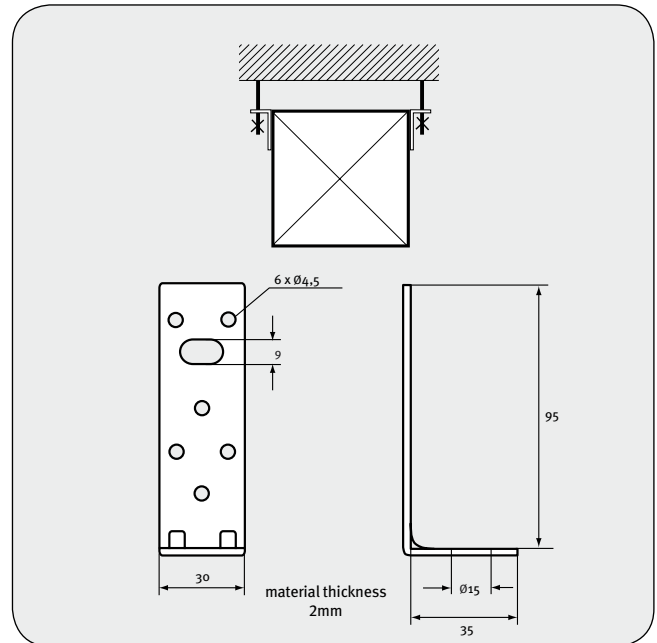


### DESCRIPTION

For assembly of rectangular ventilation ducts with use of M8 and M10 threaded rods and self-drilling screws.  
Material – 2 mm thick galvanized steel tape

**Material – stainless steel tape**

Rubber shock absorber prevents transmission of vibrations from the ventilation system to building's structure.  
Box – 100 pcs



## WCZGM TYPE SUSPENSION



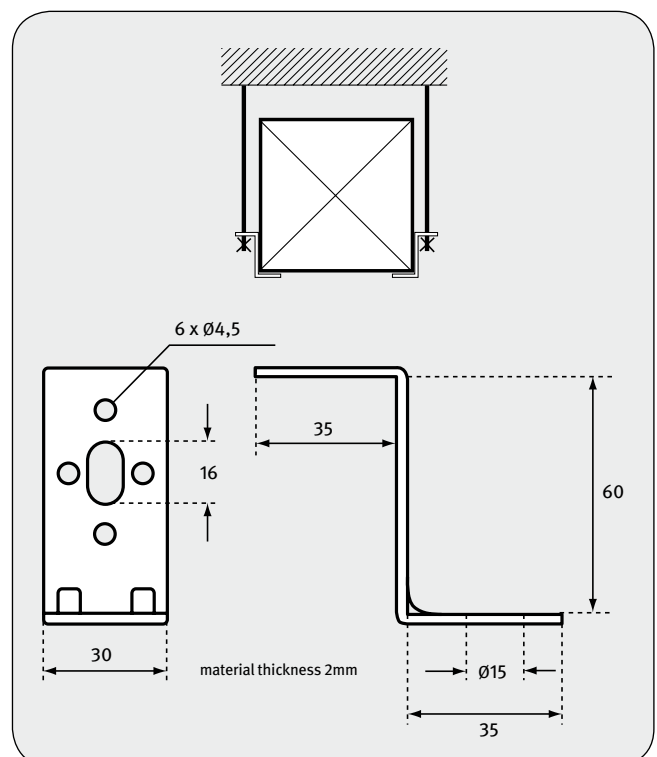
### DESCRIPTION

For assembly of rectangular ventilation ducts with use of M8 and M10 threaded rods and self-drilling screws.  
Material – 2 mm thick galvanized steel tape

**Material – stainless steel tape**

Rubber shock absorber prevents transmission of vibrations from the ventilation system to building's structure.

Box – 100 pcs





## WCRVG / WCVG TYPE SUSPENSION

TYPE WCRVG



TYPE WCVG



### DESCRIPTION

For assembly of ventilation ducts with use of M8 and M10 threaded rods and self-drilling screws. Material – 2 mm thick galvanized steel tape

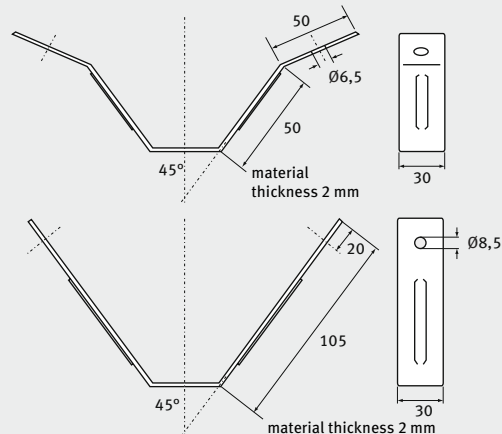
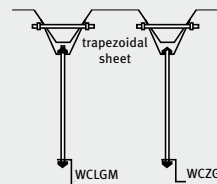
**Material – stainless steel tape**

Rubber shock absorber prevents transmission of vibrations from the ventilation system to building's structure. Package – 100 pcs

hanger for round ducts



hanger for rectangular ducts



## RJBC VENTILATION DUCT CLIP

### DESCRIPTION

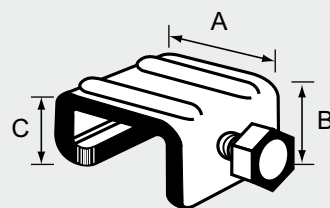
A = 32 mm; B = 19 mm; C = 13 mm

M8x25mm screw for joining DW 20, DW 30 and DW 40 duct profiles and other systems.

