

ESTA

THE WORLD OF EXTRACTION



— ACCESSORIES CATALOGUE —

2021

www.esta.com



Custom-fit, solid, durable.

High-performance accessories for ESTA Extraction Technology

With over 45 years of experience in design and supply of filtration equipment, we understand the need for high-performance accessories for use with ESTA equipment. Our accessories enable you to customize ESTA systems to your individual requirements and are also suitable for use with many other leading brands, please contact us to discuss your requirements.

All accessory products are manufactured and stringently tested to comply with all current manufacturing & safety standards.



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The prices are valid from 1st. August 2021. All prices in EURO.
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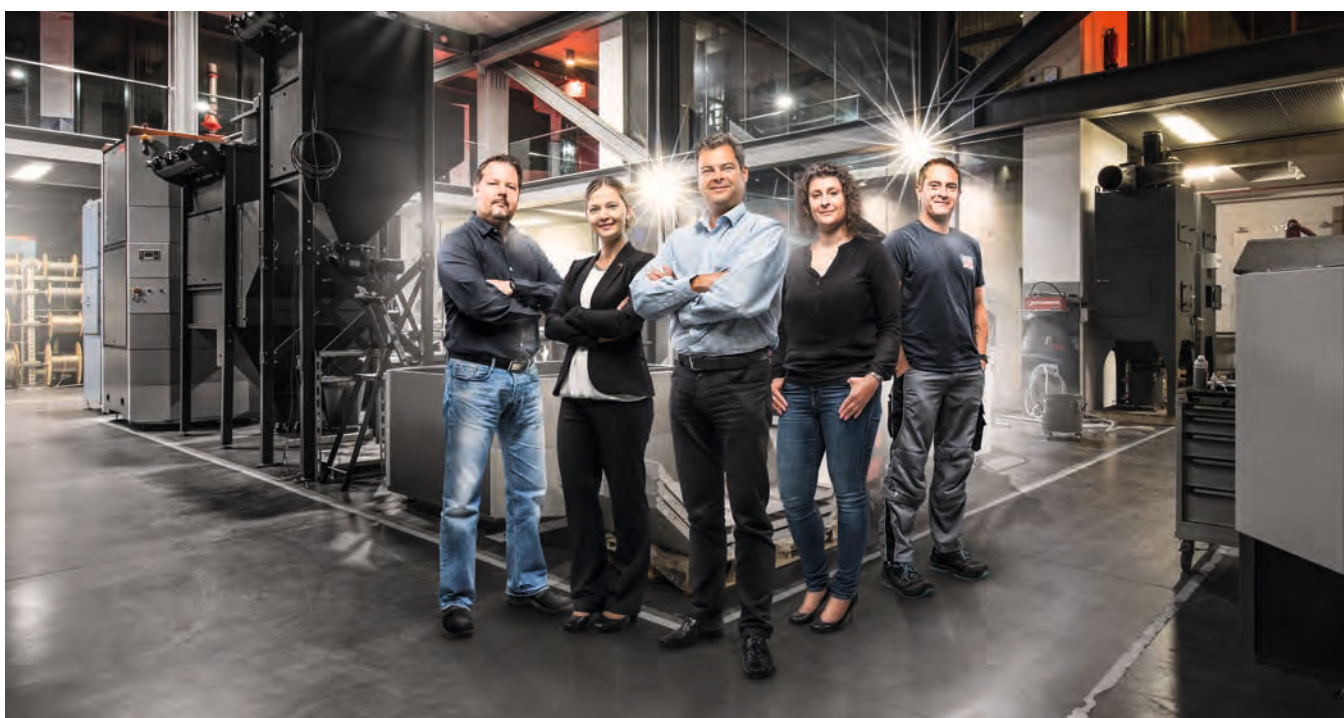
Service is important to us

Contact our international salesman



Benedikt Mühlhauser
Area Sales Manager

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Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channelsExtraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

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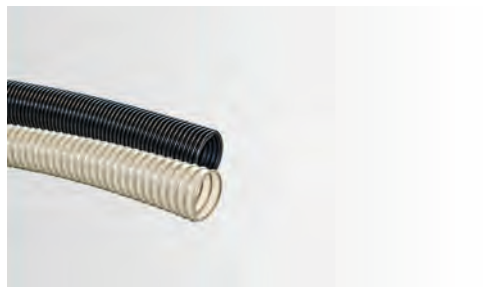
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Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

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Spiral seam pipes/
steel pipes

1 Extraction arms



ESTA extraction arms capture welding and soldering fumes, gases, vapours and dust directly at the source and can be connected to fans or to a central extraction system via a pipeline.

With mounting options on the wall, ceiling, floor or directly on the device, they have a versatile range of applications. Gas springs ensure that the extraction arms can be easily brought to any desired position within their reach.

The exterior support structure ensures that the air flow inside of the extraction arm is not obstructed and that an effective extraction can be achieved. Depending on the application, ESTA extraction arms are available with different extraction hoods, hoses and in many nominal diameters and ranges.



Extraction arms with square plastic hoods for effective collection of smoke gases



Extraction arms with square hoods are ideally suited for large-scale extraction



Extraction arms with oval hoods for precise capture of smoke and dust

The extraction arms are delivered already fully assembled. The advantage for you here is the avoidance of error sources and the shortening of assembly times.

Application

- » For connecting to extraction systems and fans for precise capture of dust and smoke sources

Special features

- » Available nominal diameters from DN 50 mm – DN 200 mm
- » Length: 1.5 m – 8.0 m
- » Large capture radii
- » Absolutely maintenance-free
- » Robust designs
- » External support structure
- » Gas pressure springs for ease of movement

Benefits

- » Wide range of nominal diameters and sizes
- » High flexibility
- » Easy handling
- » Precision capturing

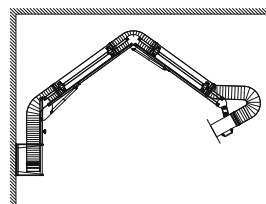


Extraction arm with oval hood for a grinding application

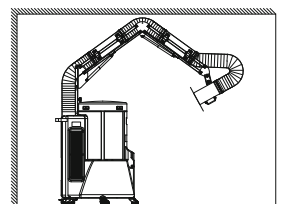


The mobile ESTA welding fume filter SRF K-15 with two extraction arms with square hood and plastic hood

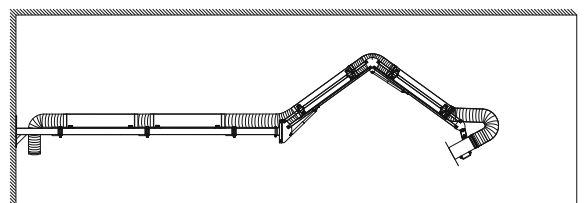
Examples of mounting



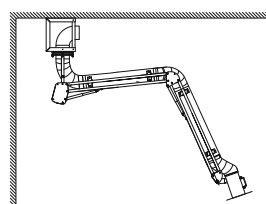
Wall bracket



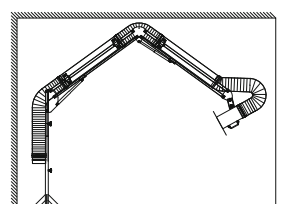
Fixing to the filter unit with a standpipe



Wall bracket with boom



Ceiling/Wall bracket with ball-joint extraction arm



Standpipe with ground level device

1 Extraction arms

1.1 Extraction arms with oval hoods



Ø mm	Length m	Art. no.	Price €
50	1.5	50.152 S/W	550.00
50	2.0	50.202 S/W	580.00
50	3.0	50.302 S/W	610.00
70	1.5	70.152 S/W	590.00
70	2.0	70.202 S/W	630.00
70	3.0	70.302 S/W	650.00
80	1.5	80.152 S/W	670.00
80	2.0	80.202 S/W	690.00
80	3.0	80.302 S/W	700.00
100	1.5	10.152 S/W	680.00
100	2.0	10.202 S/W	690.00
100	3.0	10.302 S/W	720.00
100	4.0	10.4024 S/W	990.00
100	4.0*	10.402 W	1,020.00
100	5.0*	10.502 W	1,320.00
100	6.0**	10.602 W	1,330.00
100	8.0***	10.8024 W	3,020.00
125	1.5	12.152 S/W	750.00
125	2.0	12.202 S/W	760.00
125	3.0	12.302 S/W	790.00
125	4.0	12.4024 S/W	1,020.00
125	4.0*	12.402 W	1,050.00
125	5.0*	12.502 W	1,280.00
125	6.0**	12.602 W	1,390.00
125	8.0***	12.8024 W	3,070.00
140	1.5	14.152 S/W	760.00
140	2.0	14.202 S/W	780.00
140	3.0	14.302 S/W	810.00
140	4.0	14.4024 S/W	1,060.00
140	4.0*	14.402 W	1,080.00
140	5.0*	14.502 W	1,290.00
140	6.0**	14.602 W	1,400.00
140	8.0***	14.8024 W	3,090.00
150	1.5	15.152 S/W	840.00
150	2.0	15.202 S/W	860.00
150	3.0	15.302 S/W	900.00
150	4.0	15.4024 S/W	1,090.00
150	4.0*	15.402 W	1,130.00
150	5.0*	15.502 W	1,310.00
150	6.0**	15.602 W	1,450.00
150	8.0***	15.8024 W	3,120.00

Please specify required type of mounting



S = standpipe

W = wall bracket

From 4.0m extension with boom
only possible with wall bracket

* including 2.0m boom – ** including 3.0m boom – *** including 4.0m boom

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

1 Extraction arms

1.1 Extraction arms with oval hoods (continued)



Please specify required type of mounting



S = standpipe

W = wall bracket

From 4.0m extension with boom
only possible with wall bracket

Ø mm	Length m	Art. no.	Price €
160	1.5	16.152 S/W	920.00
160	2.0	16.202 S/W	930.00
160	3.0	16.302 S/W	970.00
160	4.0	16.4024 S/W	1,120.00
160	4.0*	16.402 W	1,240.00
160	5.0*	16.502 W	1,340.00
160	6.0**	16.602 W	1,540.00
160	8.0***	16.8024 W	3,220.00
180	1.5	18.152 S/W	920.00
180	2.0	18.202 S/W	950.00
180	3.0	18.302 S/W	1,040.00
180	4.0*	18.402 W	1,280.00
180	5.0*	18.502 W	1,380.00
180	6.0**	18.602 W	1,620.00
200	2.0	20.202 S/W	1,110.00
200	3.0	20.302 S/W	1,190.00
200	4.0*	20.402 W	1,420.00
200	5.0*	20.502 W	1,520.00
200	6.0**	20.602 W	1,760.00

* including 2.0m boom – ** including 3.0m boom – *** including 4.0m boom







1.2 Extraction arms with PU hose and oval hoods



Ø mm	Length m	Art. no.	Price €
70	1.5	70.1529 S/W	600.00
70	2.0	70.2029 S/W	630.00
70	3.0	70.3029 S/W	670.00
80	1.5	80.1529 S/W	700.00
80	2.0	80.2029 S/W	720.00
80	3.0	80.3029 S/W	750.00
100	1.5	10.1529 S/W	700.00
100	2.0	10.2029 S/W	720.00
100	3.0	10.3029 S/W	760.00
100	4.0	10.40249 S/W	1,030.00
100	4.0*	10.4029 W	1,060.00
100	5.0*	10.5029 W	1,300.00
100	6.0**	10.6029 W	1,390.00

1 Extraction arms

1.2 Extraction arms with PU hose and oval hoods (continued)

	Ø mm	Length m	Art. no.	Price €
	125	1.5	12.1529 S/W	780.00
	125	2.0	12.2029 S/W	800.00
	125	3.0	12.3029 S/W	820.00
	125	4.0	12.40249 S/W	1,070.00
	125	4.0*	12.4029 W	1,110.00
	125	5.0*	12.5029 W	1,330.00
	125	6.0**	12.6029 W	1,440.00
	140	1.5	14.1529 S/W	800.00
	140	2.0	14.2029 S/W	820.00
	140	3.0	14.3029 S/W	840.00
	140	4.0	14.40249 S/W	1,110.00
	140	4.0*	14.4029 W	1,140.00
	140	5.0*	14.5029 W	1,350.00
	140	6.0**	14.6029 W	1,460.00
	150	1.5	15.1529 S/W	880.00
	150	2.0	15.2029 S/W	890.00
	150	3.0	15.3029 S/W	950.00
	150	4.0	15.40249 S/W	1,160.00
	150	4.0*	15.4029 W	1,200.00
	150	5.0*	15.5029 W	1,390.00
	150	6.0**	15.6029 W	1,500.00
	160	1.5	16.1529 S/W	970.00
	160	2.0	16.2029 S/W	990.00
	160	3.0	16.3029 S/W	1,020.00
	160	4.0	16.40249 S/W	1,190.00
	160	4.0*	16.4029 W	1,310.00
	160	5.0*	16.5029 W	1,420.00
	160	6.0**	16.6029 W	1,630.00
	180	1.5	18.1529 S/W	1,040.00
	180	2.0	18.2029 S/W	1,050.00
	180	3.0	18.3029 S/W	1,160.00
	180	4.0*	18.4029 W	1,640.00
	180	5.0*	18.5029 W	1,540.00
	180	6.0**	18.6029 W	1,810.00
	200	2.0	20.2029 S/W	1,190.00
	200	3.0	20.3029 S/W	1,280.00
	200	4.0*	20.4029 W	1,550.00
	200	5.0*	20.5029 W	1,670.00
	200	6.0**	20.6029 W	1,920.00

Please specify required type of mounting



S = standpipe



W= wall bracket

From 4.0m extension with boom
only possible with wall bracket

* including 2.0m boom – ** including 3.0m boom
Other versions on request

Extraction arms

Extraction hoods

Welding helmets

 Protective walls
Curtains / Lamellas

Extraction cabins

 Slotted suction
channels

 Extraction
accessories

Extraction hoses

 Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

 Spiral seam pipes/
steel pipes

1 Extraction arms

1.3 Ball-joint extraction arms with oval hoods



Ø mm	Length m	Art. no.	Price €
------	----------	----------	---------

360° swivelling

with gas pressure shock absorbers and ball-joint for ceiling or wall mounting

80	2.0	80.202D	1,250.00
80	3.0	80.302D	1,310.00
100	2.0	10.202D	1,290.00
100	3.0	10.302D	1,340.00
100	4.0	10.402D	1,730.00
125	2.0	12.202D	1,300.00
125	3.0	12.302D	1,400.00
125	4.0	12.402D	1,770.00
140	2.0	14.202D	1,310.00
140	3.0	14.302D	1,410.00
140	4.0	14.402D	1,800.00
150	2.0	15.202D	1,310.00
150	3.0	15.302D	1,440.00
150	4.0	15.402D	1,830.00
160	2.0	16.202D	1,320.00
160	3.0	16.302D	1,470.00
160	4.0	16.402D	1,860.00
180	2.0	18.202D	1,610.00
180	3.0	18.302D	1,760.00
180	4.0	18.402D	1,900.00

1 Extraction arms

1.4 Ball-joint extraction arms with square hoods



360° swivelling

with gas pressure shock absorbers and ball-joint for ceiling or wall mounting

Ø mm	Length m	Art. no.	Price €
100	2.0	10.203D	1,470.00
100	3.0	10.303D	1,470.00
100	4.0	10.403D	1,920.00
125	2.0	12.203D	1,470.00
125	3.0	12.303D	1,560.00
125	4.0	12.403D	1,970.00
140	2.0	14.203D	1,480.00
140	3.0	14.303D	1,590.00
140	4.0	14.403D	2,040.00
150	2.0	15.203D	1,490.00
150	3.0	15.303D	1,610.00
150	4.0	15.403D	2,160.00
160	2.0	16.203D	1,510.00
160	3.0	16.303D	1,700.00
160	4.0	16.403D	2,080.00
180	2.0	18.203D	1,770.00
180	3.0	18.303D	1,930.00
180	4.0	18.403D	2,090.00

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

1 Extraction arms

1.5 Extraction arms with PU hose and square hoods



	Ø mm	Length m	Art. no.	Price €
	100	1.5	10.1539 S/W	880.00
	100	2.0	10.2039 S/W	900.00
	100	3.0	10.3039 S/W	920.00
	100	4.0	10.40349 S/W	1,210.00
	100	4.0*	10.4039 W	1,260.00
	100	5.0*	10.5039 W	1,410.00
	100	6.0**	10.6039 W	1,480.00
	125	1.5	12.1539 S/W	950.00
	125	2.0	12.2039 S/W	960.00
	125	3.0	12.3039 S/W	990.00
	125	4.0	12.40349 S/W	1,270.00
	125	4.0*	12.4039 W	1,330.00
	125	5.0*	12.5039 W	1,440.00
	125	6.0**	12.6039 W	1,520.00
	140	1.5	14.1539 S/W	990.00
	140	2.0	14.2039 S/W	1,020.00
	140	3.0	14.3039 S/W	1,050.00
	140	4.0	14.40349 S/W	1,300.00
	140	4.0*	14.4039 W	1,350.00
	140	5.0*	14.5039 W	1,500.00
	140	6.0**	14.6039 W	1,590.00
	150	1.5	15.1539 S/W	1,020.00
	150	2.0	15.2039 S/W	1,060.00
	150	3.0	15.3039 S/W	1,110.00
	150	4.0	15.40349 S/W	1,340.00
	150	4.0*	15.4039 W	1,390.00
	150	5.0*	15.5039 W	1,610.00
	150	6.0**	15.6039 W	1,720.00
	160	1.5	16.1539 S/W	1,100.00
	160	2.0	16.2039 S/W	1,120.00
	160	3.0	16.3039 S/W	1,180.00
	160	4.0	16.40349 S/W	1,390.00
	160	4.0*	16.4039 W	1,470.00
	160	5.0*	16.5039 W	1,660.00
	160	6.0**	16.6039 W	1,790.00
	180	1.5	18.1539 S/W	1,200.00
	180	2.0	18.2039 S/W	1,220.00
	180	3.0	18.3039 S/W	1,320.00
	180	4.0*	18.4039 W	1,610.00
	180	5.0*	18.5039 W	1,870.00
	180	6.0**	18.6039 W	1,970.00

Please specify required type of mounting



S = standpipe

W = wall bracket

From 4.0m extension with boom
only possible with wall bracket

* including 2.0m boom – ** including 3.0m boom

1 Extraction arms

1.6 Extraction arms with plastic hoods



Ø mm	Length m	Art. no.	Price €
140	1.5	14.154 S/W	860.00
140	2.0	14.204 S/W	870.00
140	3.0	14.304 S/W	890.00
140	4.0*	14.404 W	1,170.00
140	5.0*	14.504 W	1,370.00
140	6.0**	14.604 W	1,460.00

* including 2.0m boom – ** including 3.0m boom

Please specify required type of mounting



S = standpipe

W = wall bracket

From 4.0m extension with boom
only possible with wall bracket

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slofted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

1 Extraction arms

1.7 Extraction arms in ATEX version with oval hoods



Applications in EX zones 1/21 and 2/22 possible.
Identification per ATEX: EX II 2G and EX II 2D.

Ø mm	Length m	Art. no.	Price €
70	1.5	70.1529 SA/WA	1,160.00
70	2.0	70.2029 SA/WA	1,190.00
70	3.0	70.3029 SA/WA	1,220.00
80	1.5	80.1529 SA/WA	1,260.00
80	2.0	80.2029 SA/WA	1,270.00
80	3.0	80.3029 SA/WA	1,290.00
100	1.5	10.1529 SA/WA	1,260.00
100	2.0	10.2029 SA/WA	1,280.00
100	3.0	10.3029 SA/WA	1,300.00
100	4.0	10.40249 SA/WA	1,580.00
100	4.0*	10.4029 WA	1,620.00
100	5.0*	10.5029 WA	1,850.00
100	6.0**	10.6029 WA	1,930.00
125	1.5	12.1529 SA/WA	1,320.00
125	2.0	12.2029 SA/WA	1,340.00
125	3.0	12.3029 SA/WA	1,380.00
125	4.0	12.40249 SA/WA	1,630.00
125	4.0*	12.4029 WA	1,660.00
125	5.0*	12.5029 WA	1,890.00
125	6.0**	12.6029 WA	2,000.00
140	1.5	14.1529 SA/WA	1,350.00
140	2.0	14.2029 SA/WA	1,370.00
140	3.0	14.3029 SA/WA	1,400.00
140	4.0	14.40249 SA/WA	1,660.00
140	4.0*	14.4029 WA	1,690.00
140	5.0*	14.5029 WA	1,900.00
140	6.0**	14.6029 WA	2,020.00
150	1.5	15.1529 SA/WA	1,440.00
150	2.0	15.2029 SA/WA	1,450.00
150	3.0	15.3029 SA/WA	1,490.00
150	4.0	15.40249 SA/WA	1,700.00
150	4.0*	15.4029 WA	1,740.00
150	5.0*	15.5029 WA	1,930.00
150	6.0**	15.6029 WA	2,060.00
160	1.5	16.1529 SA/WA	1,520.00
160	2.0	16.2029 SA/WA	1,530.00
160	3.0	16.3029 SA/WA	1,560.00
160	4.0	16.40249 SA/WA	1,730.00
160	4.0*	16.4029 WA	1,860.00

Please specify required type of mounting



SA = standpipe

WA = wall bracket

From 4.0m extension with boom
only possible with wall bracket

* including 2.0m boom – ** including 3.0m boom

1 Extraction arms

1.7 Extraction arms in ATEX version with oval hoods (continued)



Applications in EX zones 1/21 and 2/22 possible.
Identification per ATEX: EX II 2G and EX II 2D.

Ø mm	Length m	Art. no.	Price €
160	5.0*	16.5029 WA	1,970.00
160	6.0**	16.6029 WA	2,170.00
180	1.5	18.1529 SA/WA	1,590.00
180	2.0	18.2029 SA/WA	1,610.00
180	3.0	18.3029 SA/WA	1,700.00
180	4.0*	18.4029 WA	2,000.00
180	5.0*	18.5029 WA	2,100.00
180	6.0**	18.6029 WA	2,350.00
200	2.0	20.2029 SA/WA	1,740.00
200	3.0	20.3029 SA/WA	1,840.00
200	4.0*	20.4029 WA	2,110.00
200	5.0*	20.5029 WA	2,220.00
200	6.0**	20.6029 WA	2,480.00

Please specify required type of mounting



SA = standpipe

WA = wall bracket

* including 2.0m boom – ** including 3.0m boom

From 4.0m extension with boom only possible with wall bracket

1.8 Special accessories for extraction arms

Art. no. Price €

LED Lighting kit
installed in the **nozzle hood**

30014425 417.00

LED Lighting kit
installed in the **efficiency hood**

30014361 417.00

Shut-off valves
installed in the extraction arm (airtight)



Ø 100mm	270.100	135.00
Ø 125mm	270.125	146.00
Ø 140mm	270.140	146.00
Ø 150mm	270.150	152.00
Ø 160mm	270.160	160.00
Ø 180mm	270.180	168.00

1 Extraction arms

1.8 Special accessories for extraction arms

Art. no.

Price €

Throttle valves

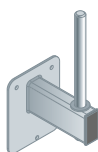
installed in the extraction arm, for controlling the air flow



Ø 50mm	240.050	97.70
Ø 70mm	240.070	97.70
Ø 80mm	240.080	74.60
Ø 100mm	240.100	74.60
Ø 125mm	240.125	74.60
Ø 140mm	240.140	80.90
Ø 150mm	240.150	80.90
Ø 160mm	240.160	80.90
Ø 180mm	240.180	87.20

Wall bracket, separate

Optionally included with delivery



30010439	84.00
----------	--------------

Standpipe, separate

Optionally included with delivery



30.001.505	84.00
------------	--------------

Floor stand device

Height: 1,000mm, for extraction arm with standpipe



30.001.388	172.00
------------	---------------

Surcharge for special version

Medium-contacting parts made from stainless steel, V2A (oval hood and pipes)

70.583.100	326.00
------------	---------------

Painted parts in special paint (RAL colour, extraction arm length 1.5 m – 3.0 m)

70.581.100	110.00
------------	---------------

Painted parts in special paint (RAL colour, extraction arm length 4.0 m – 8.0 m)

70.582.100	135.00
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1 Extraction arms

1.9 Laboratory extraction arm 50 D



Art. no.

Price €

Laboratory extraction arm 50 D

Standard version with crevice tool, total reach 900 mm, for table top mounting (including fixtures)

50.080

263.00

Version with polyamide washer (abrasion-free)

50.080.006

263.00

1.10 Special accessories for laboratory extraction arm 50 D

Art. no.

Price €

Standard extraction hood

Oval opening 90 × 110 mm, intake Ø50 mm



50.086

104.00

Extraction hood round opening

Ø210 mm, intake Ø50 mm



50.091

165.00

Extraction hood slot opening

200 × 12 mm, intake Ø50 mm



50.084

135.00

Extraction hood for grinding wheels

Suction opening 80 × 30 mm, intake Ø50 mm



50.085

135.00

Rubber extraction hood

Flexible joints, suction opening 95 × 15 mm, intake Ø50 mm



5.010

44.10

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems







Safety systems

Post-filters

Spiral seam pipes/
steel pipes

1 Extraction arms

1.10 Special accessories for laboratory extraction arm 50D

	<i>Art. no.</i>	<i>Price €</i>
Transparent plexiglas hood Suction area 250×220 mm, jointed intake Ø50 mm		
	50.090	146.00
Throttle valve installed in the extraction arm		
	50.082	80.90
Wall mounting fixture		
	50.088	92.40
Table clamping device to be attached to table side		
	50.089	190.00
Connecting hose Ø50 mm, price per metre		
	78.050	21.00
Clamp		
	Ø40 – 60 mm 93.060	2.10

2 Extraction hoods

ESTA offers a wide selection of extraction hoods for optimum capture of dust and smoke: Different nominal diameters and capture shapes are available depending on the application. Oval and square hoods are particularly suitable for precise extraction and can be connected to extraction arms, pipe systems and hoses.

The modular system extraction hood for connection to a filter unit or a fan is used in all applications where point extraction is not feasible and a larger capture radius is required.



System extraction hood, optionally with welding protecting strips and mounting feet



Square extraction hood on a welding robot

ESTA PLUS

Application

- » For precise and large-scale capture of dust and smoke sources
- » For connecting to filter systems, fans, extraction arms, pipe systems and hoses

Special features

- » Wide range of nominal connection diameters and capture shapes for different applications

Benefits

- » Optimum capture directly at the source
- » Easy handling
- » High finishing quality



Extraction arm with square hood for large-scale extraction of dust in a transfer process in the bulk materials industry



Extraction arms with efficiency hood for precise detection of welding fumes

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

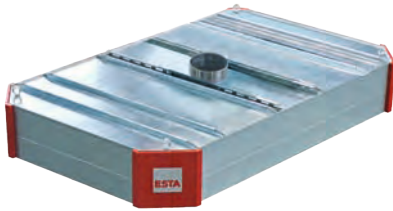
Safety systems

Post-filters

Spiral seam pipes/
steel pipes

2 Extraction hoods

2.1 System extraction hoods



Standard version

The modular extraction hood system is used wherever point extraction is not feasible. Smoke gases and vapours can be captured large-scale at the source, which ensures a high degree of flexibility in the workplace. The extraction hood with the filter system can be connected via a pipeline system. The modular design offers maximum flexibility and can be aligned to your application-specific requirements - air flow rates from 1,300 m³/h up to 10,800 m³/h can be achieved.

Depending on requirements, the system extraction hood can be installed hanging freely or standing with height-adjustable feet. Welding protection strips prevent the discharge of smoke gases and welding spatter and provide glare protection.

The delivery can be made as individual building blocks for self-assembly, pre-assembled or as a complete installation.

<i>L × W mm*</i>	<i>Volume flow in m³/h</i>	<i>Art. no.</i>	<i>Price €</i>
950 × 950	1.300	30.007.570	1,420.00
1,200 × 950	1.600	30.007.571	1,560.00
1,200 × 1,200	2.000	30.007.572	1,670.00
1,450 × 950	1.900	30.007.573	1,630.00
1,450 × 1,200	2.400	30.007.574	1,710.00
1,450 × 1,450	2.900	30.007.575	1,830.00
1,700 × 950	2.300	30.007.576	1,760.00
1,700 × 1,200	2.900	30.007.577	1,890.00
1,700 × 1,450	2.500	30.007.578	2,020.00
1,700 × 1,700	4.000	30.007.579	2,260.00
1,950 × 950	2.600	30.007.580	1,750.00
1,950 × 1,200	3.300	30.007.581	1,850.00
1,950 × 1,450	4.000	30.007.582	1,950.00
1,950 × 1,700	4.600	30.007.583	2,190.00
1,950 × 1,950	5.300	30.007.584	2,360.00
2,200 × 950	2.900	30.007.585	1,890.00
2,200 × 1,200	3.700	30.007.586	2,020.00
2,200 × 1,450	4.500	30.007.587	2,140.00
2,200 × 1,700	5.200	30.007.588	2,520.00
2,200 × 1,950	6.000	30.007.589	2,600.00
2,450 × 950	3.300	30.007.590	1,950.00
2,450 × 1,200	4.100	30.007.591	2,070.00
2,450 × 1,450	5.000	30.007.592	2,190.00
2,450 × 1,700	5.800	30.007.593	2,640.00
2,450 × 1,950	6.700	30.007.594	2,720.00
2,700 × 950	3.600	30.007.595	2,090.00
2,700 × 1,200	4.500	30.007.596	2,240.00
2,700 × 1,450	5.500	30.007.597	2,500.00
2,700 × 1,700	6.400	30.007.598	2,870.00
2,700 × 1,950	7.400	30.007.599	2,950.00

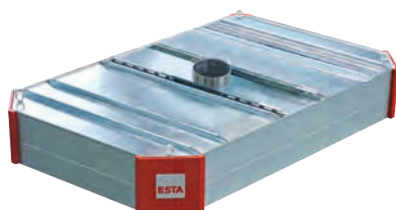


Accessories:
For welding protection strips and mounting feet, see pages 21+22

2 Extraction hoods

2.1 System extraction hoods

Standard version (continued)



Accessories:
For welding protection strips and mounting feet, see pages 21+22

<i>L × W mm*</i>	<i>Volume flow in m³/h</i>	<i>Art. no.</i>	<i>Price €</i>
2,950 × 950	3.900	30.007.600	2,080,00
2,950 × 1,200	5.000	30.007.601	2,190,00
2,950 × 1,450	6.000	30.007.602	2,540,00
2,950 × 1,700	7.000	30.007.603	2,980,00
2,950 × 1,950	8.100	30.007.604	3,080,00
3,200 × 1,450	6.500	30.007.605	2,630,00
3,200 × 1,700	7.600	30.007.606	3,010,00
3,200 × 1,950	8.700	30.007.607	3,100,00
3,450 × 1,450	7.200	30.007.608	2,690,00
3,450 × 1,700	8.400	30.007.609	3,140,00
3,450 × 1,950	9.400	30.007.610	3,220,00
3,700 × 1,450	7.700	30.007.611	2,880,00
3,700 × 1,700	9.000	30.007.612	3,360,00
3,700 × 1,950	10.100	30.007.613	3,450,00
3,950 × 1,450	8.200	30.007.614	2,810,00
3,950 × 1,700	9.600	30.007.615	3,290,00
3,950 × 1,950	10.800	30.007.616	3,370,00

Variants with spark pre-separator



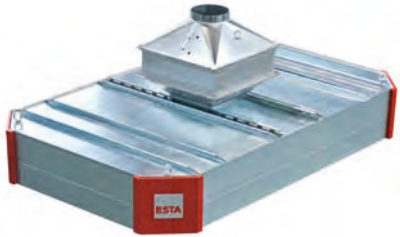
Accessories:
For welding protection strips and mounting feet, see pages 21+22

The pre-separator on the extraction nozzle prevents sparks entering the pipe system. The extracted air is diverted via a deflector plate, the suctioned sparks are held back and reliably separated. The risk of filter fire can be reduced significantly. Due to the special design, deposition of the separated particles can also be prevented and maintenance cost is reduced almost to zero.

<i>L × W mm*</i>	<i>Volume flow in m³/h</i>	<i>Art. no.</i>	<i>Price €</i>
950 × 950	1.300	30.007.620	2,060,00
1,200 × 950	1.600	30.007.621	2,140,00
1,200 × 1,200	2.000	30.007.622	2,310,00
1,450 × 950	1.900	30.007.623	2,220,00
1,450 × 1,200	2.400	30.007.624	2,390,00
1,450 × 1,450	2.900	30.007.625	2,490,00
1,700 × 950	2.300	30.007.626	2,300,00
1,700 × 1,200	2.900	30.007.627	2,490,00
1,700 × 1,450	3.500	30.007.628	2,740,00
1,700 × 1,700	4,000	30.007.629	2,940,00

2 Extraction hoods

2.1 System extraction hoods



Variants with spark pre-separator (continued)

<i>L × W mm*</i>	<i>Volume flow in m³/h</i>	<i>Art. no.</i>	<i>Price €</i>
1,950 × 950	2.600	30.007.630	2,360.00
1,950 × 1,200	3.300	30.007.631	2,570.00
1,950 × 1,450	4,000	30.007.632	3,000.00
1,950 × 1,700	4,600	30.007.633	3,200.00
1,950 × 1,950	5.300	30.007.634	3,740.00
2,200 × 950	2.900	30.007.635	2,450.00
2,200 × 1,200	3,700	30007636	2,650.00
2,200 × 1,450	4,500	30007637	3,280.00
2,200 × 1,700	5,200	30007638	3,480.00
2,200 × 1,950	6.000	30007639	3,920.00
2,450 × 950	3,300	30007640	2,530.00
2,450 × 1,200	4,100	30007641	2,710.00
2,450 × 1,450	5.000	30007642	3,550.00
2,450 × 1,700	5,800	30007643	3,750.00
2,450 × 1,950	6,700	30007644	4,100.00
2,700 × 950	3,600	30007645	2,600.00
2,700 × 1,200	4,500	30007646	2,780.00
2,700 × 1,450	5,500	30007647	3,800.00
2,700 × 1,700	6,400	30007648	4,030.00
2,700 × 1,950	7,400	30007649	4,270.00
2,950 × 950	3,900	30007650	2,690.00
2,950 × 1,200	5.000	30007651	2,850.00
2,950 × 1,450	6.000	30007652	3,870.00
2,950 × 1,700	7.000	30007653	4,310.00
2,950 × 1,950	8,100	30007654	4,450.00
3,200 × 1,450	6,500	30007655	3,930.00
3,200 × 1,700	7,600	30007656	4,380.00
3,200 × 1,950	8,700	30007657	4,540.00
3,450 × 1,450	7,200	30007658	4,000.00
3,450 × 1,700	8,400	30007659	4,460.00
3,450 × 1,950	9,400	30007660	4,600.00
3,700 × 1,450	7,700	30007661	4,060.00
3,700 × 1,700	9.000	30007662	4,540.00
3,700 × 1,950	10,100	30007663	4,680.00
3,950 × 1,450	8,200	30007664	4,130.00
3,950 × 1,700	9,600	30007665	4,600.00
3,950 × 1,950	10,800	30007666	4,760.00



Accessories:
For welding protection
strips and mounting feet,
see pages 21+22

2 Extraction hoods

2.2 Accessories for system extraction hoods



Support foot

telescopic, in four stages of 125 mm each from 2,500 mm to 3.000 mm, 1 set = 4 pieces

Art. no. 30007893

Price € 1.060.00



Welding protection strips

Minimum length: 1.000mm. Please specify required length per lamella and number of pieces

Art. no. 06006068

Price €/m 14.70

Art. No.

Price €

Mounting material

Mounting the welding lamellae on the system extraction hood
(1 piece required per lamella)

Art. no. 30009614

Price € 8.40 (Piece)

Recommended number of welding protection strips for system extraction hoods without and with spark pre-separator



L x W mm*	Number of welding protection strips
950 x 950	12
1,200 x 950	14
1,200 x 1,200	16
1,450 x 950	16
1,450 x 1,200	18
1,450 x 1,450	20
1,700 x 950	18
1,700 x 1,200	20
1,700 x 1,450	22
1,700 x 1,700	24
1,950 x 950	20
1,950 x 1,200	22
1,950 x 1,450	24
1,950 x 1,700	26
1,950 x 1,950	28

Continued on the next page

2 Extraction hoods

2.2 Accessories for system extraction hoods

**Recommended number of welding protection strips
for system extraction hoods** without and with spark pre-separator (continued)



<i>L × W mm*</i>	<i>Number of welding protection strips</i>
2,200 × 950	22
2,200 × 1,200	24
2,200 × 1,450	26
2,200 × 1,700	28
2,200 × 1,950	30
2,450 × 950	24
2,450 × 1,200	26
2,450 × 1,450	28
2,450 × 1,700	30
2,450 × 1,950	32
2,700 × 950	26
2,700 × 1,200	28
2,700 × 1,450	30
2,700 × 1,700	32
2,700 × 1,950	34
2,950 × 950	28
2,950 × 1,200	30
2,950 × 1,450	32
2,950 × 1,700	34
2,950 × 1,950	36
3,200 × 1,450	34
3,200 × 1,700	36
3,200 × 1,950	38
3,450 × 1,450	36
3,450 × 1,700	38
3,450 × 1,950	40
3,700 × 1,450	38
3,700 × 1,700	40
3,700 × 1,950	42
3,950 × 1,450	40
3,950 × 1,700	42
3,950 × 1,950	44

2 Extraction hoods

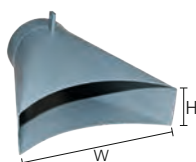
Calculation example for ordering welding protection strips

1. Selection of the system extraction hood with the required number of optional welding protection strips (page 21)	System extraction hood 1,700 × 1,700 mm required according to overview table for 24 lamellae
2. Specification of the required length of the welding protection strips	In the example, 1.5 m length per welding protection strip is required due to application-specific circumstances
3. Price calculation (welding protection strip price per m: € 14.00 – page 21)	<p>Number of welding protection strip × length of welding protection strip × price/m = total price</p> <p>24 pieces × 1.5 m × € 14.00 = € 504.00</p>
4. Required order information	24 pieces welded protection striped (art. no.: 06006068) 1.5 m length each = € 504.00

2.3 Dust collection hoods

Flat opening for grinding discs

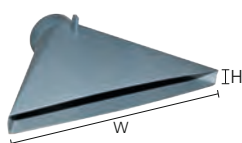
Sheet steel, powder-coated, RAL 7012 (grey)



Connection Ø mm	W × H mm	Art. no.	Price €
50	90 × 30	5014	97.70
70	200 × 60	94170	118.00
80	200 × 60	94180	124.00
100	200 × 80	94111	130.00
125	250 × 80	94125	139.00
150	300 × 80	94121	150.00
180	400 × 80	94131	212.00

Slotted opening

Sheet steel, powder-coated, RAL 7012 (grey)



Connection Ø mm	W × H mm	Art. no.	Price €
50	210 × 12	94371	102.90
70	300 × 30	94370	118.00
80	300 × 35	94380	124.00
100	400 × 35	94311	130.00
100	600 × 80	94312	135.00
125	500 × 40	94325	139.00
125	800 × 40	94326	149.00
150	500 × 65	94321	150.00
160	600 × 100	94322	209.00
180	500 × 60	94331	166.00

2 Extraction hoods

2.4 Oval hoods

Round opening

Sheet steel, powder-coated, RAL 7012 (grey)



Connection Ø mm	Ø 1 / Ø 2 mm	Art. no.	Price €
70	70 / 125	94270	88.20
70	70 / 300	94271	87.20
80	80 / 125	94280	93.50
100	100 / 150	94211	98.70
100	100 / 300	94226	122.00
125	125 / 180	94225	107.00
150	150 / 200	94221	110.00
150	150 / 300	94227	135.00
180	180 / 250	94231	126.00

Powder-coated (sheet steel, RAL 7012, grey)



Connection Ø mm	Art. no.	Price €
50	30013127	110.00
70	30013128	118.00
80	30013129	126.00
100	30013130	135.00
125	30013131	145.00
140	30013132	152.00
150	30013133	158.00
160	30013134	164.00
180	30013135	181.00
200	30013136	194.00

oval, stainless steel



Connection Ø mm	W x H mm	Art. no.	Price €
50	116 x 101	30001477	252.00
70	147 x 126	30001478	273.00
80	168 x 142	30001479	289.00
100	215 x 183	30001480	299.00
125	268 x 228	30001481	315.00
140	297 x 252	30001482	326.00
150	312 x 264	30001483	331.00
160	323 x 269	30001484	336.00
180	374 x 321	30001485	352.00

2 Extraction hoods

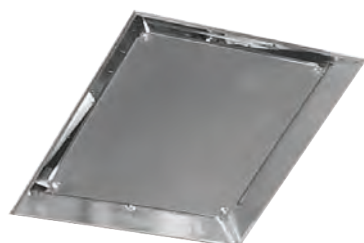
2.5 Efficiency hood



Efficiency hood of plastic

Connection Ø mm	Art. no.	Price €
125	30013757	320.00
140	30012973	320.00
150	30013755	320.00
160	30013756	320.00

2.6 Square hoods



square (aluminium 2.7 kg)

Connection Ø mm	L × W mm	Art. no.	Price €
100	500 × 500	94402	316.00
125	500 × 500	94702	321.00
150	500 × 500	94622	345.00

square (aluminium 3.0 kg)

Connection Ø mm	L × W mm	Art. no.	Price €
140	600 × 600	94222	334.00
150	600 × 600	94602	339.00
160	600 × 600	94822	345.00
180	600 × 600	94802	370.00

3 Welding helmets

Whether for professional use or in the hobby area - a welding helmet is one of the compulsory protection equipment for every welder. It serves to protect face and hair from flying sparks. Furthermore, the helmet also prevents painful light flashes of the bright flame from reaching the eyes. Thus, it provides reliable protection against ultraviolet and infrared rays, which can impair eyesight. Many welding helmets including ESTA Premium Welding Helmet automatically darkens the field of view as soon as the welding process begins. Thus, operators can apply the burner to the welding seam before the helmet darkens. During the welding process, the welder must have an excellent visibility of the workpiece, especially on lengthy welding processes. Optical classification is decisive to determine visual quality. 1/1/1/1 are the best values that any welding helmet may offer. These grades stand for optical quality, light scattering, homogeneity and angle dependence. In the professional field, viewing panes often feature an automatic welding protection filter, designed to automatically detect lighting conditions and control the degree of darkening.



Automatic welding protection filters (AFD) consist of four components:

- ” Ultraviolet and infrared filters to diminish the invisible, harmful radiation
- ” Liquid crystal display (LCD) to darken the visible light according to protection levels
- ” Photocell to detect the ignition of the arc
- ” Electronics, which darkens the LCD based on the sensor signal

When welding and soldering metal parts - depending on the welding method and the material used - different harmful fumes and dusts arise. If extraction systems fail to provide sufficient protection, the ESTA ATMOCLEAR welding helmet with blower unit is the right choice. The latter filters harmful particles from the air, so that the welder is supplied with clean breathing air.

Application

- » Optimum protection during welding, cutting or grinding

Special features

- » Universal use thanks to broad adjustment options

Benefit

- » Automatic darkening and lightening
- » Hands remain free for welding, cutting or grinding
- » Extremely broad range of applications



3 Welding helmets

3.1 BASIC welding helmet

The ESTA BASIC welding helmet is ideal for craft work, agriculture, automotive industry and amateur welders. It is suitable for sporadic welding and offers the welder maximum comfort. The solar-powered helmet has been tested and certified under all standards (DINEN379, EN175 and EN166). The helmet darkness level can be easily adjusted from the outside without removing it. Moreover, sensitivity and the brightening delay time can be manually adjusted from the inside.