Material – 2,5 mm thick galvanized steel

**Material – 2,5 mm thick stainless steel**

Package – 500 pcs



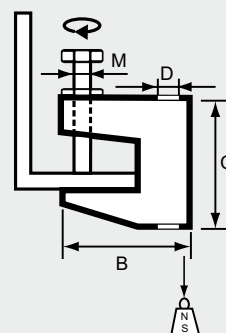
## BCT BEAM CLAMP

type	B mm	C mm	D mm	M mm	maximum load kg
BCT - M8	38	35	M8	10	112
BCT - M10	45	42	M10	10	245

Material – galvanized steel

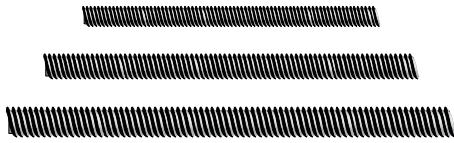
**Material - stainless steel**

Package – 50 pcs





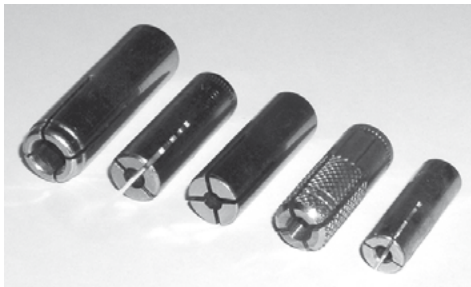
## OSB THREADED ROD



### DESCRIPTION

M 8	M 8
M 10	M 10
– length 1 m, 2 m	– length: 2 m
– <b>galvanized steel</b>	– <b>stainless steel</b>

## ABG / ABB ANCHOR BUSH



### DESCRIPTION

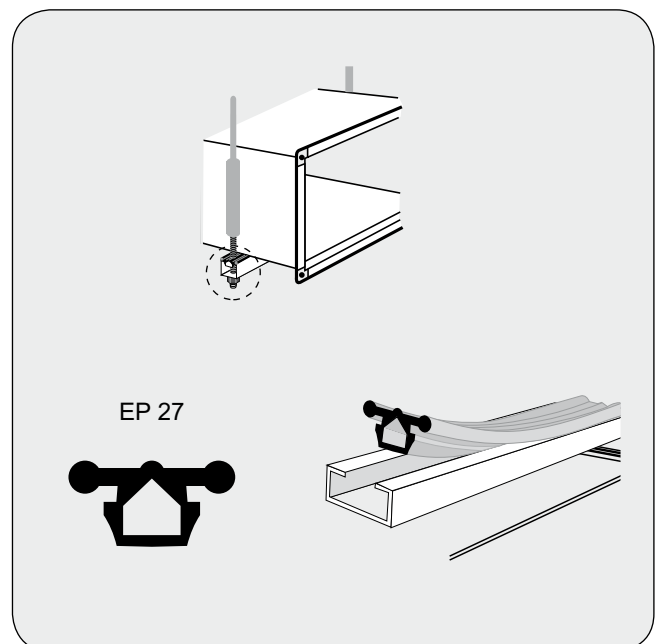
- spreading galvanized steel - ABG  
M 8 x 30 mm  
M10 x 40 mm
  - spreading brass - ABB  
M8 x 28 mm  
M10 x 33 mm
- Package – 100 pcs

## SHOCK ABSORBING RUBBER

**RU-25**

### DESCRIPTION

For support channel: W 2, W 105, W 106 and W 107 types







## UNIVERSAL SELF-DRILLING SCREWS

**SDS**



### DESCRIPTION

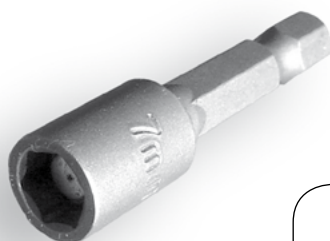
For quick mounting of suspensions, sheet-metal connections and for connecting mouldings in ventilation elements. Hexagonal head 7 mm, also equipped with square central hole for pan-head terminal.

### SIZE AND PACKAGE

4,2 x 9,5 mm, 1000 pcs	4,2 x 25 mm, 1000 pcs
4,2 x 13 mm, 1000 pcs	4,2 x 42 mm, 500 pcs
4,2 x 16 mm, 1000 pcs	4,8 x 16 mm, 1000 pcs

## TERMINAL FOR SELF-DRILLING SCREWS

**HYLSA**



**BITS**



### DESCRIPTION

Magnetic tip can be used as a socket wrench together with an automatic screwdriver for hexagonal head 7 mm sheet metal screws.