Art.no.	Price €
06003209	58.80

Technical details

- » Optical values: 1/2/1/3
- » Certified according to DINEN379, EN175 and EN166
- » Field of view: 100×42mm
- » Switching time: 0.3ms
- » Solar technology
- » external potentiometer
- » Opening time adjustable from 0.1 to 1.0 seconds
- » Protection level adjustment: yes/Outside
- » Sensitivity adjustment: yes/Inside
- » Delay time adjustment: yes/Inside
- » Outer pane: 105×115×1.0mm
- » Inner pane: 51×108×1.0mm
- » Mass: 495g
- » Helmet shell black

3.2 Accessories for BASIC welding helmet

Art.no. Price €

External viewing pane for BASIC welding helmet



- » Dimensions: 104×115×1.0mm
- » Transparent
- » Made from polycarbonate
- » Certified according to DINEN166

Packing unit = 10 pieces	06003210	11.60
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Inner viewing pane for BASIC welding helmet



- » Dimensions: 51×108×1.0mm
- » Transparent
- » Made from polycarbonate
- » Certified according to DINEN166

Packing unit = 10 pieces	06003211	7.50
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3 Welding helmets

The ESTA PREMIUM and ATMOCLEAR welding helmets have been specially developed for truly demanding professional welders. The best available optical quality on the market is complemented by a large field of vision, which provides the welder with a perfect view of the welding process from all angles. Welding efficiency increases dramatically as a result.

The UV protection is the ideal companion to the solar-powered PREMIUM welding helmet, the large, yet lightweight shell of which covers the face and neck area optimally. The particularly ergonomic headband can be easily adjusted in several positions, and thus flexibly accommodate any head shape. The cost-effective front panes can be easily swapped out from the front.

The PREMIUM welding helmet features the filter generation of the future. Further to the general requirements of DINEN379, products

featuring ADCplus technology offer an additional benefit via improved colour recognition and reduced angle-dependence, which ensure the helmet's DINplus certification.

Broad adjustment options make welder filters universally suitable for all welding jobs:

- » Manual arc welding
- » MIG/MAG welding
- » TIG welding
- » Micro-plasma welding

Advantages of ADCplus technology:

- » Undisturbed view - regardless of angle of view
- » Improved welder's convenience
- » Prevention of eye fatigue
- » No neck stiffness when welding

3.3 PREMIUM welding helmet

Technical details

- » Light shade 4, dark shade 9-13
- » Optical values: 1/1/1/1
- » Certified according to DINEN379 and EN175
- » Field of view: 96×68.5mm
- » Switching time: 0.15ms
- » ADCplus technology
- » Solar technology
- » TIG optimized
- » Forced positions optimized by reduced angle dependence
- » Brightening time adjustable from 0.1 to 1.0 seconds
- » Protection level adjustment: yes/Outside
- » Sensitivity adjustment: yes/Outside
- » Brightening time adjustment: yes/Outside
- » Curved outer pane: 147 × 125 × 1.0mm
- » Inner pane: 107.5 × 71.5 × 1.0mm
- » Weight without safety helmet: 560g
- » Weight with safety helmet: 875g
- » Helmet shell black-yellow



	Art.no.	Price €
without safety helmet	06003205	393.00
with safety helmet	06003206	470.00

3.4 ATMOCLEAR welding helmet with blower unit

The blower unit supplied filters out particles that could bypass the extraction process. The welder receives only clean air in the mouth area. The outlet area is adjustable, avoiding thereby draughts on the eye. The slight overpressure in the face area prevents penetration from polluted air from the outside.

Combined with the flexible face seal and the electronically controlled fan, the ATMOCLEAR welding helmet meets the highest possible particle filter class TH3.

Art.no.	Price €
06003199	1,040.00

Technical details

- » Light shade 4, dark shade 9-13
- » Optical values: 1/1/1/1
- » Certified according to DINEN379 and EN175
- » Field of view: 96×68.5mm
- » Switching time: 0.15ms
- » ADCplus technology
- » Solar technology
- » TIG optimized



- » Forced positions optimized by reduced angle dependence
- » Brightening time adjustable from 0.1 to 1.0 seconds
- » Protection level adjustment: yes/Outside
- » Sensitivity adjustment: yes/Outside
- » Brightening time adjustment: yes/Outside
- » Curved outer pane: 147 × 125 × 1.0mm
- » Inner pane: 107.5 × 71.5 × 1.0mm
- » Helmet shell black-yellow

3 Welding helmets

3.5 Accessories for welding helmets

Art.no.

Price €

Replacement battery 7.2 V



Suitable for ATMOCLEAR welding helmet with blower unit

06003385

166.00

Replacement filter for blower



Suitable for ATMOCLEAR welding helmet with blower unit

Packing unit = 2 Pieces

01000589

32.60

Blower unit for ATMOCLEAR welding helmet



Scope of delivery:

- » 5-stage blower unit
- » Comfort belt
- » Battery
- » Charger
- » Particle filter

Technical details

- » Adjustable airflow: 170–240 l/m
- » Useful life: up to 10 hours
- » Charging time: 4 – 5 hours
- » Noise level: max. 70 dB
- » Weight: 880 g (with Akku)
- » Akku: Lithium-Ionen-Akku 7,2 V/4,4 Ah
- » Regulates and monitors the air volume flow and emits visual and audible warning signals
- » Standards: EEN 12941/TH3

06003200

460.00

Blower hose for ATMOCLEAR welding helmet



- » Suitable for ATMOCLEAR welding helmet
- » External thread with Quicklock function
- » Connecting hose between welding helmet and blower

06003204

34.70

3 Welding helmets

3.5 Accessories for welding helmets

	Art.no.	Price €
Comfort belt with padding for blowers		
	Suitable for ATMOCLEAR welding helmet with blower unit	
	06003203	32.60
Charger 7.2 V		
	Suitable for ATMOCLEAR welding helmet with blower unit	
	06003202	55.70
Pre-filter strip with activated carbon for blowers		
	Pre-filter strip for activated carbon for blowers	
	Packing unit = 10 pieces	01000588 13.10
Outer viewing pane for ATMOCLEAR/PREMIUM welding helmet		
	» Dimensions: 147 × 125 × 1.0mm » Transparent » Made from polycarbonate	
	Packing unit = 10 pieces	06003208 24.20
Inner viewing pane for ATMOCLEAR / PREMIUM welding helmet		
	» Dimensions 107.5 × 71.5 × 1.0mm » Transparent » Made from polycarbonate	
	Packing unit = 10 pieces	06003207 13.70

4 Protective walls / curtains / lamellae

Welding protection walls are indispensable especially in production areas and workshops where welders work together with other employees. Their use allows welding workplaces to be clearly and safely separated from the rest of the environment, as to protect adjacent work areas.

ESTA welding protection walls are optionally equipped with a curtain or lamellae, which effectively protect against glare and distraction, as well as against light sparks and dirt. The material is less translucent and allow for more robust processing. For flexible use, walls are also available in a mobile version. Protective walls not only provide ideal conditions for welding work, but also ensure protection of health, work, as well as against fire during production.



Application

- » In workshops or operations with welding workstations

Special features

- » Sturdy construction
- » Easy assembly

Benefit

- » Optimal protection of employees, machinery and equipment items



4 Protective walls

4.1 One-piece mobile welding protection wall with lamellae

The single-piece, mobile ESTA welding protection panel with lamellae is ideal for work that regularly involves welding at various locations. Through the four smooth-running swivel casters, two of which are equipped with brakes for locking, the partition can be quickly and easily shifted.

If on-site conditions do not allow a permanent installation of a welding booth, then the mobile welding protection walls represents a very flexible and convenient alternative.

In addition, the ESTA welding protection walls can be conveniently combined with each other to create an ideal and, above all, safe working environment. After the welding work, protective walls can be removed, making the space in your welding shop available again.



Applications

- » Welding and grinding
- » Protection against drafts, dust, moisture and abrasive splashes
- » Separation of work areas

Technical details

- » Protection against welding arcs in accordance with DIN EN ISO 25980 with a hazard factor <1 (except transparent design)
- » Delivery in three different colours possible: red, matte dark green, transparent
- » Risk factors:
 - red: 0.80
 - matte dark green: 0.05
 - transparent: no protection against welding light
- » Dimensions: 2,100 x 1,950mm
- » Lamellae: 300 x 2mm, 1,300mm long
- » Lamellae overlap 33%
- » Swivel casters: 4 Ø100mm units, of which 2 with brakes
- » Frame blue powder-coated
- » Pipes gray powder-coated
- » Ground clearance: approx. 600mm
- » Weight: 35.5kg

Colour	Art.no.	Price €
Red	06003158	460.00
matte dark green	06003159	460.00
transparent	06003157	460.00

4 Protective walls

4.2 One-piece mobile welding protection wall with curtain

The one-piece, mobile ESTA welding protection panel with lamellae is ideal for work that regularly involves welding at various locations. Through the four smooth-running swivel casters, two of which are equipped with brakes for locking, the partition can be quickly and easily shifted.

If on-site conditions do not allow a permanent installation of a welding booth, then the mobile welding protection walls represents a very flexible and convenient alternative.

Furthermore, ESTA welding protection walls can be conveniently combined with each other to create an ideal and, above all, safe working environment. After the welding work, protective walls can be removed, making the space in your welding shop available again.



Applications

- » Welding and grinding
- » Protection against drafts, dust, moisture and abrasive splashes
- » Separation of work areas

Technical details

- » Protection against welding arcs in accordance with DIN EN ISO 25980 (exception transparent design)
- » Delivery in three different colours possible: red, matte dark green, transparent
- » Risk factors:
 - red: 0.80
 - matte dark green: 0.05
 - transparent: no protection against welding light
- » Dimensions: 2,100 × 1,950mm
- » Curtains: 2 pieces (1,300 × 1,600mm)
- » Fixing with snap hooks (13 pieces)
- » Swivel casters: 4 Ø100mm units, of which 2 with brakes
- » Frame blue powder-coated
- » Pipes gray powder-coated
- » Ground clearance: 300mm
- » Weight: 28.5kg

Colour	Art.no.	Price €
Red	06003161	342.00
matte dark green	06003162	342.00
transparent	06003160	342.00

4 Protective walls

4.3 Three-piece mobile welding protection wall with lamellae

The three-piece, mobile ESTA welding protection panel with lamellae is ideal for work that involves welding at various locations on a regular basis. Through the four smooth-running swivel casters, two of which are equipped with brakes for locking, the partition can be quickly and easily shifted. If on-site conditions do not allow a permanent installation of a welding booth, then the mobile welding protection walls represents a very flexible and convenient alternative. The two extension arms can easily be folded forwards or backwards and brought into the desired position. Furthermore, ESTA welding protection walls can be conveniently combined with each other to create an ideal and, above all, safe working environment. After the welding work, protective walls can be removed, making the space in your welding shop available again.



Applications

- » Welding and grinding
- » Protection against drafts, dust, moisture and abrasive splashes
- » Separation of work areas

Technical details

- » Protection against welding arcs in accordance with DIN EN ISO 25980 with a hazard factor <1 (except transparent design)
- » Delivery in three different colours possible: red, matte dark green, transparent
- » Risk factors:
 - red: 0.80
 - matte dark green: 0.05
 - transparent: no protection against welding light
- » Total width: 3,700mm
- » Frame middle section: 2,100 × 1,950mm
- » Extensible arms: 2 pieces of 800mm length
- » Lamellae: 300 × 2mm, 1,300mm long
- » Lamellae overlap 33%
- » Swivel casters: 4 Ø100mm units, of which 2 with brakes
- » Frame blue powder-coated
- » Pipes gray powder-coated
- » Ground clearance: approx. 600mm
- » Weight: 47.0kg

Colour	Art.no.	Price €
Red	06003152	600.00
matte dark green	06003153	600.00
transparent	06003151	600.00

4 Protective walls

4.4 Three-piece mobile welding protection wall with curtain

The three-piece, mobile ESTA welding protection panel with curtains is ideal for work that involves welding at various locations on a regular basis. Through the four smooth-running swivel casters, two of which are equipped with brakes for locking, the partition can be quickly and easily shifted. If on-site conditions do not allow a permanent installation of a welding booth, then the mobile welding protection walls represents a very flexible and convenient alternative. The two extension arms can easily be folded forwards or backwards and brought into the desired position. Furthermore, ESTA welding protection walls can be conveniently combined with each other to create an ideal and, above all, safe working environment. After the welding work, protective walls can be removed, making the space in your welding shop available again.



Applications

- » Welding and grinding
- » Protection against drafts, dust, moisture and abrasive splashes
- » Separation of work areas

Technical details

- » Protection against welding arcs in accordance with DIN EN ISO 25980 with a hazard factor <1 (except transparent design)
- » Delivery in three different colours possible: red, matte dark green, transparent
- » Risk factors:
 - red: 0.80
 - matte dark green: 0.05
 - transparent: no protection against welding light
- » Total width: 3,700mm
- » Frame middle section: 2,100 × 1,950mm
- » Extensible arms: 2 pieces of 800mm length
- » Curtains: 3 pieces (1,300 × 1,600mm)
- » Fixing with snap hooks (19 pieces)
- » Swivel casters: 4 Ø100mm units, of which 2 with brakes
- » Frame blue powder-coated
- » Pipes gray powder-coated
- » Ground clearance: 300mm
- » Weight: 35.0kg

Colour	Art.no.	Price €
Red	06003155	450.00
matte dark green	06003156	450.00
transparent	06003154	450.00

4 Protective walls

4.5 Compact welding protection wall with large curtain

The compact welding protection wall with curtain is ideal for work in which welding occurs at different locations on a regular basis.

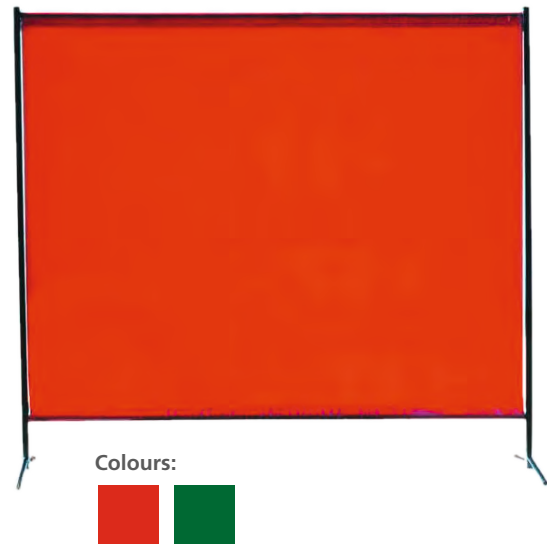
Thanks to special supporting feet, several partition walls can be freely connected to each other, and can therefore be flexibly combined to deploy welding booths or workstation separations. The supplied curtain with hemstitch is pushed onto the two cross tubes, and thus automatically covered - fast and easy.

Applications

- » Welding and grinding
- » Protection against drafts, dust, moisture and abrasive splashes
- » Separation of work areas

Technical details

- » Protection against welding arcs in accordance with DIN EN ISO 25980 at a hazard factor <1
- » Delivery is available in two different colours: red, matte dark green, transparent
- » Risk factors:
 - red: 0.80
 - matte dark green: 0.05
- » Dimensions: 2,050 x 1,870mm
- » Curtains: 1 piece (2,000 x 1,600mm) with hemstitch
- » Attachment onto cross tubes
- » Black steel tube frame, powder-coated
- » Ground clearance: 250 mm
- » Weight: 10.5kg



Colour	Art.no.	Price €
Red	06003165	175.00
matte dark green	06003166	175.00

4 Protective walls

4.6 Compact welding protection wall with a small curtain

The compact welding protection wall with curtain is ideal for work in which welding occurs at different locations on a regular basis.

Thanks to special supporting feet, several partitions can be connected to each other without gaps, making them flexible for welding booths or workstation partitions.

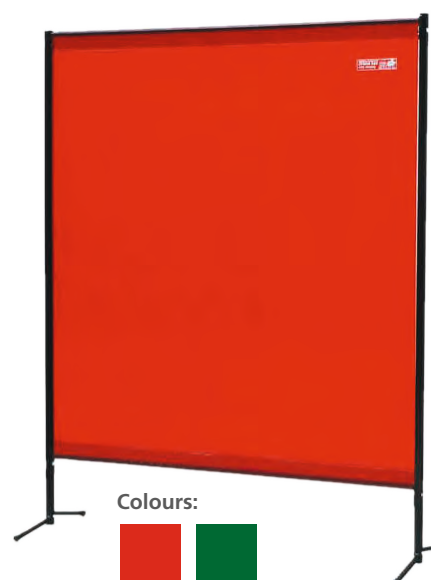
The supplied curtain with hemstitch is pushed onto the two cross tubes, and thus automatically covered - fast and easy.

Applications

- » Welding and grinding
- » Protection against drafts, dust, moisture and abrasive splashes
- » Separation of work areas

Technical details

- » Protection against welding arcs in accordance with DIN EN ISO 25980 at a hazard factor <1
- » Delivery is available in two different colours: red, matte dark green, transparent
- » Risk factors:
 - red: 0.80
 - matte dark green: 0.05
- » Dimensions: 1,450 x 1,870 mm
- » Curtains: 1 piece (1,400 x 1,600 mm) with hemstitch
- » Attachment onto cross tubes
- » Black steel tube frame, powder-coated
- » Ground clearance: 250 mm
- » Weight: 9.8 kg



Colour	Art.no.	Price €
Red	06003163	148.00
matte dark green	06003164	148.00

4 Protective walls

4.7 Curtains



Matte dark-green welding protection curtain

ESTA welding protection curtains offer optimum protection against welding arcs in accordance with DINENISO25980 and DINEN1598.
Hazard factor 0.05

<i>L × W mm</i>	<i>Art.no.</i>	<i>Price €</i>
1300 × 1,600	06003108	35.70
1300 × 1,800	06003109	39.90
1300 × 2,000	06003110	45.20
1,300 × 2,200	06003111	52.50
1,300 × 2,400	06003112	56.70
1,300 × 2,600	06003113	60.90
1,300 × 2,800	06003114	65.10
1,300 × 3,000	06003115	72.50



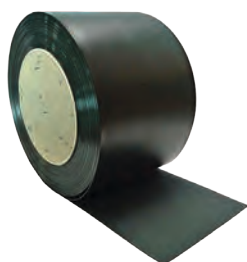
Red welding protection curtain

ESTA welding protection curtains offer optimum protection against welding arcs in accordance with DINENISO25980 and DINEN1598.
Hazard factor 0.80

<i>L × W mm</i>	<i>Art.no.</i>	<i>Price €</i>
1300 × 1,600	06003100	35.70
1300 × 1,800	06003101	39.90
1300 × 2,000	06003102	45.20
1,300 × 2,200	06003103	52.50
1,300 × 2,400	06003104	56.70
1,300 × 2,600	06003105	60.90
1,300 × 2,800	06003106	65.10
1,300 × 3,000	06003107	72.50

4 Protective walls

4.8 Lamellae strips



Lamellae strip in matte dark green

ESTA lamellae strips protect in accordance with DIN EN ISO 25980 with a hazard factor < 1.

Technical details

- » Colour: matte dark green
- » Width: 300 mm
- » Thickness: 2.0 mm/3.0 mm
- » Roll length: 50.0 m
- » Weight: 0.75 kg/m/1.10 kg/m
- » Hazard factor: 0.05

<i>B × thickness mm</i>	<i>Art.no.</i>	<i>Price € / linear meter</i>
300 × 2.0	06003185	10.70
300 × 3.0	06003186	15.80



Red lamellae strips

ESTA lamellae strips protect in accordance with DIN EN ISO 25980 with a hazard factor < 1.