Size 7 mm

Also available BITS type for pan-head type screws



## ALU-ZINC SPRAY ALZN 500



### PROPERTIES

- drying time - surface is resistant to touching after 2-3 minutes, complete drying time 30 min
- produced using acrylic resins
- silver colour

### INDICATIONS ON PROCESSING

- clean up and remove grease from surface to be painted
- remove remains of rust by rubbing down
- remove old varnish coatings
- mix the product thoroughly by shaking it for ca. 1 minute

### APPLICATION

- permanent protection of metal surfaces from corrosion
- spotting of damaged galvanized elements
- repair of cut, heat sealed and welded elements
- applying corrections following galvanization, heat sealing and welding

### ADVANTAGES

- high zinc and aluminium content 99%
- excellent resistance to abrasion
- excellent covering power
- highly efficient and economical
- resistant to high temperatures
- short drying time

Packaging - 500 ml, 12pcs/box

## GALVANIZED STEEL NUT

**M6M**



type	thread	box quantity	weight kg
M6M08	M8	2000	9
M6M10	M10	1500	15

## CONNECTING NUT

**LN**



type	description
LN830	M8, length 30 mm
LN1030	M10, length 30 mm



## GALVANIZED STEEL SCREW

**BB**



type	size	box quantity	weight kg
BB0825	M8x25	300	3,75
BB1025	M10x25	200	4,00

## GALVANIZED STEEL WASHER

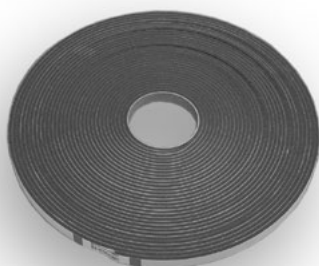
**WW**



type	size	box quantity	weight kg
WW08	M8	4000	28
WW10	M10	3000	19

## SELF-ADHESIVE SEAL

**PES**



### DESCRIPTION

Used for sealing connections of rectangular duct sections.

Material – polyethylene foam with closed cells, physical reticulation, dark grey.

operating Temperature Range: -80°C to +110°C

width 10 mm x thickness 4 mm, roll 20 m, package 1000 m

width 15 mm x thickness 4 mm, roll 20 m, package 1200 m

width 12 mm x thickness 6 mm, roll 12,5 m, package 1000 m

width 10 mm x thickness 7 mm, roll 10 m, package 900 m



## TEMPERATURE RESISTANT SEAL

**PEST**



### DESCRIPTION

Gasket is made of ceramic fiber which ensures its high temperature resistance, as well as lack of fumes in case of contact with fire.

Glue applied on one side of the gasket ensures easy assembly.

Gasket is a perfect choice for ventilation ducts with high fire and smoke safety requirements.

width 10 mm x thickness 4 mm, package 10 m

width 10 mm x thickness 5 mm, package 10 m

width 10 mm x thickness 6 mm, package 10 m

Adhesive	acrylic dispersion, solvent-free
Adhesive carrier	nonwoven web
Liner	siliconized PE-foil
Colour	white
Density	200 - 300 kg/m <sup>3</sup>
Fiber diameter	Ø 3,2 µm
Tensile strength	≥ 350 kPa
Classification temperature (maximum service temperature)	1100 °C
Melting point	> 1330 °C

## PERFORATED SUSPENSION BANDING

**DUH**



### DESCRIPTION

Used for hanging circular ducts in duct system installations.

Material: perforated galvanized steel tape

0,6 x 17 mm – 25 mb

0,6 x 25 mm – 25 mb

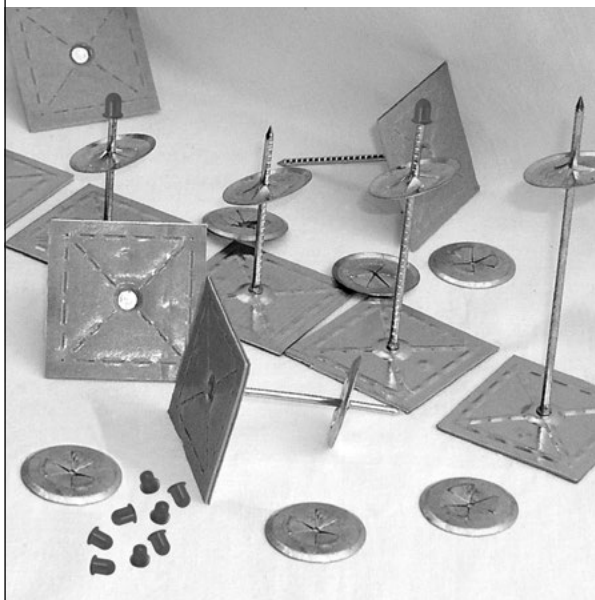
Box - 10 pcs



## SELF-ADHESIVE NAILS / WELDING NAILS

**GS1 / GS**

### SELF-ADHESIVE NAILS - GS1



#### TECHNICAL DATA

- steel pins, diameter 2,7 mm
- self-adhesive, galvanized steel base (50/50 mm)
- solid, synthetic resin rubber glue made of compact cells filled with polyurethane foam
- length 19-165 mm
- nail surface is knurled which prevents the fixing clip from sliding

#### USE

Self-adhesive nails are used for mechanical fixing of insulation materials on smooth surfaces of ventilation ducts. To be used within temperature range from -40°C to +80°C (for a short time up to 100°C).

#### HOW TO USE

Fix the nails when air temperature is minimum 10 °C. It is recommended to use 10 to 12 self-adhesive nails per square meter.