Technical details

- » Colour: red
- » Width: 300 mm
- » Thickness: 2.0 mm/3.0 mm
- » Roll length: 50.0 m
- » Weight: 0.75 kg/m/1.10 kg/m
- » Hazard factor: 0.80

<i>B × thickness mm</i>	<i>Art.no.</i>	<i>Price € / linear meter</i>
300 × 2.0	06003185	10.70
300 × 3.0	06003186	15.80

4 Protective walls

4.9 Fixing

	Art.no.	Price €
C-profile 40 × 40mm		
	Suitable for suspending ESTA welding protection curtains Technical details <ul style="list-style-type: none">» Galvanised» Dimensions: 40 × 40 × 2.5mm	
	10002240	37.80/m
Ceiling fixture for C-profile		
	<ul style="list-style-type: none">» Powder-coated» including dowels and screws	
	10002236	20.00
Ceiling fixture for 1" pipe		
	<ul style="list-style-type: none">» including dowels, screws and washers» Powder-coated	
	10002245	20.00
End cap for C-profile		
	<ul style="list-style-type: none">» Material: plastic» Colour: black	
	10002239	1.10
End cap for 1" pipe		
	<ul style="list-style-type: none">» Material: plastic» Colour: black	
	10002248	1.10
3-hole retaining plate for curtain stand		
	<ul style="list-style-type: none">» Holes: 2 × 9.0mm + 1 × 13.0mm» Dimensions: 140 × 40 × 10mm» powder-coated, black	
	10002258	14.70

4 Protective walls

4.9 Fixing

	Art.no.	Price €
Snap hook for 1" pipe		
	Suitable for suspension of ESTA welding protection curtains on 1" pipe » Inner diameter about 40mm » Requirements: 7 pieces per 1.3-meter curtain » Galvanised	
	10002233	2.10
L-connector for C-profile		
	» for connecting two C-profiles at a 90° angle » Powder-coated	
	10002242	48.30
L-connector for 1" pipe		
	» for connecting two 1" pipes at a 90° angle » Powder-coated	
	10002250	46,20
Carriage with hook for C-profile		
	Suitable for suspending ESTA welding protection curtains. With the help of carriages, even high curtains can be easily moved. Technical details » Dimensions without hooks (L x W x H): 35mm x 30mm x 35mm » Total height with hook: 100mm » Capacity: 5.0kg » Maximum load: 10.0kg » 2 x 4 rolls of plastic	
	10002234	7.40
PA hook for C-profile		
	Suitable for suspending ESTA welding protection curtains Technical details » Material: Light and soft » plastic » Requirements: 7 pieces per 1.3-meter curtain	
	10002232	2.10

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

4 Protective walls

4.9 Fixing

	<i>Art.no.</i>	<i>Price €</i>
1" pipe		
	Suitable for suspending lamellae Technical details » Outer diameter: Ø33.7mm » Galvanised	
	10002244	17.90
Pipe clamp for 1" pipe		
	» including screws and nuts » Galvanised	
	10002256	5.30
Rail connector for C-profile		
	» for connecting two C-profiles » Powder-coated	
	10002241	21.00
Swing clamp for 1" pipe		
	» suitable for lamellae of 2,0-3,0mm of thickness » including screws and nuts » Galvanised	
	10002257	3.90
Front wall fixture for C-profile		
	» powder-coated, gray	
	10002237	22.10
Front wall fixture for 1" pipe		
	» including dowels, screws and washers » Powder-coated	
	10002247	20.00

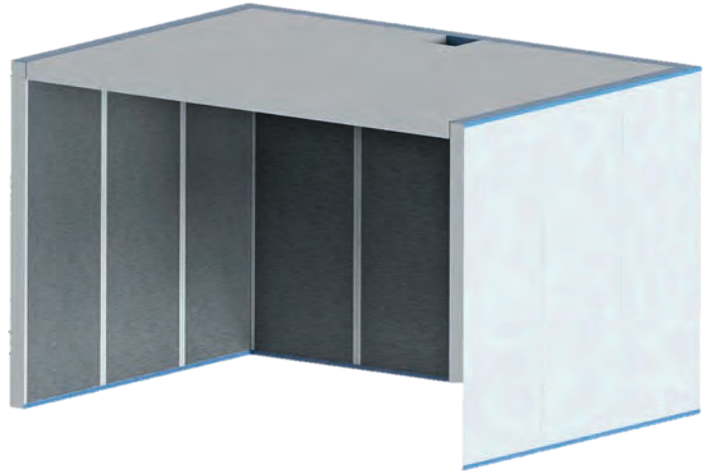
4 Protective walls

4.9 Fixing

	Art.no.	Price €
T-connector for C-profile		
 <ul style="list-style-type: none"> » for connecting three C-profiles » Powder-coated 	10002243	46.20
T-connector for 1" pipe		
 <ul style="list-style-type: none"> » for connecting three pipes » Powder-coated 	10002251	46.20
Curtain stand for C-profile		
 <p>Suitable for suspending ESTA welding protection curtains.</p> <p>Technical details</p> <ul style="list-style-type: none"> » C-profile kit incl. 2 clamping nuts, dimensions: 60 x 60 x 2.5mm » reinforced foot plate » Stand height adjustable over 100 mm grid » Height: 2000-2500mm 	10002235	214.00
Universal wall fixation for C-profile		
 <ul style="list-style-type: none"> » for fixing the C-profile to end and side walls » including dowels and screws » powder-coated, gray 	10002238	25.20
Universal wall fixation for 1" pipe		
 <ul style="list-style-type: none"> » for fixing the 1" pipe to end and side walls » Adjustable height » including screws and nuts » galvanized/powder coated 	10002246	25.20

5 Extraction cabins

ESTA extraction cabins offer extraction and sound insulation in one. They enclose workplaces or machines prone to generate dust and smoke and prevent the release of pollutants into adjacent workareas. Furthermore, the use of appropriate extraction technology reduces the exposure of employees to dust or smoke and ensures compliance with statutory regulations. Cabins are suitable, among other things, for extraction during welding, grinding, cutting, polishing and for almost all materials (metal, stone, plastic, etc.) which produce particles during processing.



Basic cabin

The extraction cabins consist of non-flammable wall and ceiling elements. The element thickness is 60mm. The outer shell is coated in RAL7035 basic structure. Other RAL catalogue colours are also available.

The elements are filled with non-combustible, mineral insulating material, DIN4102, surface with abrasion-resistant, black glass fleece. On the inside, there is galvanized expanded metal.

Walls and ceilings are subdivided into a 0.75m grid, and

can be easily integrated into any location. The surface weight is approx. 32kg /m².

All cabins are provided with 250×250 mm cutout in the ceiling to allow the installation of extraction systems or cables.

The cabin base is closed on 3 sides incl. ceiling, whereas one longitudinal side remains open. The cabin is delivered disassembled on disposable pallets. For larger spans i.e. > 6m, an auxiliary support or truss girder is used for the ceiling support.

Fixation

The floor is fixated by means of a U-profile and dowels. The base frame is delivered in several parts with pre-formed corners.

The ceiling connection relies on a profile screwed onto the wall. With this arrangement, the cabin offers high basic stability.

Accessories / special equipment

- » Lamellae curtain, fixed
- » Lamellae curtain, sliding
- » Industrial curtain
- » Industrial curtain, DIN1598 (Welder)
- » Viewing pane made of safety glass
- » LED lighting (IP65, ATEX)

Application

- » Extraction of dust and smoke particles as well as noise reduction at workstations or machines

Special features

- » Modular design
- » Integral construction
- » Flexible setup
- » Optionally with powder-coated exterior in RAL colour
- » Optionally with viewing windows

Benefit

- » Wide range of applications
- » Noise protection and extraction in one
- » No contamination of adjacent areas
- » Easy assembly

5 Extraction cabins

<i>Internal dimensions in mm</i>				
<i>Width</i>	<i>Height</i>	<i>Depth</i>	<i>Art.no.</i>	<i>Price €</i>
2,000	2,500	2,000	30008500	5,760.00
2,500	2,500	2,000	30008501	6,420.00
2,500	2,800	2,500	30008502	8,170.00
3,000	2,500	2,000	30008503	8,240.00
3,000	2,800	2,500	30008504	8,950.00
3,000	2,800	3,000	30008505	10,220.00
4,000	2,500	2,000	30008506	10,330.00
4,000	2,800	2,500	30008507	10,520.00
4,000	2,800	3,000	30008508	11,930.00
4,000	2,800	3,500	30008509	13,350.00
4,000	2,800	4,000	30008510	14,770.00
4,000	3,000	4,000	30008511	15,440.00
5,000	2,800	3,000	30008512	15,560.00
5,000	2,800	3,500	30008513	15,900.00
5,000	2,800	4,000	30008514	16,740.00
5,000	3,000	4,000	30008515	17,520.00
6,000	2,800	3,500	30008516	17,810.00
6,000	2,800	4,000	30008517	18,800.00
6,000	3,000	4,000	30008518	19,590.00

Wall thickness: 60 mm

5.2 Accessoriess for sound-insulated extraction cabins

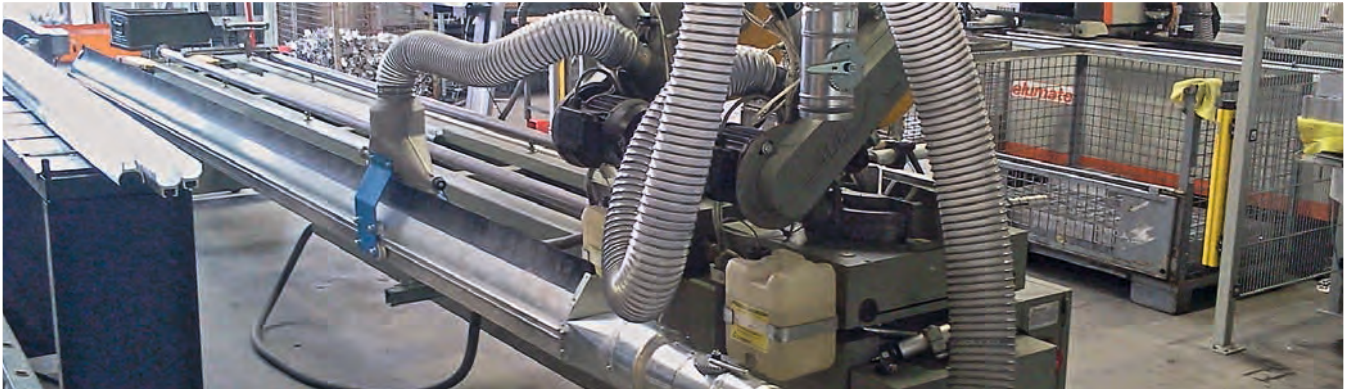
Safety glass viewing pane	<i>Art.no.</i>	<i>Price</i>
Viewing pane 600 × 800mm, VSG	06003301	368.00
Viewing pane 600 × 1,000mm, VSG	06003302	400.00

Curtains (length: see interior dimensions cabin height / width: 1.0m)	<i>Art.no.</i>	<i>Price</i>
Lamellae curtain , transparent, fixed, PVC	06003303	490.00
Lamellae curtain , transparent, sliding, PVC	06003304	770.00
Lamellae curtain,red, fixed, DIN1598 (welder)	06003305	540.00
Lamellae curtain,red, sliding, DIN1598 (welder)	06003306	820.00

6 Slotted suction channels

Slotted suction channels enable flexible extraction of dust and smoke on one axis. They are particularly suitable for multiple workplaces where work is not carried simultaneously and thus separate extraction is not required. This allows connection of multiple extraction locations via one suction channel and operation with only one sensing element. This saves space and provides an inexpensive alternative to developing several workplaces with separate extraction systems.

Due to their modular design, slotted channels can be extended as required and aligned with new requirements. The extraction capacity can always be made available at the required workplace over the entire channel length by means of suction carriages (optional) – airflow rates up to 4,000 m³/h can thus be realised.



Slotted vacuum channel on a belt sander for the extraction of aluminium grinding dust

Application

- » For connecting to extraction systems, fans or pipe systems for flexible extraction at several or large area workplaces

Special features

- » Modular construction allows subsequent extension of slotted vacuum
- » The suction carriage can be optionally equipped with an extraction arm

Benefits

- » It extends over the entire length of the slotted vacuum channel
- » Cost savings through the use of a suction unit for several workplaces
- » Quick and easy installation
- » Low space requirement



Slotted suction channels with suction carriage (optional) are available with different nominal diameters to suit the application



Slotted vacuum channel for the extraction of metal chippings

6 Slotted suction channels

6.1 Slotted suction channels for medium pressure

Aluminium-slotted vacuum channel system AS 200



The AS 200 system is suitable for the Ø100 mm, Ø125 mm and Ø150 mm suction carriages. The max. air flow is approx. 1,800 m³/h. Cross-section 200 cm². The delivery lengths are 4.0 m and 6.0 m. Installation lengths of 50.0 m and more are possible.

	Art. no.	Price €
Aluminium slotted vacuum channel AS 200	15008327	219.00*
End stop system AS, rubber-cushioned	15005175	16.80**
End cover	15008330	32.60

* Price per m / ** Price per set (2 pieces)



"rollfix" suction carriage

With eight ball bearing rollers and aluminium caste nozzle for connecting a hose

	Connection Ø	Art. no.	Price €
	DN 100	15013007	550.00
	DN 125	15015477	680.00
	DN 150	15006884	620.00

Connection nozzle for exhaust air pipe

	Art. no.	Price €
Connection nozzle for exhaust air pipe DN 160 mm, front-mounted on the slotted vacuum channel	15015296	217.00
Connection nozzle for exhaust air pipe DN 160 mm, mounted on the slotted vacuum channel	15015467	205.00
Connection nozzle for exhaust air pipe DN 200 mm, mounted on the slotted vacuum channel	15008331	200.00

Channel connecting sleeve ***

	Art. no.	Price €
	15008328	32.60

*** required from a length of 8.0 m

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

6 Slotted suction channels

6.1 Slotted suction channels for medium pressure

Aluminium-slotted vacuum channel system AS 300



The AS 300 system is suitable for the Ø 125 mm, Ø 150 mm and Ø 200 mm suction carriages. The max. air flow is approx. 2,500 m³/h. Cross-section 300 cm². The delivery lengths are 4.0 m and 6.0 m.

	<i>Art. no.</i>	<i>Price €</i>
Aluminium slotted vacuum channel AS 300	15015974	342.00*
End stop system AS, rubber-cushioned	15005175	16.80**
End cover	15015978	39.90
Channel stiffening system AS, every 1.0 m	15008816	20.00

* Price per m / ** Price per set (2 pieces)



"rollfix" suction carriage

With eight ball bearing rollers and aluminium caste nozzle for connecting a hose

	<i>Connection Ø</i>	<i>Art. no.</i>	<i>Price €</i>
	DN 125	15015477	680.00
	DN 150	15006884	620.00
	DN 200	15005180	1,070.00

Connection nozzle for exhaust air pipe

	<i>Art. no.</i>	<i>Price €</i>
Connection nozzle for exhaust air pipe DN 160 mm, front-mounted on the slotted vacuum channel	15015975	218.00
Connection nozzle for exhaust air pipe DN 200 mm, front-mounted on the slotted vacuum channel	15015976	222.00
Connection nozzle for exhaust air pipe DN 200 mm, mounted on the slotted vacuum channel	15015468	193.00
Connection nozzle for exhaust air pipe DN 250 mm, mounted on the slotted vacuum channel	15015469	215.00

Channel connecting sleeve ***

	<i>Art. no.</i>	<i>Price €</i>
	15015977	39.90

*** required from a length of 8.0 m

6 Slotted suction channels

6.1 Slotted suction channels for medium pressure

Aluminium-slotted vacuum channel system AS 440

The AS 440 system is suitable for the Ø 125 mm, Ø 150 mm and Ø 200 mm suction carriages. The max. air flow is approx. 4,000 m³/h. Cross-section 440 cm². The delivery lengths are 4.0 m and 6.0 m.



	Art. no.	Price €
Aluminium slotted vacuum channel AS 440	15005171	500.00*
End stop system AS, rubber-cushioned	15005175	16.80**
End cover	15008111	57.80
Channel stiffening system AS, every 1.0 m	15008816	20.00

* Price per m / ** Price per set (2 pieces)



"rollfix" suction carriage

With eight ball bearing rollers and aluminium caste nozzle for connecting a hose

Connection Ø	Art. no.	Price €
DN 125	15015477	680.00
DN 150	15006884	620.00
DN 200	15005180	1,070.00

Connection nozzle for exhaust air pipe

	Art. no.	Price €
Connection nozzle for exhaust air pipe DN 250 mm, Front-mounted on the slotted vacuum channel	15015470	382.00
Connection nozzle for exhaust air pipe DN 250 mm, mounted on the slotted vacuum channel	15015469	215.00
Connection nozzle for exhaust air pipe DN 315 mm, mounted on the slotted vacuum channel	15008137	238.00

Channel connecting sleeve ***

Art. no.	Price €
15005170	57.80

*** required from a length of 8.0 m

6 Slotted suction channels

6.2 Accessories for slotted suction channels for medium pressure

"rollfix" suction carriage



With eight ball bearing rollers and aluminium cast nozzle for connecting a hose

Connection Ø	Art. no.	Price €
DN 250*	15015478	2,670.00

* Sheet steel nozzle with chassis

"Compact" balancer



for pulling up the suction hose

Extension length mm	Tensile force kg	Art. no.	Price €
2,500	6 – 8	15015479	740.00
2,500	8 – 10	15015480	820.00
2,500	10 – 14	15015481	890.00
3,000	6 – 8	15015482	950.00
3,000	8 – 10	15015483	950.00
3,000	10 – 14	15015484	950.00

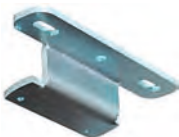
Hose bracket



including chain link and hook

Connection Ø	Art. no.	Price €
DN 100	15015486	70.40
DN 125	15015487	74.60
DN 150	15015488	83.00
DN 200	15015489	170.00

Ceiling mount



for swivelling in, suitable for securing the slotted suction channel to ceiling or wall bracket, coated

Art. no.	Price €
15005179	35.70

Universal holder



for fixing the slotted suction channel to suspension constructions, coated

Art. no.	Price €
15015475	29.40

6 Slotted suction channels

6.2 Accessories for slotted suction channels for medium pressure

Wall bracket

made from profiled sheet steel, for wall mounting of the slotted suction channel



<i>Length mm</i>	<i>Art. no.</i>	<i>Price €</i>
500	15015471	80.90
600	15015472	128.00
800	15015473	147.00
1000	15015474	166.00

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

**Slotted suction
channels**

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

7 Extraction accessories



ESTA has a wide range of suction accessories, distinguished by their flexible application options for a great variety of different applications. Nozzles, guide tubes and suction hoses and other accessory parts are available in three nominal widths: DN 38 mm, DN 50 mm and DN 70 mm.

Both industrial vacuum cleaners and central high-vacuum extraction systems can be fitted with the ESTA extraction accessories. The cone plug-in system enables easy handling and offers a great variety of different combinations of the individual components. Use with different brands is thus possible without any problems.



Accessory parts, which are identified as "electrically conductive", are suitable for use in ATEX zones 21/22



The program also includes special versions in silicone for the food industry and temperature ranges up to 200 ° C

Application

- » For equipping industrial dust extraction systems and central high-vacuum extraction systems

Special features

- » Available in nominal diameters DN 38, DN 50, DN 70 mm
- » Silicone nozzles are available for the food and pharmaceutical industries as well as for high temperature ranges

Benefits

- » Wide selection of extraction nozzles for widely different applications
- » Easy to use and multiple combination possibilities thanks to plug-in system
- » Can be used in ATEX zones 21/22



Crevice nozzle for extracting pharmaceutical dusts



ESTA DUROSOG with antistatic suction hose, length 3.0 m, and oblique-tip nozzle for extracting textile fibres



ESTA EUROSOG with guiding tube and floor nozzle for extracting metal chippings

7 Extraction accessories

7.1 Nominal diameter 38 mm

Art. no.

Price €

Oblique-tip nozzle



made from electrically conductive rubber compound, including connecting tube, total length 290 mm

30007768

27.30

made from silicone, including connecting tube, total length 290 mm

30007769

30.50

made from electrically conductive rubber compound, suction opening 20 × 60 mm, total length 240 mm

06002473

17.90

Wide nozzle



made from electrically conductive rubber compound, including connecting tube, suction opening 110 × 25 mm, total length 280 mm

30007784

32.60

made from silicone, including connecting tube, suction opening 110 × 25 mm, total length 280 mm

30007785

59.90

Crevice nozzle



made from electrically conductive rubber compound, including connecting tube, suction opening Ø 13 mm, total length 400 mm

30007913

55.70

made from silicone, including connecting tube, suction opening Ø 13 mm, total length 400 mm

30007914

64.10

Universal adapter



made from electrically conductive rubber compound, including connecting tube, graduated from 38 mm to 15 mm, total length 400 mm

30007915

42.00

7 Extraction accessories

7.1 Nominal diameter 38 mm

Art. no.

Price €

Rake nozzle



made from electrically conductive rubber compound, including connecting pipe, suction opening 210 × 25 mm, total length 180 mm

30007927

37.80

made from silicone, including connecting pipe, suction opening 210 × 25 mm, total length 180 mm

30007930

41.00

Vacuum brush



Nylon bristles, Ø82 mm, including connecting tube

30007776

91.40

Nylon bristles interspersed with brass bristles, Ø82 mm, electrically conductive, including connecting tube

30007778

106.00

Natural hair bristles, Ø82 mm, including connecting tube

30007777

96.60

Natural hair bristles interspersed with brass bristles, Ø82 mm, electrically conductive, including connecting tube

30007779

111.00

Bristled ring for vacuum brush



Nylon bristles, Ø82 mm

06002448

59.90

Nylon bristles interspersed with brass bristles, electrically conductive, Ø82 mm

06002450

71.40

Natural hair bristles, Ø82 mm

06002449

65.10

Natural hair bristles interspersed with brass bristles, electrically conductive, Ø82 mm

06002451

73.50

7 Extraction accessories

7.1 Nominal diameter 38 mm

Art. no.

Price €

Connecting pipe



galvanised, length 120 mm

06002464

10.50

Stainless steel, length 120 mm

06002465

25.20

Hose sleeve accessories



with internal thread, for PE hose, electrically conductive

06002460

16.80

with internal thread, for PU hose, electrically conductive

06002461

16.80

ESTA vacuum cleaner hose sleeve



boiler side, with internal thread, for PE hose, electrically conductive

06002547

13.70

boiler side, with internal thread, for PU hose, electrically conductive

06002548

13.70

Hose coupling



with internal thread, for PE hose, black, electrically conductive

03000508

31.50

with internal thread, for PU hose, electrically conductive

03004407

31.50

Rubber bushing for flap valve DN 50



with internal thread, for PE hose, 38 mm

60038

20.60

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

7 Extraction accessories

7.1 Nominal diameter 38 mm

Art. no.

Price €

Suction hose



PE hose, antistatic, light, highly flexible, weather-resistant and wear-resistant, high internal smoothness

78038

18.90

PU hose

91038

25.00

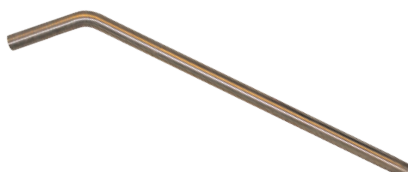
Guide pipe



chrome-plated steel, 3-part, length 1,400 mm

30007912

69.30



Stainless steel, bent, length 1,320 mm

02007591

133.00

Floor nozzle



two height-adjustable floor rollers, cylindrical connection, electrically conductive, width 370 mm

30007924

131.00

7 Extraction accessories

7.2 Nominal diameter 50 mm

Art. no.

Price €

Oblique-tip nozzle



PVC, non-conductive, length 350 mm

06000701

24.20

made from electrically conductive rubber compound, including connecting tube, total length 400 mm

30007766

27.30

made from silicone, including connecting tube, total length 400 mm

30007767

30.50

made from electrically conductive rubber compound, Ø45 mm, length 246 mm

06002458

16.80

Wide nozzle



made from electrically conductive rubber compound, including connecting tube, suction opening 110 × 25 mm, total length 270 mm

30007781

28.40

made from silicone, including connecting tube, suction opening 110 × 25 mm, total length 270 mm

30007783

56.70

Crevice nozzle



made from electrically conductive rubber compound, including connecting tube, suction opening Ø13 mm, total length 400 mm

30007916

55.70

made from silicone, suction opening Ø13 mm, total length 400 mm

30007917

64.10

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

7 Extraction accessories

7.2 Nominal diameter 50 mm

Art. no.