Procedure:

- clean, dry and degrease the surface where the nails are to be fixed
- remove paper cover and assemble nails
- cover nails with insulation
- install EC fixing clips and, if necessary, protect nail tip with EP nylon hood

- EC fixing clips
- galvanized steel elastic blades
- external diameter 30 or 40 mm. Protective EP nylon hood
- plastic hood protects the nail tip

### WELDING NAILS - GS



#### USE

Welding nails are used for mechanical fixing of insulation materials on smooth surfaces of ventilation ducts. To be used within temperature range from -40°C to +80°C (for a short time up to 100°C).

#### HOW TO USE

Nails are fixed using welder. They are heated in that way, to ensure enough durability, but avoid damaging the zinc coating.



## INSULATING ALUMINUM TAPE

## AI TAPE



### DESCRIPTION

Single sided self-adhesive aluminum insulation tape. Used in production and assembly of air conditioning and ventilation devices, dust removal systems as well as heat engineering. To be applied on insulation bends and forks, on material and mineral wool or glass wool segment connections. Ensures a coherent aluminum insulation layer which prevents water from penetrating the system. Hardly combustible according to DIN 4102-1-B1 standard.

carrier: aluminum, thickness: 0,03 mm

total thickness: 0,075 mm

glue: acryl

temperature range: -30°C to +120°C

peel adhesion: 20 N/25mm

tensile strength: 37,5 N/25mm

width mm	length m	box quantity
100	50	12
75	50	16
50	50	24

## REINFORCED INSULATING ALUMINUM TAPE

## RAI TAPE



### DESCRIPTION

Single sided self-adhesive aluminum tape reinforced with 5x5 mm carbon fibre mesh, laminated with polyethylene. Higher mechanical durability as compared to plain tape. Widely used in technical assemblies.

carrier: aluminum, thickness: 0,03 mm

total thickness: 0,15 mm

glue: acryl

temperature range: -20°C; +80°C

peel adhesion: 25 N/25mm

width mm	length m	box quantity
100	50	12
75	50	16
50	50	24



## UNIVERSAL REPAIR TAPE

### UR TAPE



#### DESCRIPTION

Single sided self adhesive tape is perfect for connecting insulations in air conditioning and ventilation systems. It is perfect for all types of repairs. Very good adhesive properties.

carrier: polyethylene laminated with polyester-cotton fabric

total thickness: 0,22 mm

glue: acryl

temperature range: 0°C; +80°C

peel adhesion: >1.5 N/25mm

tensile strength: 8 N/cm

width  
mm

length  
m

box quantity

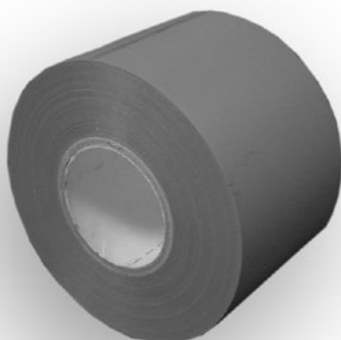
50

50

48

## GREY PVC TAPE

### PVC TAPE



#### DESCRIPTION

Soft tape made of vinyl polychlorade is designed for pipes and ducts (ventilation and heating) less exposed to weather conditions. It is elastic, which allows for relatively smooth surface after applying the tape.

carrier: polyethylene laminated with polyester-cotton fabric

total thickness: 0,08 mm

glue: acryl

temperature range: -15°C; +80°C

peel adhesion: 4,9 N/25mm

tensile strength: 88,25 N/25mm

width  
mm

length  
m

box quantity

50

50

24



## PP METALIZED TAPE

## MT TAPE



### DESCRIPTION

Single sided self adhesive tape with aluminum dust. Used for tightening of air conditioning or central heating systems. Due to its' good adhesive properties and low side penetration by water and solvents, it is also widely used in other branches.

carrier: aluminum dusted polypropylene

total thickness: 0,05 mm

glue: acryl

temperature range: -20°C;+80°C

peel adhesion: 25 N/25mm

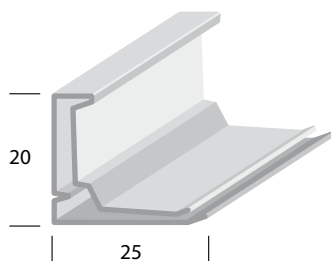
width mm	length m	box quantity
75	50	64
50	50	96



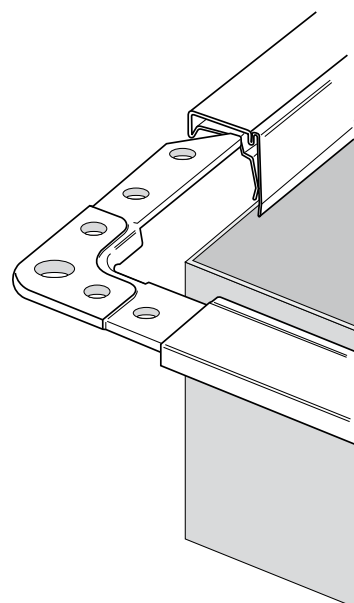
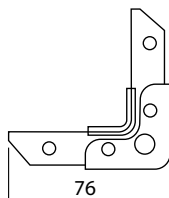


## RJFP DUCTWORK PROFILES, RJCL CORNERS FOR DUCTWORK PROFILES

**RJFP 20**



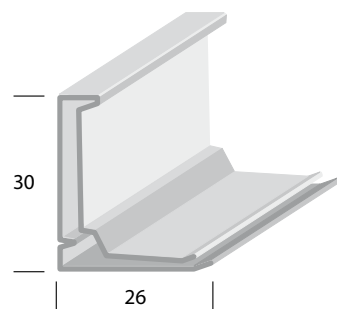
**RJCL 20**



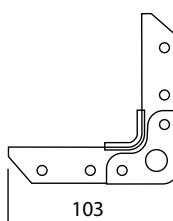
RJFP 20 - PROFILE - metal thickness: 0.6 mm; length: 5 m

RJCL 20 - CORNER - metal thickness: 2 mm; box quantity: 500 pcs

**RJFP 30**



**RJCL 30**



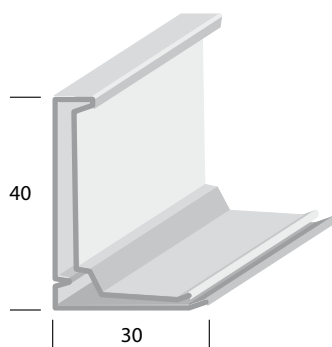
RJFP 30 - PROFILE - metal thickness: 0.7 mm; length: 5 m

RJCL 30 - CORNER - metal thickness: 2,5 mm; box quantity: 250 pcs

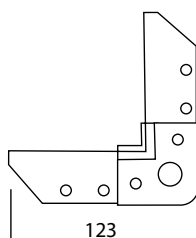
**On request - also available:**

- ductwork profiles in different material thicknesses
- ductwork profiles with sealant

**RJFP 40**



**RJCL 40**



RJFP 40 - PROFILE - metal thickness: 1 mm; length: 5 m

RJCL 40 - CORNER - metal thickness: 3 mm; box quantity: 100 pcs



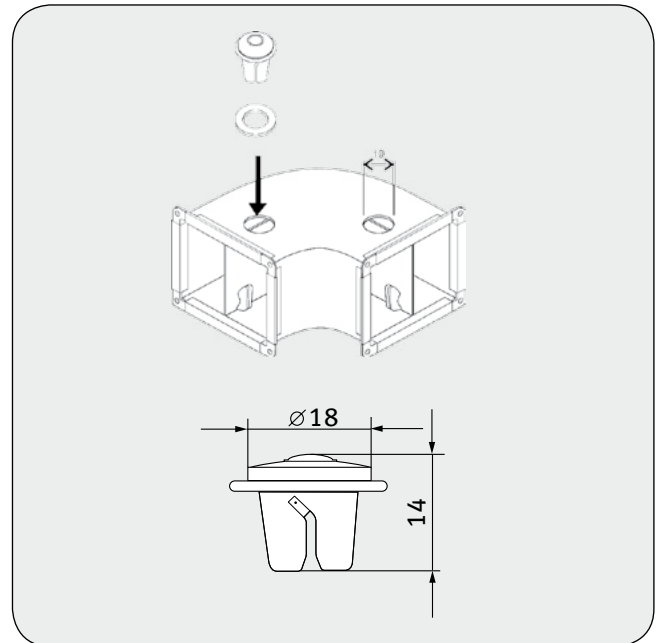
## TURNING VANE GUIDES FOR RECTANGULAR DUCT

**LKK**

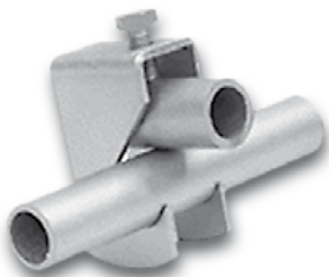

### DESCRIPTION

These guides allow the user to install turning vanes 0,4-1,13 mm thick in rectangular ducting fittings. Made of galvanized steel. Supplied with rubber gasket, which makes connection air tight.

Box quantity: 100 pcs



## STIFFENING STEEL CROSS

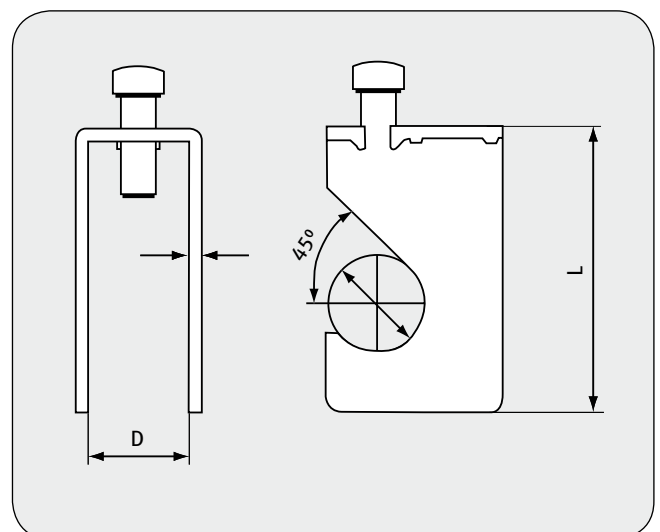
**SSS**


### DESCRIPTION

Designed for cross connection of large diameters stiffening pipes. Made of 3 mm galvanized steel, which guarantees resistance to high temperatures necessary e.g. for smoke removing duct systems.