Price €

Universal adapter



made from electrically conductive rubber compound, including connecting tube, graduated from 50 mm to 15 mm, total length 400 mm

30007918

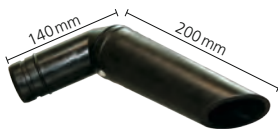
41.00

made from silicone, including connecting tube, Graduated from 50 mm to 15 mm, total length 400 mm

30007919

66.20

Angled oblique-tip nozzle



made from electrically conductive rubber compound

06002459

57.80

Rake nozzle



made from electrically conductive rubber compound, including connecting pipe, suction opening 210 × 25 mm, total length 180 mm

30007928

39.90

made from silicone, including connecting pipe, suction opening 210 × 25 mm, total length 180 mm

30007931

46.20

Vacuum brush



Nylon bristles, Ø 100 mm, including connecting pipe

30007774

120.00

Nylon bristles interspersed with brass bristles, Ø 100 mm, electrically conductive, including connecting pipe

30007772

93.50

Natural hair bristles, Ø 100 mm, including connecting pipe

30007775

131.00

Natural hair bristles interspersed with brass bristles, Ø 100 mm, electrically conductive, including connecting pipe

30007773

106.00

7 Extraction accessories

7.2 Nominal diameter 50 mm

Art. no.

Price €

Bristled ring for vacuum brush



Nylon bristles, Ø 100 mm

06002444

63.00

Nylon bristles interspersed with brass bristles, Ø 100 mm, electrically conductive

06002446

81.90

Natural hair bristles, Ø 100 mm

06002445

70.40

Natural hair bristles interspersed with brass bristles, Ø 100 mm, electrically conductive

06002447

91.40

Connecting tube



galvanised, length 120 mm

06002463

10.50

Stainless steel, length 120 mm

06002392

27.30

Hose sleeve



with internal thread, for PE hose, electrically conductive

06002298

19.00

with internal thread, for PU hose, electrically conductive

06002405

18.90

Rotary coupling, PVC, for PE hose, non-conductive

06000354

13.70

7 Extraction accessories

7.2 Nominal diameter 50 mm

Art. no.

Price €

Hose coupling



with internal thread, for PE hose, black, electrically conductive

03000509

31.50

with internal thread, for PU hose, electrically conductive

03000510

31.50

Rubber bushing for flap valve



with internal thread, for PE hose, DN 50 mm

60050

21.80

Suction hose



PE hose, antistatic, light, highly flexible, weather-resistant and wear-resistant, high internal smoothness

78050

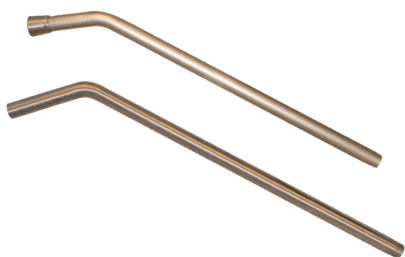
21.80

PU hose

91050

27.30

Suction tube



Aluminium, bent, length 1,200 mm

30000572

153.00



Stainless steel, 2-part, electrically conductive, length 1,400 mm

30006972

160.00

7 Extraction accessories

7.2 Nominal diameter 50 mm

	Art. no.	Price €
Suction tube extension		
	Aluminium, length 1,500 mm	
	11000004	81.90
Floor nozzle		
	two height-adjustable floor rollers, cylindrical connection, electrically conductive, width 500 mm	
	30000376	182.00

7 Extraction accessories

7.3 Nominal diameter 70 mm

Art. no.

Price €

Diagonal tube nozzle



made from electrically conductive rubber compound, including connecting tube, total length 350 mm

30007770

54.60

made from silicone, including connecting tube, total length 350 mm

30007771

63.00

Flat nozzle



made from electrically conductive rubber compound, including connecting tube, suction opening 110 × 25 mm, total length 320 mm

30007782

68.30

Rake nozzle



made from electrically conductive rubber compound, including connecting tube, suction opening 210 × 25 mm, total length 200 mm

30007929

70.40

made from silicone, including connecting tube, suction opening 210 × 25 mm, total length 200 mm

30007932

78.80

Universal adapter



made from electrically conductive rubber compound, including connecting tube, graduated from 70 mm to 15 mm, total length 450 mm

30007920

64.10

7 Extraction accessories

7.3 Nominal diameter 70 mm

Art. no.

Price €

Connecting tube



galvanised, length 140 mm

06002462

14.70

Stainless steel, length 140 mm

06000711

31.50

Hose sleeve



with internal thread, for PE hose, electrically conductive

06002397

31.50

with internal thread, for PU hose, electrically conductive

06002404

31.50

Suction hose



PE hose, antistatic

78070

37.80

PU hose

91070

28.00

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

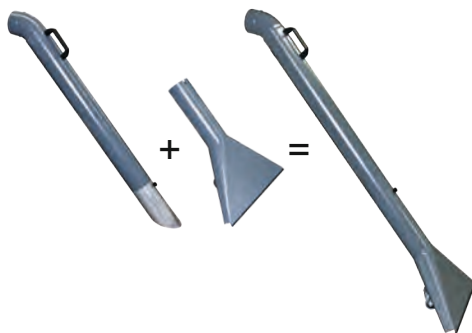
7 Extraction accessories

7.3 Floor cleaning set

Art. no.

Price €

Floor cleaning set



Nominal diameter 70 mm, opening 30 × 300 mm

30007490

302.00

Nominal diameter 100 mm, opening 40 × 400 mm

30000894

318.00

Suction lance

for packing flakes (styrofoam chips)





made of sheet steel, galvanised, nominal diameter 125 mm

30005536

219.00

7 Extraction accessories

7.4 Filter bags made from paper/dust collecting cardboard

Article	Order no.	Price €	DUSTOMAT 4-10	DUSTOMAT 4-24	DUSTOMAT-100 S	DUSTOMAT-120 S	DUSTOMAT-140 S	DUSTOMAT-160 S	MOBEX P	MOBEX F	FILTOWER (all models)	DUROSOG-W	DUROSOG-ID	DUROSOG-II-D	COMPASOG SR	COMPASOG ST	MULTISOG-1, -2, -3, -4	MULTISOG-SRM	PRETTYBOY (manufactured up to 2006)	PRETTYBOY (manufactured from 2006)	ESTA FURNACE VACUUM	RG 100	RG 200	RG 300	Mobile dust extractors RG 100 / RG 200 / RG 300
 Filter bag No. 6020 Material: Paper 5 pieces per set	30000587	26.00															•								
 Filter bag No. 3017 Material: Paper 10 pieces per set	30000373	30.00															•			•					
 Filter bag No. 5317 Material: Paper 10 pieces per set	30000584	32.00																	•						
 Filter bag No. 5318 Material: Paper 10 pieces per set	30000336	32.00																	•						
 Filter bag No. 5017 Material: Paper 10 pieces per set	30000566	38.00		•								•	•												
 Filter bag No. 9017 Material: Paper 5 pieces per set	30000624	41.00			•	•	•							•											
 Filter bag No. 90017 Material: Paper 6 pieces per set	30000589	48.00																				•	•	•	•
 Dust collection box No. 30008311 Material: Cardboard 8 pieces per set including cover	30008311	95.00	•	•					•	•	•				•	•									
 Reusable dust container Material: Sheet steel 1 piece, without lid	30008816	163.00	•	•					•	•	•				•	•									
 Reusable dust container Material: Stainless steel 1 piece, without lid	30008922	344.00	•	•					•	•	•				•	•									

7 Extraction accessories

7.5 Dust collection bags made from PE-LD

Article	Order no.	Price €	DUSTOMAT-HMS-10	DUSTOMAT-14/-15/-16M	DUSTOMAT-21 to -67	DUSTOMAT-21 to -67 ATEX	DUSTOMAT T-5	DUSTOMAT T-10 and ATEX	DUSTOMAT P-10/P-20 and ATEX	COMPEX S 6.2	DUSTOVAC-I-D/-II-D	DUSTOVAC 5.5/7.5/8.5/13.0/-III-D/-IV-D	EUROSOG-W/-I-D/-II-D	WHISPERSOG-2.2/-3.0/FM/FA	WHISPERSOG-2.2/-3.0 JET	PRE-SEPARATOR 100I	PRE-SEPARATOR 200I	SRF K-10	SRF K-15	RG 100	RG 200	RG 300	STYROSOG 1000	STYROSOG 2000
 Dust collection bag No. 91015 Material: PE-LD 10 pieces per set	30000588	27.00	•	•							•		•	•	•									
 Dust collection bag No. 91017 Material: PE-LD 10 pieces per set	30000567	35.00			•							•		•		•								
 Dust collection bag No. 91018 Material: PE-LD, electrically conductive 10 pieces per set	30007002	36.00					•	•	•	•														
 Dust collection bag No. 91019 Material: PE-LD, electrically conductive 10 pieces per set	30006113	64.00			•																			
 Dust collection bag no. 90116 Material: PE-LD 10 pieces per set	30000590	29.00																		•				
 Dust collection bag no. 90117 Material: PE-LD 10 pieces per set	30000575	35.00																			•	•	•	•
 Drawstring bag for SRF K Material: PE-LD 5 pieces per set	30000995	12.00																•	•					

8 Extraction hoses



Hoses are the most common conveyor system for solid, liquid and gaseous media in industry and trade. Their flexibility and their absorbing and sound-dampening properties often replace or supplement pipelines. ESTA offers a wide range of extraction hoses that also meet specific requirements. High temperature hoses and extraction hoses that are especially suitable for the food and pharmaceutical industries are also available in addition to our standard hoses. To achieve optimum extraction performance, each hose must correspond as well as possible with the operating conditions to which it is subjected. Therefore, select a hose based on your actual requirements and then decide on type, quality and size.



PU hoses for connecting the extraction hoods to the pipe system in a metalworking shop



ESTA DUSTOMAT-10 with PU hose installed on a buzz saw for extraction of wood dust

ESTA PLUS

Application

- » For connection to filter systems and pipeline systems
- » For equipping extraction arms

Special features

- » Wide range of nominal diameters
- » Hoses for special applications, including for food and pharmaceutical industries

Benefits

- » High flexibility in the extraction process
- » Optimum extraction capacity when conveying dust and smoke
- » High finishing quality
- » Can be used in ATEX zones



Special anti-static hose versions are suitable for use in ATEX zones

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Sorted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

8 Extraction hoses

8.1 Flexible suction hosesuper-light version

Material:

- » Helix: Spring steel wire embedded in the wall
- » Hose material: PVC-coated polyester fabric, flame retardant in accordance with DIN 4102-B1
- » Wall thickness approx. 0.25 mm

Material properties:

- » Highly flexible and compressible 6:1
- » Fabric reinforced
- » Good chemical resistance
- » Good resistance to alkalis and acids
- » Flame-retardant
- » Temperature-resistant: approx. -30°C to approx. +100°C



Applications:

- » Extraction and blower hose, particularly suitable for:
 - welding fume extraction
 - ventilation and air conditioning technology

<i>Inner Ø mm</i>	<i>Outer Ø mm</i>	<i>Bend radius (Hose middle) mm</i>	<i>Negative pressure bar</i>	<i>Manufactured length m</i>	<i>Art. no.</i>	<i>Price in € per m</i>
50	53	53	0.145	10.0	92.050	21.00
60	63	63	0.115	10.0	92.060	22.00
70	73	73	0.085	10.0	92.070	23.00
83	86	86	0.070	10.0	92.080	24.00
100	103	103	0.050	10.0	92.100	26.00
125	128	128	0.035	10.0	92.125	31.00
140	143	143	0.035	10.0	92.140	36.00
150	153	153	0.035	10.0	92.150	38.00
160	163	163	0.025	10.0	92.160	40.00
180	183	183	0.020	10.0	92.180	44.00
200	203	203	0.020	10.0	92.200	51.00
224	227	227	0.020	10.0	92.220	61.00
250	254	254	0.010	10.0	92.250	65.00
280	284	284	0.010	10.0	92.280	74.00
300	304	304	0.005	10.0	92.300	79.00

Other dimensions on request - suitable for extraction arms - for fastening clamps, see page 59

8 Extraction hoses

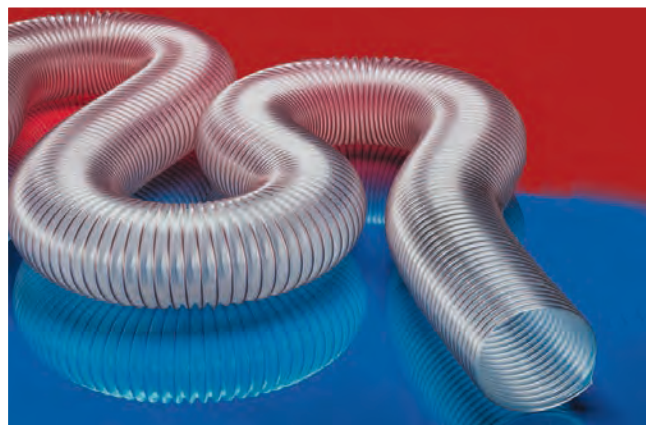
8.2 PU spiral hosesuper-light version

Material:

- » Helix: Spring steel wire firmly embedded in the wall
- » Hose material: Polyurethane, flame retardant in accordance with DIN 4102-B1
- » Wall thickness approx. 0.4mm

Material properties:

- » Highly flexible and compressible 4:1
- » High resistance to abrasion
- » Good chemical resistance
- » Good resistance to oil and petrol
- » Flame retardant in accordance with: UL94-VO, DIN 4102-B1
- » in accordance with TRBS 2153 (formerly BGR 132) for electrostatic discharge by earthing the spiral
- » Temperature-resistant: approx. -40°C to approx. +90°C, briefly to approx. +125°C



Applications:

- » for extraction of wood dust and chippings from woodworking machines
- » for abrasive solids such as dust, powder, fibres and chippings
- » for dust extraction systems

Inner Ø mm	Outer Ø mm	Bend radius (Hose middle) mm	Negative pressure bar	Manufactured length m	Art. no.	Price in € per m
50	58	58	0.240	10.0	71.050	26.00
65	73	73	0.170	10.0	71.065	27.00
70	78	78	0.140	10.0	71.070	28.00
80	88	88	0.120	10.0	71.080	32.00
100	108	108	0.080	10.0	71.100	34.00
125	133	133	0.055	10.0	71.125	42.00
140	148	148	0.050	10.0	71.140	47.00
150	158	158	0.050	10.0	71.150	50.00
160	168	168	0.045	10.0	71.160	53.00
180	188	188	0.035	10.0	71.180	76.00
200	208	208	0.035	10.0	71.200	77.00
225	233	233	0.025	10.0	71.224	78.00
250	258	258	0.015	10.0	71.250	82.00
280	288	288	0.010	10.0	71.280	90.00
300	309	309	0.010	10.0	71.300	102.00

Other dimensions on request - suitable for extraction arms - for fastening clamps, see page 59

8 Extraction hoses

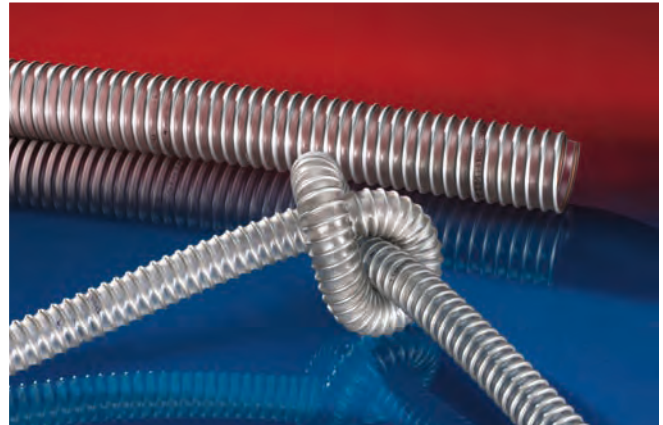
8.2 PU spiral hose heavy-duty version

Material:

- » Helix: Spring steel wire firmly embedded in the wall
- » Hose material: Polyurethane, flame retardant in accordance with DIN 4102-B1
- » Wall thickness approx. 0.9 mm

Material properties:

- » Flexible
- » High resistance to abrasion
- » Good chemical resistance
- » Good resistance to oil and petrol
- » Flame retardant in accordance with: UL94-VO, DIN 4102-B1
- » in accordance with TRBS 2153 (formerly BGR 132) for electrostatic discharge by earthing the spiral
- » Temperature-resistant: approx. -40°C to approx. +90°C, briefly to approx. +125°C



Applications:

- » for extraction of wood dust and chippings from woodworking machines
- » for abrasive solids such as dust, powder, fibres and chippings
- » for dust extraction systems

<i>Inner Ø mm</i>	<i>Outer Ø mm</i>	<i>Bend radius (Hose middle) mm</i>	<i>Negative pressure bar</i>	<i>Manufactured length m</i>	<i>Art. no.</i>	<i>Price in € per m</i>
50	58	64	0.365	10.0	91.050	27.30
65	73	80	0.255	10.0	91.065	27.00
70	79	87	0.210	10.0	91.070	28.00
80	89	98	0.175	10.0	91.080	32.00
100	109	120	0.120	10.0	91.100	34.00
125	134	147	0.085	10.0	91.125	42.00
140	149	164	0.085	10.0	91.140	47.00
150	159	175	0.075	10.0	91.150	50.00
160	169	186	0.065	10.0	91.160	53.00
180	189	208	0.055	10.0	91.180	76.00
200	209	230	0.055	10.0	91.200	77.00
224	233	256	0.040	10.0	91.224	78.00
250	259	285	0.020	10.0	91.250	82.00
280	289	318	0.020	10.0	91.280	90.00
300	309	340	0.020	10.0	91.300	102.00

Other dimensions on request – not suitable for extraction arms – for fastening clamps, see page 59

8 Extraction hoses

8.3 Electrically conductive hosesuper-light version

Material:

- » Helix: Spring steel wire firmly embedded in the wall
- » Hose material: electrically conductive polyethylene (PE)
- » Wall thickness approx. 0.4 mm

Material properties:

- » Highly flexible and compressible
- » Fabric reinforced
- » Excellent chemical resistance
- » Good resistance to oil and petrol
- » in accordance with TRBS 2153 electrically conductive wall: Contact resistance $<10^4 \Omega$, recommended for conveying flammable bulk goods
- » Meets the requirements of the European ATEX Directive
- » Temperature-resistant: approx. -35°C to approx. $+60^\circ\text{C}$



Applications:

- » Electrically conductive extraction and blower hose, with special suitability:
 - in explosive areas (explosion protection)
 - for aggressive solids such as dust, powder and fibres
 - for aggressive gaseous media such as vapours and smoke
 - for dust extraction systems

Inner Ø mm	Outer Ø mm	Bend radius (Hose middle) mm	Negative pressure bar	Manufactured length m	Art. no.	Price in € per m
50	58	58	0.240	10.0	73.050	48.30
65	73	73	0.170	10.0	73.065	51.50
70	78	78	0.140	10.0	73.070	55.70
80	88	88	0.120	10.0	73.080	62.00
100	108	108	0.080	10.0	73.100	66.20
125	133	133	0.055	10.0	73.125	80.90
140	148	148	0.050	10.0	73.140	89.30
150	158	158	0.050	10.0	73.150	95.60
160	168	168	0.045	10.0	73.160	101.90
180	188	188	0.035	10.0	73.180	118.00
200	208	208	0.035	10.0	73.200	128.00
224	232	232	0.025	10.0	73.224	146.00
250	258	258	0.015	10.0	73.250	156.00
280	288	288	0.015	10.0	73.280	173.00
300	309	309	0.010	10.0	73.300	195.00

Other dimensions on request - suitable for extraction arms - for fastening clamps, see page 59

8 Extraction hoses

8.3 Electrically conductive hosesuper-light version

Material:

- » Clamping profile support helix: completely made from stainless steel
- » Hose material: inside semiconducting PTFE foil, outside coated polyester fabric

Material properties:

- » Surface resistance of PTFE film $<10^6 \Omega$
- » Double-layered
- » Highly flexible and compressible 4:1
- » Abrasion protection due to external clamping profile
- » Excellent chemical resistance
- » Good resistance to alkalis and acids
- » In accordance with TRBS 2153 electrically conductive wall:
Contact resistance $<10^3 \Omega$, recommended for conveying flammable bulk goods
- » Meets the requirements of the European ATEX Directive
- » Temperature-resistant: approx. -40°C to approx. $+170^\circ\text{C}$



Applications:

- » Electrically conductive extraction and blower hose, with special suitability:
 - in explosive areas (explosion protection)
 - for aggressive solids such as dust, powder and fibres
 - for aggressive gaseous media such as vapours and smoke
 - for dust extraction systems
 - as bellows and expansion joint

Inner Ø mm	Outer Ø mm	Bend radius (Hose middle) mm	Negative pressure bar	Manufactured length m	Art. no.	Price in € per m
50	62	43	0.300	6.0	74.050	194.00
65	77	54	0.230	6.0	74.065	195.00
70	82	57	0.210	6.0	74.070	196.00
80	92	64	0.160	6.0	74.080	201.00
100	112	78	0.100	6.0	74.100	225.00
125	137	96	0.070	6.0	74.125	261.00
140	152	106	0.050	6.0	74.140	272.00
150	162	113	0.040	6.0	74.150	285.00
160	172	120	0.035	6.0	74.160	307.00
180	192	134	0.030	6.0	74.180	379.00
200	212	148	0.025	6.0	74.200	404.00
224	236	166	0.020	6.0	74.224	490.00
250	262	183	0.020	6.0	74.250	500.00
280	292	204	0.015	6.0	74.280	570.00
300	312	218	0.010	6.0	74.300	620.00

Other dimensions on request - suitable for extraction arms - for fastening clamps, see page 59