L = 70mm, D = 22mm

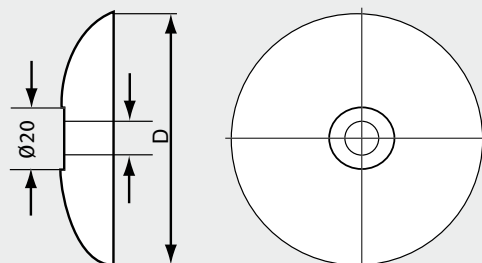
Box quantity: 1 pc





## STIFFENING DISC

**TD**



### DESCRIPTION

Diameter D=74 mm, used for stiffening of large dimensions rectangular ducts. Prevents deformation of the duct, where the stiffening is installed.  
Made of 1-1,3 mm thick galvanized steel  
Embossing for nut

Box quantity: 1000 pcs

## STIFFENING ALUMINUM PIPE

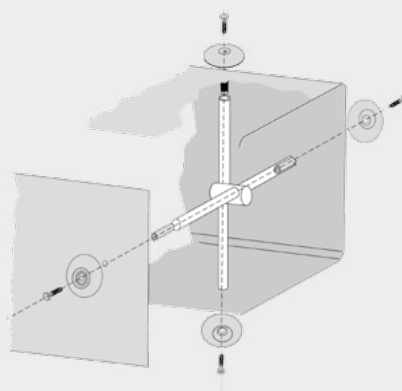
**SAP**



### DESCRIPTION

Aluminum pipe designed for stiffening large dimensions rectangular ducts.  
Wall thickness c.a. 2 mm

16 mm x 6 m





## FLEXIBLE CONNECTOR

**LECK**



### DESCRIPTION

Flexible connector is used to prevent transmission of vibrations and noise along the duct system. Different types of connectors are available so that the user could choose the best solution for installation, fire protection and economy.

### PROPERTIES:

- prevents transmission of vibrations and noise along the duct system
- air tight
- can be used in round, rectangular and oval duct systems
- easy to use and fabricate

### Technical data:

	Metal	Fabric	Metal
Standard dimensions	35 mm	60 mm	35 mm
	45 mm	60 mm	45 mm
	70 mm	100 mm	70 mm
Standard lengths	25 m, packed in separate cardboard box		
	50 m, packed in separate cardboard box		
Metal thickness	0.4 mm, galvanized		

### Technical data:

Fabric material	PVC
Coverage	Polyester
Coating	Hardly combustible PVC
Color	Grey
Operating temperatures range	-40/+80°C



## DAMPER MECHANISMS



### Damper mechanism

KS145	1/4" damper mechanism, KP6 bolt with a spring, KP8S square bolt
KSR195	3/8" damper mechanism KR3, KP9S square bolt, BKP14 plastic sleeves

## REGLS DAMPER MECHANISM

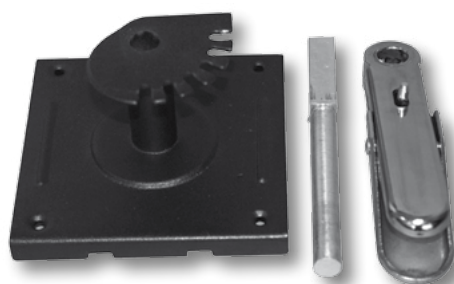


### DESCRIPTION

Mechanism made of galvanized steel. It is adjusted with the bar located directly above the mechanism's rotation axis. The set includes: cup with handle and locking screws, shaft connecting strips with fastening screws, shaft bushings and lock washers.

## AC-006 DAMPER MECHANISM

**AC-006**



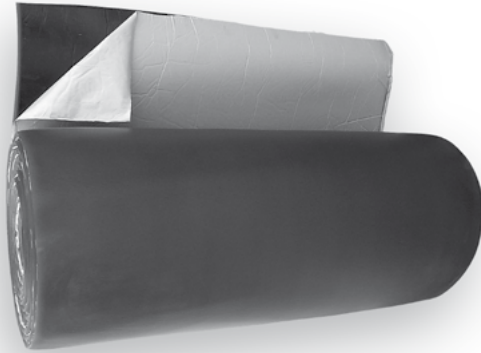
### DESCRIPTION

AC-006 mechanism for multi-leaf dampers. In the set you will find body made from powder-painted steel in black color, aluminum pin and handle form made of nickled steel. Precise regulation is possible because of a handle supporting the given angle of current setting.



## THERMAL INSULATION SELF-ADHESIVE MAT

**MSTCK**



### DESCRIPTION

Self-adhesive thermal insulation mats MSTCK are made of synthetic rubber foam and rolled into 1 m wide rolls. Mats are used for thermal insulation and protection against condensate water of large diameter pipes, tanks and all types of fixtures in cooling, air conditioning, ventilation, heating, sanitary and special installations.

### CHARACTERISTICS

density: 70÷90 kg/m<sup>3</sup>  
 heat conductivity (W/mK):  
 $\lambda=0,031$  (-20°C);  $\lambda=0,034$  (0°C);  $\lambda=0,038$  (+40°C)  
 thermal resistance: -50°C ÷ +110°C  
 steam dispersion resistance factor:  
 $\mu > 4500$   
 water absorption: < 5%

thickness mm	width m	box quantity m <sup>2</sup> /roll
6	1	10
9	1	10
13	1	10
19	1	10
25	1	10



## CIRCULAR DUCT INSULATION

**FDFI**



### PRODUCT ADVANTAGES

- low transportation and storage cost
- easy assembly
- no need to use special tools for cutting or fixing

### USE

This insulation is meant to be used with circular ducts

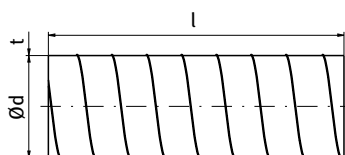
### DESIGN

Insulated with 25 mm thick mineral wool layer. The external layer is made of aluminum-polyester laminate reinforced with fibre wire.

type	FDFI
Diameter range	102 - 508 mm
Operating temperature range	-30/+140 °C
Insulation thickness	25 mm
Standard length	10 m
Cardboard package	roll

# TOLERANCES

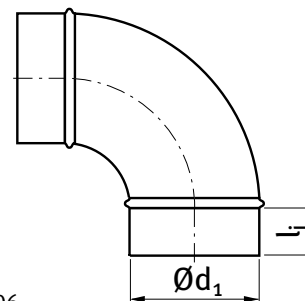
Diameter range for ducts



According to EN1506

Ød nom	tolerance range		
80	80,0	-	80,5
100	100,0	-	100,5
125	125,0	-	125,5
140	140,0	-	140,6
150	150,0	-	150,6
160	160,0	-	160,6
180	180,0	-	180,7
200	200,0	-	200,7
224	224,0	-	224,8
250	250,0	-	250,8
280	280,0	-	280,9
300	300,0	-	300,9
315	315,0	-	315,9
355	355,0	-	356,0
400	400,0	-	401,0
450	450,0	-	451,1
500	500,0	-	501,1
560	560,0	-	561,2
600	600,0	-	601,2
630	630,0	-	631,2
710	710,0	-	711,6
800	800,0	-	801,6
900	900,0	-	902,0
1000	1000,0	-	1002,0
1120	1120,0	-	1122,5
1250	1250,0	-	1252,5

Diameter range for fittings



According to EN1506

Ød <sub>1</sub> , d <sub>2</sub> , d <sub>3</sub> , d <sub>4</sub> nom	tolerance range			l nom
80	78,8	-	79,3	38
100	98,8	-	99,3	38
125	123,8	-	124,3	38
140	138,7	-	139,3	38
150	148,7	-	149,3	38
160	158,7	-	159,3	38
180	178,6	-	179,3	38
200	198,6	-	199,3	38
224	222,5	-	223,3	38
250	248,5	-	249,3	57
280	278,4	-	279,3	57
300	298,4	-	299,3	57
315	313,4	-	314,3	57
355	353,3	-	354,3	57
400	398,3	-	399,3	75
450	448,2	-	449,3	75
500	498,2	-	499,3	75
560	558,1	-	559,3	75
600	598,1	-	599,3	75
630	628,1	-	629,3	75
710	708,0	-	709,3	100
800	798,0	-	799,3	100
900	897,9	-	899,3	100
1000	997,9	-	999,3	115
1120	1117,8	-	1119,3	115
1250	1247,8	-	1249,3	115

Length

l, l <sub>1</sub> , l <sub>3</sub> , etc	Tolerance
0-15	+0 / -2
16-100	+0 / -5
101-	+0 / -10
L	±5

Angle

α	Tolerance
	±2°

Weight

±10%

Sheet metal thickness

As in sheet metal standard EN 10143:1993.

**Bold face denotes standard dimensions.** Standard face denotes intermediate dimensions.



**A**

ABG / ABB - Anchor bush .....	115
AC-006 - Damper mechanism .....	128
AI TAPE - Insulating aluminum tape .....	121
ALZN 500 - Alu-zinc spray .....	117
AV / AVL - Angle take-off with mesh .....	41

**B**

B / BL 15 - 15° pressed bend .....	10
B / BL 30 - 30° pressed bend .....	9
B / BL 45 - 45° pressed bend .....	8
B / BL 60 - 60° pressed bend .....	7
B / BL 90 - 90° pressed bend .....	6
BB - Galvanized steel screw .....	118
BCT - Beam clamp .....	114
BF / BFL 15 - 15° segmented bend .....	15
BF / BFL 30 - 30° segmented bend .....	14
BF / BFL 45 - 45° segmented bend .....	13
BF / BFL 60 - 60° segmented bend .....	12
BF / BFL 90 - 90° segmented bend .....	11
BKL 90 - 90° short pressed bend .....	16
BKML 90 - 90° short pressed bend .....	17

**C**

CA / CN - Centrowent chimney root .....	101
CDCK - Round ceiling diffuser .....	72
CMN - Nylon band clip .....	110