8 Extraction hoses

8.4 Hose for food and pharmaceutical industriesuper-light version

Material:

- » Clamping profile support spiral: completely made from stainless steel
- » Hose material: PTFE-coated glass fabric

Material properties:

- » Highly flexible and compressible 4:1
- » Abrasion protection due to external clamping profile
- » Excellent chemical resistance
- » Good resistance to alkalis and acids
- » Inner liner food-safe in accordance with: EC Directive 2002/72/EC (formerly 90/128/EEC)
- » Odourless and tasteless
- » Temperature-resistant: approx. -150 °C to approx. +250 °C, briefly to approx. +270 °C

Applications:

- » Extraction and blower hose, with particularly suitable:
 - for aggressive solids such as dust, powder and fibres
 - for aggressive gaseous media such as vapours and smoke
 - for dust extraction systems
 - for the chemical industry
 - for the food and pharmaceutical industries



Inner Ø mm	Outer Ø mm	Bend radius (Hose middle) mm	Negative pressure bar	Manufactured length m	Art. no.	Price in € per m
50	62	43	0.270	6.0	72.050	91.40
65	77	54	0.200	6.0	72.065	119.00
70	82	57	0.180	6.0	72.070	128.00
80	92	64	0.140	6.0	72.080	144.00
100	112	78	0.085	6.0	72.100	180.00
125	137	96	0.060	6.0	72.125	208.00
140	152	106	0.040	6.0	72.140	219.00
150	162	113	0.035	6.0	72.150	229.00
160	172	120	0.030	6.0	72.160	244.00
180	192	134	0.025	6.0	72.180	301.00
200	212	148	0.020	6.0	72.200	322.00
224	236	166	0.020	6.0	72.224	385.00
250	262	183	0.015	6.0	72.250	403.00
280	292	204	0.012	6.0	72.280	450.00
300	312	218	0.010	6.0	72.300	490.00

Other dimensions on request - suitable for extraction arms - for fastening clamps, see page 59

8 Extraction hoses

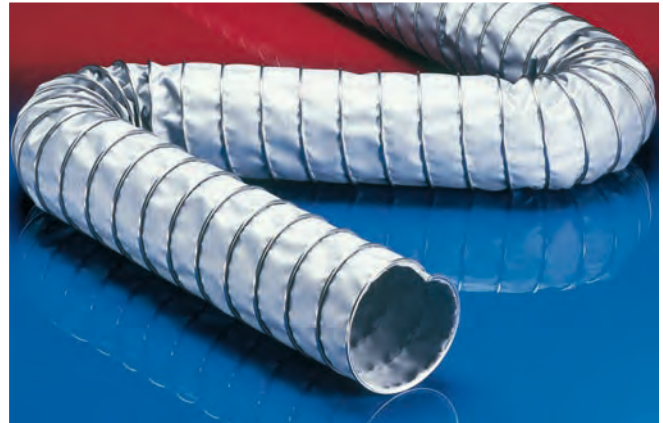
8.5 High temperature hose super-light version

Material:

- » Clamping profile support spiral: Galvanised steel
- » Hose material: Armoured with stainless steel wire and specially coated glass fabric

Material properties:

- » Highly flexible and compressible 3:1
- » Abrasion protection due to external clamping profile
- » Flame retardant in accordance with: DIN 4102-B1
- » Temperature-resistant: approx. -60°C to approx. +400°C, briefly to approx. +450°C



Applications:

- » Flame retardant extraction hose, with special suitability:
 - for aggressive solids such as dust, powder and fibres
 - for gaseous media such as vapours and smoke
 - for dust extraction systems
 - as bellows and expansion joint

<i>Inner Ø mm</i>	<i>Outer Ø mm</i>	<i>Bend radius (Hose middle) mm</i>	<i>Negative pressure bar</i>	<i>Manufactured length m</i>	<i>Art. no.</i>	<i>Price in € per m</i>
50	62	50	0.380	6.0	76.050	98.70
65	77	62	0.290	6.0	76.065	110.00
70	82	66	0.260	6.0	76.070	112.00
80	92	74	0.200	6.0	76.080	118.00
100	112	101	0.120	6.0	76.100	130.00
125	137	123	0.085	6.0	76.125	166.00
140	152	137	0.060	6.0	76.140	184.00
150	162	113	0.050	6.0	76.150	194.00
160	172	120	0.045	6.0	76.160	212.00
180	192	134	0.040	6.0	76.180	233.00
224	236	166	0.025	6.0	76.224	297.00
250	262	183	0.025	6.0	76.250	330.00
280	292	203	0.020	6.0	76.280	382.00
300	312	218	0.015	6.0	76.300	395.00

Other dimensions and higher temperatures on request - suitable for extraction arms - for fastening clamps, see page 59

8 Extraction hoses

8.6 Special hose for increased sparksuper-light version

Material:

- » Clamping profile support helix:
hot-dip galvanised steel strip
- » Hose material: Specially coated,
textile high temperature fabric

Material properties:

- » Highly flexible and compressible 6:1
- » Abrasion-proof
- » Abrasion protection due to external clamping profile
- » Widely resistant against increased sparks
- » Temperature-resistant: approx. -40°C
to approx. +200°C, briefly to approx. +280°C



Applications:

- » Flame retardant extraction hose, with special suitability:
 - grinding dust extraction with high amount of sparks
 - welding fume extraction with high amount of sparks
 - extraction of hot and abrasive grinding dust

Inner Ø mm	Outer Ø mm	Bend radius (Hose middle) mm	Negative pressure bar	Manufactured length m	Art. no.	Price in € per m
50	58	59	0.300	3.0 / 6.0	75.050	214.00
65	73	76	0.190	3.0 / 6.0	75.065	276.00
70	78	81	0.160	3.0 / 6.0	75.070	299.00
80	88	92	0.120	3.0 / 6.0	75.080	330.00
100	108	114	0.080	3.0 / 6.0	75.100	354.00
125	133	142	0.050	3.0 / 6.0	75.125	396.00
140	148	158	0.040	3.0 / 6.0	75.140	410.00
150	158	169	0.035	3.0 / 6.0	75.150	430.00
160	170	181	0.030	3.0 / 6.0	75.160	450.00
180	190	221	0.025	3.0 / 6.0	75.180	510.00
200	210	245	0.020	3.0 / 6.0	75.200	570.00
224	234	275	0.016	3.0 / 6.0	75.224	630.00
280	290	338	0.010	3.0 / 6.0	75.280	790.00
300	310	365	0.010	3.0 / 6.0	75.300	830.00

Other dimensions on request - suitable for extraction arms - for fastening clamps, see page 59

8 Extraction hoses

8.7 Flexible metal hose

Material:

- » Profiled metal strip, galvanised steel
- » Engaged profile
- » Seal: Glass yarn

Material properties:

- » Flexible
- » Abrasion-proof
- » in accordance with TRBS 2153 electrically conductive wall: Contact resistance and surface resistance $<10^3 \Omega$, recommended for conveying combustible bulk goods/
- » Abrasion protection due to external clamping profile
- » Flame-retardant
- » Meets the requirements of the European ATEX Directive
- » Temperature-resistant: to approx. +400 °C



Applications:

- » Extraction hose, with special suitability:
 - for solids such as powder, chippings and pellets
 - for gaseous media
 - for dust extraction systems
 - for conveying flammable bulk goods and in explosive areas (explosion protection)

Inner Ø mm	Outer Ø mm	Bend radius (Hose middle) mm	Manufactured length m	Art. no.	Price in € per m
35	39	150	10.0	77.035	27.00
50	55	180	10.0	77.050	41.00
60	66	215	10.0	77.060	46.00
70	76	240	10.0	77.070	60.00
80	86	270	10.0	77.080	66.00
100	107	300	10.0	77.100	98.00
125	132	400	10.0	77.125	112.00
140	149	430	10.0	77.140	136.00
150	159	460	10.0	77.150	151.00
160	169	490	10.0	77.160	169.00
180	189	545	10.0	77.180	204.00
200	211	560	5.0	77.200	253.00
225	236	630	5.0	77.224	293.00
250	261	700	5.0	77.250	326.00
275	286	770	5.0	77.275	385.00
300	311	850	5.0	77.300	425.00

Other dimensions and higher temperatures on request – metal hose not suitable for extraction arms

8 Extraction hoses

8.8 Fixing material

Fixing clamps*



<i>Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
60 – 175	93.150	4.70
60 – 215	93.200	5.30
60 – 540	93.300	9.50

* not suitable for "6.7 Flexible metal hose"

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

9 Pre-separators for extraction systems

The use of pre-separation systems is an effective supplement to extraction systems in many applications. The pre-separation of dry and pourable dust, chippings and sparks is particularly recommended to increase the lifetime of the main filter of the extraction system, thus reducing operating costs. Only the very fine dust needs to be filtered in the extraction system.

Depending on the application, ESTA provides you with different versions: a water pre-separator is the ideal solution, for flying sparks to reduce the risk of filter fires to a minimum.

A cyclone pre-separator on the other hand is suitable for the separation of different problem dusts, amongst other things. Due to innovative technology and highly efficient operation, the ESTA cyclonic pre-separators achieve a very high separation efficiency. To achieve optimum extraction capacity, the extraction medium should always be taken as the basis for selecting a suitable pre-separation system.



Cyclone ZA-160 in use

Application

- » For connecting to extraction systems for pre-separation of coarse particles and sparks

Special features

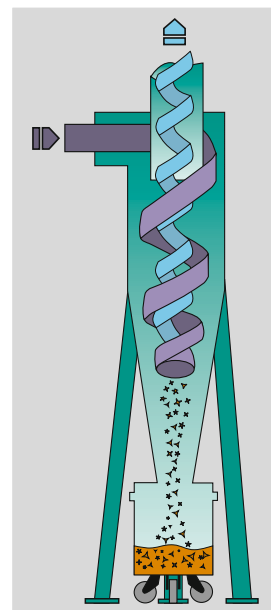
- » Different pre-separation systems for special requirements

Benefits

- » Reduction of the operating costs for the extraction system by increasing the service life of the main filter
- » Reducing the risk of a filter fire
- » Pre-separators can be combined with most extraction units and systems



ESTA DUSTMAC F-144 with cyclone pre-separator for the extraction of zinc and cotton fibres with polishing wax



Functional diagram of a cyclone pre-separator

9 Pre-separators for extraction systems

9.1 Cyclone pre-separator ZA



Cyclone pre-separators are installed before the actual filter unit and used for the pre-separation of dry and free-flowing dusts. Mainly medium and coarse dust particles are separated so that only the fine dust needs to be filtered. The lower pollution on the filter cartridges also reduces the operating costs of the entire filter system.

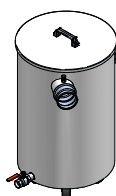
Cyclone pre-separators achieve an efficiency of around 90 % for an average particle size of at least 150 microns. For particle sizes larger than 150 microns, a separation efficiency of up to 96 % is achieved.

Collection bin and feet are included in the scope of delivery.

Suction nozzle mm	Collection bin Litres	Height mm	Art. no.	Price €
50	50	1,458	20.820.050	3,410.00
100	100	2,280	20.821.100	3,790.00
125	100	2,596	20.821.125	3,970.00
140	100	2,578	20.821.140	4,210.00
160	100	2,924	20.821.160	4,970.00
200	100	3,166	20.821.200	5,080.00
225	200	4,128	20.822.225	7,920.00
250	200	4,823	20.822.250	9,310.00
280	200	4,399	20.822.280	10,410.00
300	200	5,086	20.822.300	10,680.00
315	200	5,278	20.822.315	11,320.00
355	200	5,735	20.822.355	14,140.00
450	200	6,449	20.822.450	25,900.00

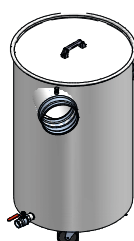
Other cyclone pre-separators on request

9.2 Water pre-separator



For use in spark-generating applications, 100 litre steel container with removable lid, optical fill control, drain valve and 1.5 m PU connecting hose

Connection Ø mm	Art. no.	Price €
100	90.100	940.00



For use in spark-generating applications, 200 litre steel container with removable lid, optical fill control, drain valve and 1.5 m PU connecting hose

Connection Ø mm	Art. no.	Price €
125	90.125	970.00
140	90.140	970.00
160	90.160	970.00
180	90.180	970.00

9 Pre-separators for extraction systems

9.3 Pre-separator for large chipping volumes



Pre-separator for dust extractor

For use with large volumes of chippings, 200 l dust collection container with lid, incl. 1.5 m PU connecting hose and plastic filling sacks

Connection Ø mm	Art. no.	Price €
100	95.100	1,180.00
125	95.125	1,180.00
140	95.140	1,180.00
160	95.160	1,180.00

Cyclone pre-separator for dust extractor

For connecting to a dust extractor, lid with integrated cyclone for separating lighter chippings, including 1.5 m PU connecting hose and plastic filling sacks

Connection Ø mm	Art. no.	Price €
100	96.100	1,830.00
125	96.125	1,830.00
140	96.140	1,830.00
160	96.160	1,830.00



Plastic filling bags for pre-separator

1 set = 10 pieces

Volume	Art. no.	Price €
100l	91.015	27.00
200l	91.017	35.00



9.4 Pipe pre-separator



The pipe pre-separation system effectively removes coarse particles, glowing particles and sparks already in the pipeline, thus minimising the fire risk of your extraction and filtration system. The pipe pre-separator not only provides effective protection for your system, but also significantly increases filter life. The system can be easily integrated into the pipeline - whether during a new installation or when retrofitting an existing system.

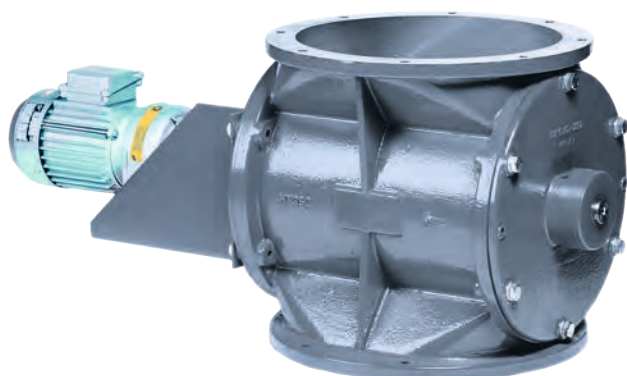
Connection-Ømm	Effective range of use m³/h	Art.no.	Price €
250	2,800 - 3,500	98250	2,050.00
355	5,500 - 7,000	98355	2,300.00
450	9,200 - 11,200	98450	2,510.00
560	13,500 - 17,500	98560	2,610.00

10 Discharge systems



Discharge systems, such as rotary valves, are suitable for the continuous discharge of fine-grained and dusty bulk materials from filters, separators and cyclones. They are installed under extraction systems in order to carry away bulk material from air conveyor circuits with minimal pressure losses. ESTA offers the rotary valves in different output levels. Discharge gates on the other hand are used for the discontinuous inward and outward transfer of bulk materials and are available in two versions:

a manual version with hand crank and a pneumatic automatic version. The discharge rate can be aligned and regulated to specific requirements.



Rotary valve ZRS6-350
Use in ATEX zones optionally possible



Central extraction system with two rotary valves for the continuous discharge of brick dust

Application

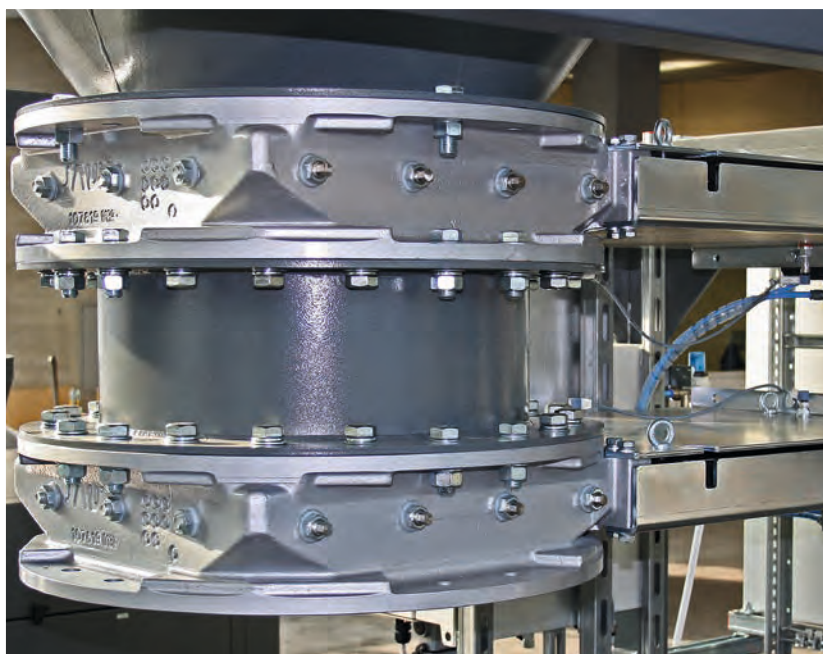
- » Installation under filter systems and cyclones for the extraction of bulk material

Special features

- » Suitable for retrofitting
- » Low pressure drop of the filter system ensured

Benefits

- » Continuous discharge of the bulk material
- » Regulation of the discharge rate
- » Robust, low-wear designs
- » Simple installation and easy to use
- » Can be used in ATEX zones



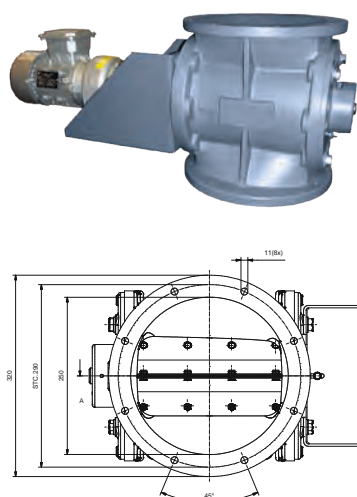
Two pneumatic process gate valves on one filter cyclone for the extraction of bulk material into a Big Bag

10 Discharge systems

10.1 Rotary valves



Rotary valve ZRS6-250



Type ZRS6-250 makes use of an rotor disc with six chambers, which reaches a maximum conveying performance of approx. 6,300 l / h. This type is designed for a discharge flange of **DN 250 mm** , a negative pressure up to max. 5,000 Pa and a temperature range from approx. -15 ° C to 60 ° C. The mounting flange corresponds to the adjacent flange pattern. The ATEX version can be used in zone 22.

	Art. no.	Price €
ZRS6-250	16000588	2,160.00
ZRS6-250 ATEX	16000589	2,570.00

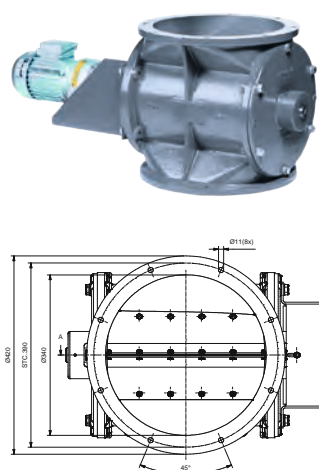
Rotary valve ZRS8-250



Type ZRS8-250 makes use of an rotor disc with eight chambers, which reaches a maximum conveying performance of approx. 3,300 l/h. This type is designed for a discharge flange of **DN 250 mm** , a negative pressure up to max. 20,000 Pa and a temperature range from approx. -20 °C to 80 °C. The mounting flange corresponds to DIN 2501 PN 10. The ATEX version can be used in zone 22.

	Art. no.	Price €
ZRS8-250	16000592	2,550.00
ZRS8-250 ATEX	16000593	3,200.00

Rotary valve ZRS6-350



Type ZRS6-350 makes use of an rotor disc with six chambers, which reaches a maximum conveying performance of approx. 18,000 l / h. This type is designed for a discharge flange of **DN 350 mm** , a negative pressure up to max. 5,000 Pa and a temperature range from approx. -15°C to +60°C. The mounting flange corresponds to the adjacent flange pattern. The ATEX version can be used in zone 22.

	Art. no.	Price €
ZRS6-350	16000590	2,570.00
ZRS6-350 ATEX	16000591	2,980.00

Special versions

All rotary valves can be supplied in special versions upon direct request, e.g. special coating of the rotary valve, a different temperature range, another rotor disc, etc.
If you have any questions, we are happy to help.

10 Discharge systems

10.2 Discharge gates



Discharge gates



The discharge gates are available in manual and pneumatic versions. We offer the gates for discharge flanges of Ø250 mm and Ø300 mm as standard. The mounting flange corresponds to DIN 2501 PN 10. The gates can be used in ATEX zones 20, 21 and 22. The housing can be made of aluminium or grey cast iron depending on the application. The slide plate is made of stainless steel as standard. At the customer's special request, we can also supply custom-made products, e.g. made entirely of stainless steel, different nominal diameters, other fastening flanges, etc.

	Art. no.	Price €
Ø 250 mm, pneumatic, aluminium	16000594	3,500.00
Ø 250 mm, pneumatic, grey cast iron	16000595	3,830.00
Ø 300 mm, pneumatic, aluminium	16000596	3,930.00
Ø 300 mm, pneumatic, grey cast iron	16000597	4,330.00
Ø 250 mm, manual, aluminium	16000598	1,790.00
Ø 250 mm, manual, grey cast iron	16000599	2,160.00
Ø 300 mm, manual, aluminium	16000600	2,190.00
Ø 300 mm, manual, grey cast iron	16000601	2,590.00

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

11 Safety systems



ESTA places the highest importance on the safety of your extraction system. Potential risks, such as filter fires, deflagrations in the filter system or dangers posed by a filter rupture, can be reduced to a minimum through the use of additional safety systems. Amongst other things, the use of sensors also allows the checking of the fill level in the dust collection chamber and notifies the user with an acoustic or visual signal when a set limit value is reached.

A residual dust sensor is used to switch off the extraction system immediately if there is a filter rupture, thus preventing the leakage of hazardous substances. For a better explosion protection, filter systems can be equipped with explosion relief panels to relieve pressure into non-hazardous areas. The integration of non-return valves in the pipe system can prevent the propagation of an explosion into the raw gas line. All extraction systems can also be equipped with a powder extinguishing system that is immediately triggered in the event of fire in order to prevent greater damage.