**D**

DR / DRL - Regulating damper .....	83
DRSN - Circular suspension .....	106
DRSNR - Circular suspension .....	107
DS / DSL - Closing damper .....	84
DT / DTL - Airtight closing damper .....	85
DUH - Perforated suspension banding .....	119
DVR - Swirl diffuser .....	77

**E**

EGC - Egg crate grille .....	82
EPF - Fitting end cap .....	49
EPFH - Fitting end cap with handle .....	51
ES / ESL - Duct end cap .....	48
ESHL - Duct end cap with handle .....	50
ESN / ESNL - Take-off with mesh .....	55

**F**

FD - PVC flexible duct .....	61
FDB / FDBL - Tape for band clips / fasteners .....	109
FDFI - Circular duct insulation .....	130
FDS - Swirl floor diffuser .....	79
FHD - Non-insulated aluminum flexible duct .....	58
FIHD - Insulated aluminum flexible duct .....	59
FKO - Round duct filter .....	100
FLD - Non-insulated aluminum flexible duct .....	56
FLDD - PVC laminated aluminum flexible duct .....	62
FLDFSL / FLDPI - Insulated aluminum flexible duct .....	57

**G**

GS - Welding nails .....	120
GS1 - Self-adhesive nails .....	120

**H**

HB40 - Four-way diffuser .....	73
HF - Roof hood .....	97
HN - Roof hood .....	96
HU - Roof hood .....	94
HYLSA - Terminal for self-drilling screws .....	116

**I**

IL / ILL - Flat take-off .....	52
ILF - Female flat take-off .....	53
ILR / ILRL - Take-off with radius .....	54
IPF - Flat access door for rectangular duct .....	91
IPLR - Curved access door for round duct .....	90
IRIS - Iris damper .....	86

**J**

JNS - Jet diffuser .....	80
--------------------------	----

**K**

KS145 - Damper mechanism .....	128
KSR195 - Damper mechanism .....	128
KWO-AL - Round air intake / exhauster .....	92

**L**

LECK - Flexible connector .....	127
LKK - Turning vane guides for rectangular duct .....	125
LN - Connecting nut .....	117

**M**

M6M - Galvanized steel nut .....	117
MDC - Metal band clip .....	108
MF - Female coupling .....	47
MSTCK - Thermal insulation self-adhesive mat .....	129
MT TAPE - PP metalized tape .....	123

**N**

NEV - Exhaust air valve .....	67
NP / NPL - Male coupling .....	46
NSV - Supply air valve .....	66

**O**

OFK - Round duct filter .....	99
OM - Supressing band .....	111
OSB - Threaded rod .....	115

**P**

PES - Self-adhesive seal .....	118
PEST - Temperature resistant seal .....	119
PS / PSL - Pressed saddle .....	35
PVC TAPE - Grey PVC tape .....	122

**R**

RAI TAPE - Reinforced insulating aluminum tape .....	121
RC / RCPL - Pressed reducer .....	18
RCF / RCFPL - Pressed male-female reducer .....	19
RCL / RCLL - Symmetric hand made reducer .....	20
REGLS - Damper mechanism .....	128
RJBC - Ventilation duct clip .....	114
RJCL 20 - Corners for ductwork profiles .....	124
RJCL 30 - Corners for ductwork profiles .....	124
RJCL 40 - Corners for ductwork profiles .....	124
RJFP 20 - Ductwork profile .....	124
RJFP 30 - Ductwork profile .....	124
RJFP 40 - Ductwork profile .....	124
RL / RLL - Eccentric hand made reducer .....	23
RSKA - Back draft damper .....	89
RU-25 - Shock absorbing rubber .....	115

**S**

S-FLEX - Semi-rigid aluminum duct .....	60
SAP - Stiffening aluminum pipe .....	126
SDB - Swirl diffuser .....	75

SDC - Swirl diffuser .....	76
SDML - Slot diffuser .....	78
SDS - Universal self-drilling screws .....	116
SF - Flexible circular silencer .....	105
SF-E - Exhaust air valve .....	69
SF-S - Supply air valve .....	68
SGD - Round duct grille .....	81
SLL - Circular silencer .....	103
SR-E - Exhaust air valve .....	65
SR-S - Supply air valve .....	64
SSS - Stiffening steel cross .....	125
SSST - Male connector .....	45
SW - Swirl diffuser .....	74

**T**

TBS - Curved boot .....	42
TBSF - Flat shoe .....	44
TC / TCL - Hand made T-piece .....	29
TCP / TCPL - T-piece .....	26
TD - Stiffening disc .....	126
TSTC / TSTCL - Hand made saddle .....	38
TV 45 / TVL 45 - 45° T-piece .....	32

**U**

UR TAPE - Universal repair tape .....	121
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**V**

VH - Roof hood .....	95
VHL - Roof hood .....	98
VLA - Round air intake / exhauster (CrNi steel) .....	93
VP - Plastic air valve .....	71
VS - Air valve (CrNi steel) .....	70

**W**

W 2 – Support channel .....	112
W 41 – Support channel .....	112
W 105 – Support channel .....	112
W 106 – Support channel .....	112
W 107 – Support channel .....	112
WCLGM type suspension .....	113
WCRVG / WCVG type suspension .....	114
WCZGM type suspension .....	113
WW - Galvanized steel washer .....	118

[illegible]

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