ESTA provides a wide range of safety systems to minimise your risk potential - we are happy to advise you!



DUSTMAC F-96 central welding fume filter system with integrated ABC powder extinguishing system

ESTA PLUS

Application

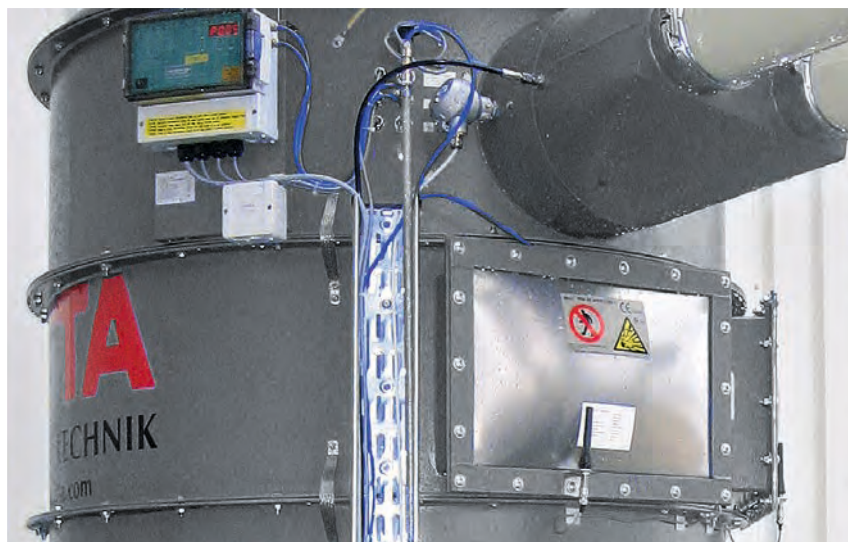
- » For installation in the extraction system or for integration in the pipe system

Special features

- » Suitable for retrofitting
- » Various systems for different safety requirements

Benefits

- » Protects your extraction system and the working environment
- » Minimisation of risks
- » Can be used in ATEX zones



Central extraction system with integrated filter rupture monitoring and explosion relief panel for pressure relief into the outdoor area

11 Safety systems

11.1 Residual dust sensor



DUSTY dust sensor



The DUSTY dust sensor is used to check the clean gas side pipeline for residual dust and is used as a safety component in the event of a filter rupture. The dust sensor can be adjusted specifically to your application. If the set amount of residual dust is exceeded, the extraction system is switched off as a precautionary measure. The dust sensor is designed for pipelines up to a nominal diameter of 250 mm and can be read out via a converter and evaluated. For pipelines with nominal diameters greater than 250 mm, three sensors can be coupled to ensure better monitoring.

	<i>Art. no.</i>	<i>Price €</i>
DUSTY std.	30003564	3,100.00
DUSTY ExD (ATEX)	30007890	3,320.00

Converter



The converter for the residual dust sensor unit is integrated in a control cabinet and converts the signal from the sensor unit which can then be read.

	<i>Art. no.</i>	<i>Price €</i>
DUSTY converter	15004135	2,880.00

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

11 Safety systems

11.2 Fill level monitor



Vibrating rod sensor



The vibrating rod sensor stimulates the measuring rod at its resonant frequency through a piezoelectric drive. If the measuring rod is plunged into bulk material, this changes its vibration amplitude. The actual amplitude is now compared with the target amplitude. Depending on the connection of the sensor, it emits an acoustic signal via a signal horn or activates a switching device. The ATEX version can be used in zones 20/22.

	<i>Shaft length mm</i>	<i>Art. no.</i>	<i>Price €</i>
Soliphant FTM 20	225	04002713	1,100.00
Soliphant FTM 20ex	225	04003065	1,340.00

Ultrasonic sensor



The ultrasonic sensor sends pulses that are reflected by the bulk material. The measured time serves as the distance measurement. The sensor sends a signal when a previously set maximum distance is reached. The ATEX version can be used in zones 20/22.

	<i>Art. no.</i>	<i>Price €</i>
Prosonic FMU40-5RB2C2	04002523	3,900.00
Prosonic FMU40-5RH2A2	04002745	3,920.00

Rotary vane sensor



The rotary vane sensor keeps one vane in constant rotation. As soon as the vane is immersed in bulk material, this stops. Depending on the connection of the sensor, it emits an acoustic signal via a signal horn or activates a switching device. The ATEX version can be used in zones 20/22.

	<i>Shaft length mm</i>	<i>Art. no.</i>	<i>Price €</i>
Soliswitch FTE30-AAA1	100	04003066	830.00

Other versions on request.

11 Safety systems

11.3 Rupture discs

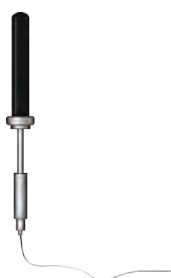
Explosion relief panel GE 1000

In the case of a deflagration in the filter housing of the extraction system, the explosion relief panel breaks and ensures controlled pressure relief into non-hazardous areas. The extraction system is then immediately shut down. This precautionary measure prevents greater damage to your extraction system and your working environment.



Length x width mm	Art. no.	Price €
457 x 890	02002362	1,270.00
305 x 457	02002368	1,090.00
220 x 420	02002462	1,170.00
490 x 490	02002463	1,120.00
645 x 645	02003474	1,430.00
610 x 610	02003542	1,270.00
490 x 590	02003543	1,120.00
470 x 610	02003544	1,180.00
375 x 655	02003545	1,180.00

Sensor for explosion relief panel



Art. no.	Price €
02010353	317.00

Explosion relief panel GE 1000, complete including sensor



Length x width mm	Art. no.	Price €
220 x 420	30007872	1,490.00
305 x 457	30007873	1,410.00
375 x 655	30007874	1,490.00
490 x 490	30007875	1,440.00
490 x 590	30007876	1,440.00
470 x 610	30007877	1,490.00
457 x 890	30007878	1,560.00
610 x 610	30007879	1,560.00
645 x 645	30007880	1,680.00

11 Safety systems

11.4 Pressure relief valves

Pressure relief valves

Pressure relief valves are used wherever there is a flame front or where the pressure of an explosion must be absorbed safely. They open automatically in the process of a deflagration in the extraction system, reliably prevent the escape of flames, and then close again. This prevents unpredictable secondary explosions and subsequent fires. Unlike explosion relief panels that need to be replaced after an explosion and force a system shutdown, the use of pressure relief valves means production can quickly continue – moreover, it is also not necessary to change the valve. In addition, the valves are specially designed for use in indoor areas.



<i>Geometric relief cross-section cm²</i>	<i>Art. no.</i>	<i>Price €</i>
499	16001787	on request
732	16001788	on request
1,260	16001789	on request
1,665	16001654	on request
2,300	16001764	on request
2,990	16001662	on request
3,903	16001790	on request

9.5 ABC powder extinguisher

ABC powder extinguisher



As a further fire protection measure, ESTA recommends the use of ABC powder extinguishing systems. With a capacity of 10 kg, they can be installed on the side of the extraction systems. Two spark detectors, a thermal maximum detector and, on the pure air side, a smoke detector are integrated inside the device. If a spark or an increase in temperature is detected or smoke is produced, the fan is automatically switched off and ABC extinguishing powder is directed into the filter system by the central extinguishing system. There is also acoustic/optical signalling. The extinguishing powder that is supplied can be cleared by cleaning the filter and disposed of in the dust collecting container, which ensures the continued smooth running of the entire system.

<i>Designation</i>	<i>Art. no.</i>	<i>Price €</i>
ABC powder extinguisher	16000487	on request

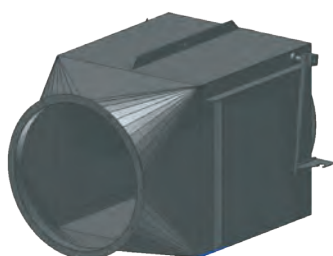
Prices on request as specific planning is required for each system.

11 Safety systems

11.6 Non-return valves

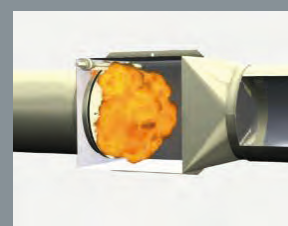
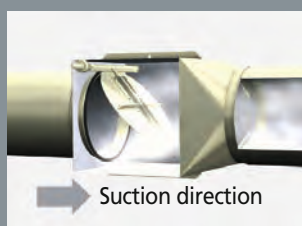
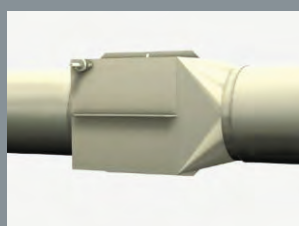
Non-return valves

During various processes, explosive dust/air mixtures can occur. If the introduction of ignition sources (e.g. flying sparks) into the extraction system cannot be ruled out, non-return valves are integrated in the raw gas pipeline as a protective measure. If there is an explosion in the extraction system, the non-return valve closes, thus preventing the discharge of the explosion via the raw gas pipeline and avoiding greater damage.



NW mm	Art. no.	Price €
160	15013384	2,650.00
180	15013385	2,750.00
200	15013386	2,840.00
250	15013387	2,990.00
315	15013388	3,500.00
350	15013160	4,060.00
400	15013389	4,470.00

Mode of operation:



12 Post-filters

Post-filters are installed downstream of a main filter or a dust removal system and perform a final cleaning and a backup function. The latter is required if an upstream filter is no longer functional, e.g. due to a fracture – the post-filter prevents the uncontrolled escape of hazardous substances.

The main task of post-filters, however, is to remove residual dust from the clean air and to ensure compliance with the statutory limits.

The cassette filters that are used for this have low operating costs due to the maximum filter surface in a small area and the associated long filter service life. After reaching the service life, the filter media can easily be removed from the housing.

ESTA filter cartridges meet the requirements of the filter class “H13” in accordance with DIN EN 1822 with a separation efficiency of 99.95 % (e.g. filter breakage monitoring, ATEX zone entrainment).

ESTA filter cartridges of filter class “H14” with a separation efficiency > 99.995 % are approved in accordance with DIN EN 1822.

Moreover, the ESTA post-filters can be integrated in a pipeline system at any time.



Modular ESTA extraction system DUSTMAC F-144 with post-filters for the extraction of GFK sanding dust

Application

- » For installing downstream of a dust removal system or a main filter
- » Can be retrofitted to pipe systems

Special features

- » Backup function
- » Use of high-quality glass fibre filter media

Benefits

- » High separation capability due to HEPA filters of filter class “H13” or “H14”
- » Low operating costs due to long filter service life
- » Easy filter change



Post-filters on a filter system in a metal working shop



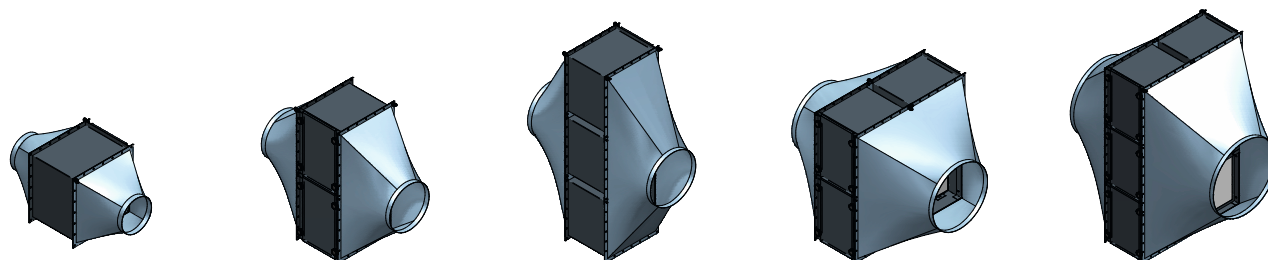
Post-filters installed on the DUSTMAC F-288 central extraction system

12 Post-filters

12.1 Post-filters

Post-filters (filter class "H13")

A post-filter, filter category "H13", is used to filter the clean gas pipeline and provides a filtration efficiency of 99.95 %. The filter can also be retrofitted into the clean gas pipeline. Depending on the size of the overall filter, several filter cassettes are used. Due to the simple construction, the filter cartridges can be replaced quickly. Pressure resistance of the housing: 4,000 Pa. Initial pressure difference at nominal flow 250 Pa. Recommended end pressure difference 500 Pa.



1 x 1		1 x 2		1 x 3		2 x 2		2 x 3	
m³/h	Art. no.	m³/h	Art. no.	m³/h	Art. no.	m³/h	Art. no.	m³/h	Art. no.
3,000	30010200	6,000	30010202	9,000	30010204	16,000	30010206	18,000	30010207
4,000	30010201	8,000	30010203	12,000	30010205	–		24,000	30010208

Volume flow m³/h	Post-filter version	Post-filter pieces	Connection Ø mm	W x H x L mm	Art. no.	Price €
3,000	1	1	300	1,320 x 710 x 710	30010200	2,580.00
4,000	2	1	355	1,320 x 710 x 710	30010201	2,730.00
6,000	1	2	450	1,620 x 1,420 x 710	30010202	4,840.00
8,000	2	2	500	1,620 x 1,420 x 710	30010203	5,240.00
9,000	1	3	560	1,620 x 2,130 x 710	30010204	7,110.00
12,000	2	3	600	1,620 x 2,130 x 710	30010205	7,560.00
16,000	2	4	710	1,820 x 1,420 x 1,420	30010206	9,610.00
18,000	1	6	800	2,020 x 2,130 x 1,420	30010207	13,060.00
24,000	2	6	900	2,020 x 2,130 x 1,420	30010208	13,660.00

12.2 Spare parts

Post-filters (filter class "H13")



Version	W x H x L mm	Art. no.	Price €
1	Air volume flow up to 3,000 m³/h		
	610 x 610 x 292	01000542	550.00
2	Air volume flow up to 4,000 m³/h		
	610 x 610 x 292	01001058	620.00

U-pipe manometer, complete

To display differential pressures of gaseous media (analogue model, i.e. display only)

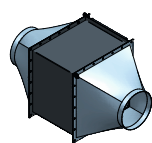
Art. no.	Price €
Range: 0 – 1,000 Pa	93.50

12 Post-filters

12.3 Policing filters

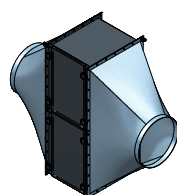
Policing filters (filter class "H14")

ESTA policing filter of filter class "H14" with a degree of separation > 99.995 % are approved per TRGS 560 [German technical rules for hazardous substances] for air recirculation in activities involving hazardous materials (dust and smoke) that are carcinogenic, mutagenic and toxic to reproduction. This applies to welding fumes from chrome-nickel steels, for example. The filter cartridges can be quickly replaced due to their simple construction. Pressure resistance of the housing: 4,000 Pa. . Initial pressure difference at nominal flow 250 Pa. Recommended end pressure difference 500 Pa.



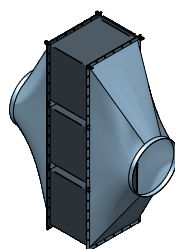
1x1

m³/h	Art. no.
3,000	30010221



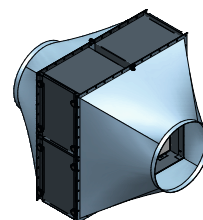
1x2

m³/h	Art. no.
6,000	30010784



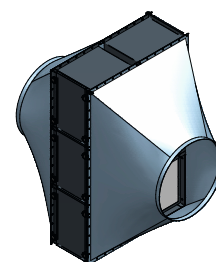
1x3

m³/h	Art. no.
9,000	30010785



2x2

m³/h	Art. no.
12,000	30010786



2x3

m³/h	Art. no.
18,000	30010787

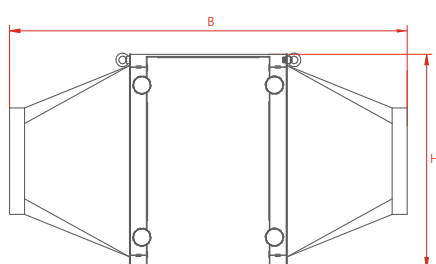
Volume flow m³/h	Policing filter version	Policing filter pieces	Connection Ø mm	W x H x L mm	Art. no.	Price €
3,000	3	1	300	1,320 x 710 x 710	30010221	2,830.00
6,000	3	2	450	1,620 x 1,420 x 710	30010784	5,330.00
9,000	3	3	560	1,620 x 2,130 x 710	30010785	7,840.00
12,000	3	4	710	1,820 x 1,420 x 1,420	30010786	10,590.00
18,000	3	6	800	2,020 x 2,130 x 1,420	30010787	14,520.00

12.4 Spare parts

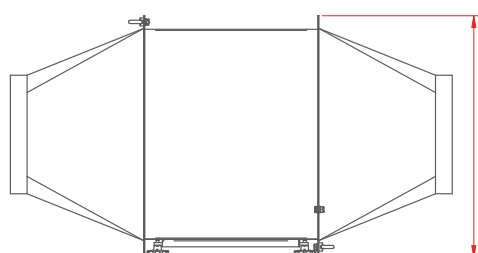
Policing filters (filter class "H14")



Version	W x H x L mm	Art. no.	Price €
3	Air volume flow up to 3,000 m³/h		
	610 x 610 x 292	01001064	780.00



Front view



Plan view

13 Spiral seam pipes

Pipeline systems are connected to the dust or smoke source for optimal flow to the extraction system. ESTA has a comprehensive selection of spiral seam ducts whose robust, premium workmanship and flexibility make them excellent for your specific requirements.

Correct design is important to achieving maximum suction, because a tight network of pipelines ensures an economical system. This is why all ESTA moulded parts have a double-lipped seal. ESTA also has the connectors and fasteners you need.



Central extraction system with spiral seam pipes system in the shoe industry



Application

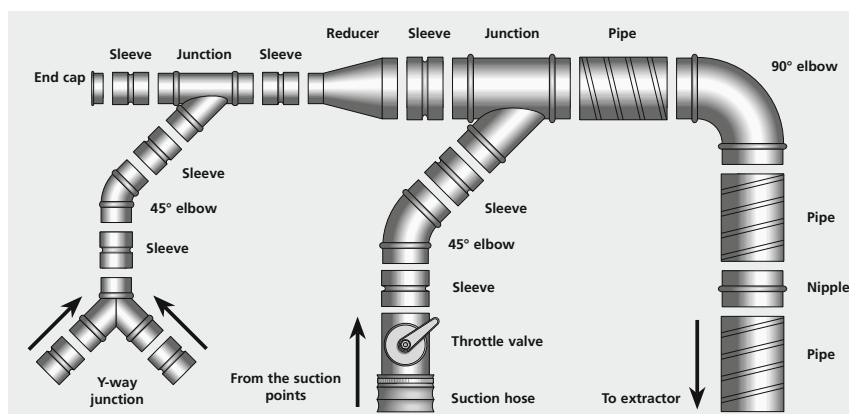
- » For connecting multiple extraction points to a central extraction system

Special features

- » Galvanised sheet steel per DIN EN 12237
- » Standard length up to 6.0 m
- » DN 71 mm – 450 mm in stock*
- » Sheet thicknesses from 0.4 to 1.2 mm depending on nominal pipe sizes

Benefits

- » Extensive range of parts
- » Optimum flow conditions
- » Robust workmanship
- » Simple installation



Connecting pipe between fan and filter system



Exhaust air pipeline with deflector hood



Pipe system as a supply line for central extraction system

13 Spiral seam pipes

13.1 Spiral seam pipes

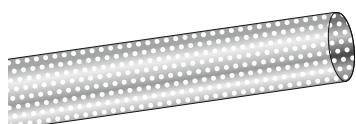


<i>Inner Ø mm</i>	<i>Material thickness mm</i>	<i>Art. no.</i>	<i>Price €</i>
71	0.5	01.070	10.00
80	0.6	01.080	12.10
90	0.6	01.090	15.20
100	0.6	01.100	15.30
112	0.6	01.112	18.80
125	0.6	01.125	19.10
140	0.6	01.140	22.70
150	0.6	01.150	23.50
160	0.6	01.160	24.20
180	0.6	01.180	27.20
200	0.6	01.200	30.00
224	0.6	01.224	33.50
250	0.6	01.250	37.70
280	0.6	01.280	42.10
300	0.6	01.300	44.90

Other nominal diameters on request – prices per metre – manufactured length: 3.0 m

13.2 Perforated pipes

as an air outlet of supply air or filtered exhaust air. The perforated pipe has a plate thickness of 0.6 mm and a free cross-section of 33 %. The spacing of the holes is 3.2 mm.



<i>Inner Ø mm</i>	<i>Material thickness mm</i>	<i>Art. no.</i>	<i>Price €</i>
80	0.5	15015428	88.40
100	0.6	15015429	90.70
112	0.6	15015430	111.00
125	0.6	15008021	113.00
140	0.6	15015431	134.00
150	0.6	15015432	135.00
160	0.6	15015433	136.00
180	0.6	15015434	168.00
200	0.6	15015435	168.00
224	0.6	15007954	173.00
250	0.6	15015436	215.00
280	0.6	15009819	294.00
300	0.6	15015437	299.00
315	0.8	15015438	306.00
355	0.8	15015439	369.00
400	0.8	15015440	405.00
450	0.8	15015441	500.00
500	0.8	15015442	510.00
560	0.8	15015443	680.00
600	0.8	15015444	700.00
630	1.0	15015445	710.00

Prices per metre – manufactured length: 1.0 m

13 Spiral seam pipes

13.3 Formed parts

45° elbow with rubber seal



Outer Ø mm	Art. no.	Price €
71	22.071.7	20.60
80	22.080.7	25.20
100	22.100.7	26.10
112	22.112.7	29.90
125	22.125.7	31.10
140	22.140.7	37.30
150	22.150.7	38.90
160	22.160.7	39.20
180	22.180.7	41.90
200	22.200.7	52.00
224	22.224.7	63.80
250	22.250.7	69.40
280	22.280.7	84.00
300	22.300.7	97.00

Other nominal diameters on request

90° elbow with rubber seal



Outer Ø mm	Art. no.	Price €
71	24.071.7	23.00
80	24.080.7	26.10
100	24.100.7	28.80
112	24.112.7	35.60
125	24.125.7	36.60
140	24.140.7	47.40
150	24.150.7	47.90
160	24.160.7	50.10
180	24.180.7	57.40
200	24.200.7	74.10
224	24.224.7	94.80
250	24.250.7	108.00
280	24.280.7	124.00
300	24.300.7	141.00

Other nominal diameters on request

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

13 Spiral seam pipes

13.3 Formed parts

Sleeves

for connecting formed parts



<i>Inner Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
71	66.071	8.30
80	66.080	8.50
90	66.090	9.30
100	66.100	9.60
112	66.112	9.60
125	66.125	9.60
140	66.140	9.70
150	66.150	9.70
160	66.160	9.70
180	66.180	11.00
200	66.200	11.20
224	66.224	11.90
250	66.250	12.10
280	66.280	12.90
300	66.300	13.40

Other nominal diameters on request

Two-way distributor with rubber seal



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
100 × 71 × 71	94.070.7	92.90
100 × 80 × 80	94.080.7	97.10
100 × 100 × 100	94.100.7	100.10
125 × 80 × 80	94.081.7	120.00
125 × 100 × 100	94.101.7	121.00
125 × 125 × 125	94.025.7	123.00
140 × 100 × 100	94.104.7	123.00
140 × 125 × 125	94.425.7	126.00
140 × 140 × 140	94.140.7	126.00
150 × 100 × 100	94.151.7	129.00
150 × 125 × 125	94.152.7	130.00
150 × 150 × 150	94.150.7	134.00
160 × 100 × 100	94.161.7	134.00
160 × 125 × 125	94.162.7	136.00
160 × 160 × 160	94.160.7	136.00
180 × 125 × 125	94.182.7	136.00
180 × 150 × 150	94.185.7	150.00
180 × 180 × 180	94.118.7	159.00

13 Spiral seam pipes

13.3 Formed parts

Two-way distributor with rubber seal



Outer Ø mm	Art. no.	Price €
200 × 140 × 140	94.240.7	164.00
200 × 180 × 180	94.218.7	173.00
200 × 200 × 200	94.200.7	186.00

Other nominal diameters on request

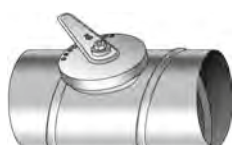
Nipple with rubber seal for connecting pipes



Outer Ø mm	Art. no.	Price €
71	65.071.7	9.10
80	65.080.7	15.30
90	65.090.7	15.30
100	65.100.7	14.60
112	65.112.7	16.00
125	65.125.7	16.00
140	65.140.7	18.20
150	65.150.7	18.20
160	65.160.7	18.60
180	65.180.7	19.50
200	65.200.7	23.40
224	65.224.7	23.80
250	65.250.7	24.80
280	65.280.7	25.80
300	65.300.7	32.40

Other nominal diameters on request

Throttle valves



Outer Ø mm	Art. no.	Price €
80	230.080.7	59.40
100	230.100.7	61.10
112	230.112.7	69.80
125	230.125.7	71.60
140	230.140.7	75.90
150	230.150.7	77.20
160	230.160.7	77.90
180	230.180.7	78.60
200	230.200.7	84.50
224	230.224.7	86.10

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

13 Spiral seam pipes

13.3 Formed parts

Throttle valves (continued)



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
250	230.250.7	98,20
280	230.280.7	108,00
300	230.300.7	121,00

More nominal diameters on request

Shut-off valves



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
100	220.100.7	143,00
125	220.125.7	149,00
140	220.140.7	160,00
150	220.150.7	160,00
160	220.160.7	165,00
180	220.180.7	165,00
200	220.200.7	180,00
224	220.224.7	180,00
250	220.250.7	182,00
300	220.300.7	225,00

More nominal diameters on request

Reducers with rubber seal



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
80/ 63	37.080.063	36.30
100/ 63	37.100.063	24.40
100/ 80	37.100.080	24.40
112/ 80	37.112.080	40.80
112/100	37.112.100	40.80
125/ 63	37.125.063	40.80
125/ 80	37.125.080	25.20
125/100	37.125.100	25.20
125/112	37.125.112	40.80
140/ 80	37.140.080	43.90
140/100	37.140.100	43.90

13 Spiral seam pipes

13.3 Formed parts



Reducers with rubber seal (continued)

<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
140/112	37.140.112	43.90
140/125	37.140.125	43.90
150/ 80	37.150.080	44.50
150/100	37.150.100	44.50
150/112	37.150.112	44.50
150/125	37.150.125	44.50
150/140	37.150.140	44.50
160/ 80	37.160.080	27.80
160/100	37.160.100	27.80
160/112	37.160.112	44.50
160/125	37.160.125	27.90
160/140	37.160.140	45.70
160/ 150	37.160.150	45.70
180/ 80	37.180.080	48.40
180/100	37.180.100	48.40
180/112	37.180.112	48.40
180/125	37.180.125	48.40
180/140	37.180.140	49.40
180/150	37.180.150	49.40
180/160	37.180.160	49.40
200/ 80	37.200.080	53.00
200/100	37.200.100	53.00
200/112	37.200.112	53.00
200/125	37.200.125	53.00
200/140	37.200.140	53.80
200/150	37.200.150	53.80
200/160	37.200.160	53.80
200/180	37.200.180	53.80
224/100	37.224.100	56.00
224/112	37.224.112	56.00
224/125	37.224.125	56.80
224/140	37.224.140	56.80
224/150	37.224.150	56.80
224/160	37.224.160	56.80
224/180	37.224.180	56.80
224/200	37.224.200	58.80
250/100	37.250.100	58.80
250/112	37.250.112	58.80
250/125	37.250.125	59.40
250/140	37.250.140	59.40
250/150	37.250.150	59.40

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

13 Spiral seam pipes

13.3 Formed parts

Reducers with rubber seal (continued)



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
250/160	37.250.160	61.40
250/180	37.250.180	61.40
250/200	37.250.200	61.40
250/224	37.250.224	61.40
280/112	37.280.112	64.90
280/125	37.280.125	64.90
280/140	37.280.140	66.20
280/150	37.280.150	66.20
280/160	37.280.160	66.20
280/180	37.280.180	66.20
280/200	37.280.200	66.20
280/224	37.280.224	66.20
280/250	37.280.250	66.20
300/125	37.300.125	68.50
300/140	37.300.140	69.60
300/150	37.300.150	69.60
300/160	37.300.160	69.60
300/180	37.300.180	69.60
300/200	37.300.200	72.50
300/224	37.300.224	72.50
300/250	37.300.250	73.40
300/280	37.300.280	73.40
400/300	37.400.300	106.00

Branches with rubber seal



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
80/ 71	57.080.071	48.10
80/ 80	57.080.080	50.60
100/ 71	57.100.071	49.90
100/ 80	57.100.080	52.50
100/ 90	57.100.090	52.60
100/100	57.100.100	53.20
112/ 71	57.112.071	50.60
112/ 80	57.112.080	53.20
112/ 90	57.112.090	54.30
112/100	57.112.100	56.80
112/112	57.112.112	59.40

13 Spiral seam pipes

13.3 Formed parts

Branches with rubber seal (continued)



Outer Ø mm	Art. no.	Price €
125/ 71	57.125.071	50.60
125/ 80	57.125.080	53.20
125/ 90	57.125.090	54.30
125/100	57.125.100	56.80
125/112	57.125.112	46.70
125/125	57.125.125	46.70
140/ 71	57.140.071	58.90
140/ 80	57.140.080	61.10
140/ 90	57.140.090	61.60
140/100	57.140.100	62.80
140/112	57.140.112	62.80
140/125	57.140.125	63.80
140/140	57.140.140	65.60
150/ 71	57.150.071	58.90
150/ 80	57.150.080	61.10
150/ 90	57.150.090	61.60
150/100	57.150.100	62.80
150/112	57.150.112	62.80
150/125	57.150.125	63.80
150/140	57.150.140	65.60
150/150	57.150.150	69.12
160/ 80	57.160.080	62.80
160/ 90	57.160.090	64.10
160/100	57.160.100	64.60
160/112	57.160.112	66.40
160/125	57.160.125	67.10
160/140	57.160.140	70.70
160/150	57.160.150	77.70
160/160	57.160.160	85.50
180/ 80	57.180.080	64.60
180/ 90	57.180.090	65.30
180/100	57.180.100	67.10
180/112	57.180.112	68.10
180/125	57.180.125	70.80
180/140	57.180.140	76.80
180/150	57.180.150	81.20
180/160	57.180.160	89.00
180/180	57.180.180	95.00
200/ 80	57.200.080	70.80
200/ 90	57.200.090	72.30
200/100	57.200.100	75.00

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

13 Spiral seam pipes

13.3 Formed parts

Branches with rubber seal (continued)



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
200/112	57.200.112	76.80
200/125	57.200.125	80.30
200/140	57.200.140	81.90
200/150	57.200.150	86.10
200/160	57.200.160	93.10
200/180	57.200.180	99.50
200/200	57.200.200	113.00
224/ 90	57.224.090	76.80
224/100	57.224.100	80.30
224/112	57.224.112	81.20
224/125	57.224.125	83.70
224/140	57.224.140	85.50
224/150	57.224.150	88.20
224/160	57.224.160	95.80
224/180	57.224.180	100.20
224/200	57.224.200	103.50
224/224	57.224.224	108.00
250/100	57.250.100	81.90
250/112	57.250.112	84.50
250/125	57.250.125	85.50
250/140	57.250.140	87.40
250/150	57.250.150	89.80
250/160	57.250.160	99.50
250/180	57.250.180	102.10
250/200	57.250.200	106.00
250/224	57.250.224	111.00
250/250	57.250.250	121.00
280/112	57.280.112	86.10
280/125	57.280.125	87.40
280/140	57.280.140	89.80
280/150	57.280.150	93.10
280/160	57.280.160	102.10
280/180	57.280.180	107.00
280/200	57.280.200	111.00
280/224	57.280.224	115.00
280/250	57.280.250	123.00
280/280	57.280.280	131.00
300/125	57.300.125	106.00
300/140	57.300.140	107.00
300/150	57.300.150	108.00
300/160	57.300.160	112.00

13 Spiral seam pipes

13.3 Formed parts

Branches with rubber seal (continued)



Outer Ø mm	Art. no.	Price €
300/180	57.300.180	117.00
300/200	57.300.200	124.00
300/224	57.300.224	126.00
300/250	57.300.250	133.00
300/280	57.300.280	140.00
300/300	57.300.300	152.00
400/150	57.400.150	153.00
400/300	57.400.300	203.00

End cap

suitable for formed parts with outer Ø



Outer Ø mm	Art. no.	Price €
71	69.071	9.90
80	69.080	10.00
90	69.090	11.00
100	69.100	11.20
112	69.112	13.00
125	69.125	13.00
140	69.140	13.10
150	69.150	13.10
160	69.160	15.20
180	69.180	15.90
200	69.200	16.30
224	69.224	18.00
250	69.250	19.80
280	69.280	27.80
300	69.300	29.60

Other nominal diameters on request

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

13 Spiral seam pipes

13.3 Formed parts

End cap with rubber seal

suitable for pipes with inner Ø



<i>Inner Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
80	67.080	13.00
100	67.100	14.00
112	67.112	16.00
125	67.125	16.00
140	67.140	18.30
150	67.150	18.30
160	67.160	19.20
180	67.180	19.70
200	67.200	22.20
224	67.224	23.70
250	67.250	26.00
280	67.280	29.30
300	67.300	34.20

Other nominal diameters on request

Exhaust vent, 45°

with bird protection grille



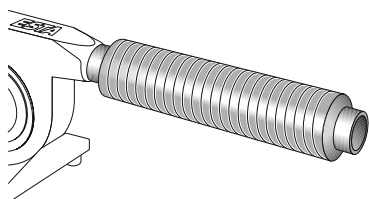
<i>Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
100	88.100	82.80
112	88.112	89.00
125	88.125	89.00
140	88.140	96.70
150	88.150	96.70
160	88.160	101.20
180	88.180	106.00
200	88.200	112.00
224	88.224	118.00
250	88.250	129.00
280	88.280	152.00
300	88.300	165.00

13 Spiral seam pipes

13.4 Sound muffler

Duct silencer – flexible

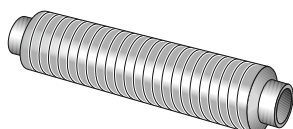
for extractor fans RG 100 to RG 800



Outer Ø mm	Art. no.	Price €
100	30.000.702	119.00
150	30.000.703	149.00
180	30.000.704	197.00
224	30.000.705	280.00
250	30.000.706	305.00
280	30.000.707	354.00
315	30.000.708	420.00
355	30.000.709	470.00

Duct silencer

with 100 mm insulation, length 1,200 mm



Outer Ø mm	Art. no.	Price €
250	15.003.137	470.00
280	15.001.860	357.00
300	15.003.141	357.00
315	15.003.143	357.00
355	15.003.145	470.00

13.5 Shutters

Electrical gate valves

230 Volt



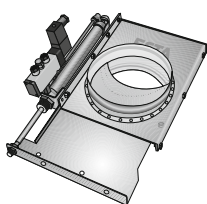
Outer Ø mm	Art. no.	Price €
80	250.080	700.00
100	250.100	715.00
125	250.125	720.00
140	250.140	730.00
160	250.160	840.00

13 Spiral seam pipes

13.5 Shutters

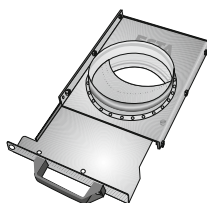
Pneumatic gate valves

230 Volt with compressed air



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
80	210.080	412.00
100	210.100	420.00
112	210.112	430.00
125	210.125	450.00
140	210.140	460.00
150	210.150	460.00
160	210.160	470.00
180	210.180	500.00
200	210.200	530.00
224	210.224	710.00
250	210.250	720.00
280	210.280	760.00
300	210.300	800.00
315	210.315	880.00
355	210.355	960.00
400	210.400	970.00

Shutters with rubber seal – manual



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
80	200.080	127.00
100	200.100	128.00
112	200.112	131.00
125	200.125	144.00
140	200.140	151.00
150	200.150	159.00
160	200.160	167.00
180	200.180	198.00
200	200.200	202.00
224	200.224	235.00
250	200.250	258.00
280	200.280	301.00
300	200.300	311.00
315	200.315	319.00
355	200.355	395.00
400	200.400	417.00

13 Spiral seam pipes

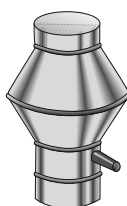
13.6 Hoods

Roof hoods



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
100	86.100.7	157.00
112	86.112.7	163.00
125	86.125.7	163.00
140	86.140.7	176.00
150	86.150.7	176.00
160	86.160.7	176.00
180	86.180.7	192.00
200	86.200.7	223.00
224	86.224.7	230.00
250	86.250.7	235.00
280	86.280.7	253.00
300	86.300.7	267.00

Deflector hoods



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
100	87.100.7	250.00
112	87.112.7	250.00
125	87.125.7	250.00
140	87.140.7	289.00
150	87.150.7	289.00
160	87.160.7	289.00
180	87.180.7	361.00
200	87.200.7	361.00
224	87.224.7	391.00
250	87.250.7	391.00
280	87.280.7	391.00
300	87.300.7	391.00

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

13 Spiral seam pipes

13.7 Fixing material

Special fastening clamp with threaded rod



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
80	30.000.873	24.80
100	30.000.874	26.00
112	30.000.875	27.40
125	30.000.876	28.80
140	30.000.877	30.20
150	30.000.878	31.50
160	30.000.879	32.80
180	30.000.880	34.20
200	30.000.881	35.60
250	30.000.882	37.00
280	30.000.883	38.30
300	30.000.884	39.60
350	30.000.885	41.00

Other nominal diameters on request

Adhesive sealing tape for pipeline connections

Width: 50 mm / length: 20 m



	<i>Art. no.</i>	<i>Price €</i>
1 roll	600.050	20.10

14 Steel pipes

Unlike spiral seam pipes, steel pipes are ideal for use in extraction systems with high vacuum. Whether formed parts, gate valves or flap valves, ESTA offers a broad product range of customer-rolled steel pipes. The precisely matched tubular pipe components make air leakage virtually impossible. The robust workmanship and the optimum flow conditions ensure maximum performance of your extraction system.



Steel pipe system of a central extraction system in the tobacco industry



ESTA steel pipes are electro-galvanised and meet the most stringent demands

ESTA PLUS

Application

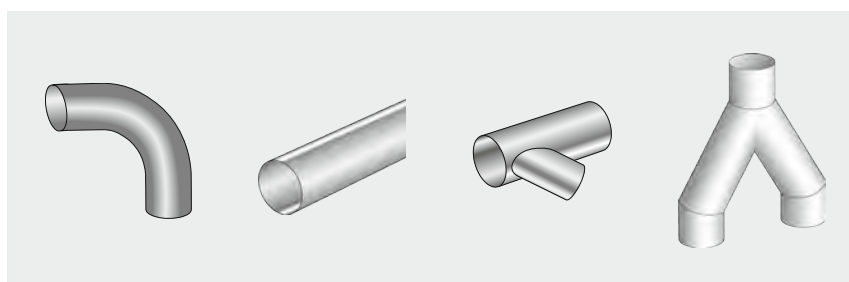
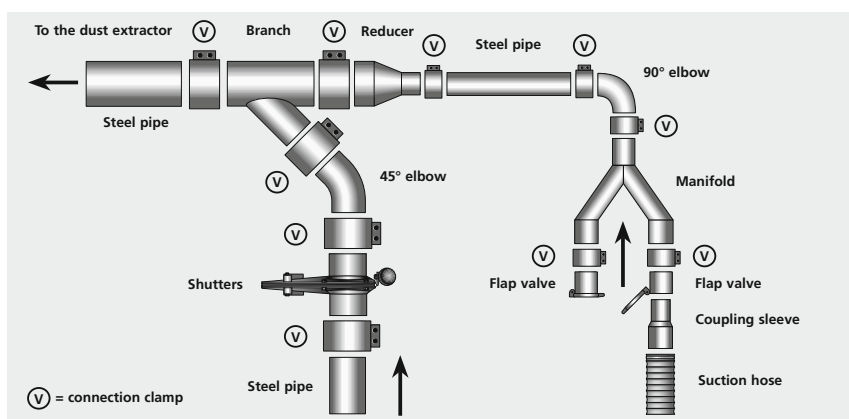
- » For connecting several suction points to a central high vacuum extraction system

Special features

- » Standard length up to 6.0 m
- » The following outer nominal diameters are available in stock:
 - Ø 50 × 1.5 mm
 - Ø 76 × 1.5 mm
 - Ø 108 × 2.0 mm
 - Ø 133 × 2.9 mm
 - Ø 159 × 2.9 mm

Benefits

- » Extensive range of parts
- » Optimum flow conditions
- » Robust workmanship
- » Quick and easy installation



Formed parts made of steel pipe

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

14 Steel pipes

14.1 Steel pipes

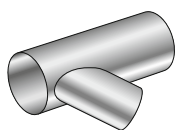


Steel pipes

<i>Outer Ø mm</i>	<i>Material thickness mm</i>	<i>Art. no.</i>	<i>Price €</i>
50	1.5	11.050	19.30
76	1.5	11.076	50.20
108	2.0	11.108	71.80
133	2.9	11.133	85.40
159	2.9	11.159	95.40

Prices per metre – manufactured length 6.0 m

14.2 Formed parts



45° branch

<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
50/ 50/ 50	64.050.050	57.20
76/ 76/ 50	64.076.050	60.30
76/ 76/ 76	64.076.076	76.90
108/108/ 50	64.108.050	81.50
108/108/ 76	64.108.076	84.80
108/108/108	64.108.108	113.00
133/133/ 50	64.133.050	148.00
133/133/ 76	64.133.076	159.00
133/133/108	64.133.108	214.00
133/133/133	64.133.133	248.00
159/159/ 50	64.159.050	155.00
159/159/ 76	64.159.076	170.00
159/159/108	64.159.108	179.00
159/159/133	64.159.133	225.00
159/159/159	64.159.159	200.00

90° elbow

with leg extension



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
50	34.050	47.80
76	34.076	50.30
108	34.108	144.00
133	34.133	341.00
159	34.159	358.00

14 Steel pipes

14.2 Formed parts

45° elbow with leg extension



Outer Ø mm	Art. no.	Price €
50	32.050	45.20
76	32.076	48.60
108	32.108	110.00
133	32.133	206.00
159	32.159	165.00

Manifold



Outer Ø mm	Art. no.	Price €
50/ 50/ 50	97.250	58.50
76/ 50/ 50	97.050	94.10
76/ 76/ 76	97.276	101.30
108/ 76/ 76	97.076	163.00
108/108/108	97.108	194.00
133/108/108	97.132	277.00
133/133/133	97.133	315.00
159/108/108	97.158	333.00
159/159/159	97.159	362.00

Reducers



Outer Ø mm	Art. no.	Price €
76/ 50	45.076.050	34.50
108/ 50	45.108.050	41.20
108/ 76	45.108.076	44.40
108/100	45.108.100	54.50
133/ 50	45.133.050	69.10
133/ 76	45.133.076	64.40
133/108	45.133.108	68.50
159/ 76	45.159.076	58.50
159/108	45.159.108	64.30
159/133	45.159.133	71.70

Extraction arms

Extraction hoods

Welding helmets

Protective walls
Curtains / Lamellas

Extraction cabins

Slotted suction
channels

Extraction
accessories

Extraction hoses

Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

Spiral seam pipes/
steel pipes

14 Steel pipes

14.2 Formed parts

Connection clamps

for pipes and formed parts



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
50	611.050	20.20
76	611.076	23.60
108	611.108	27.00
133	611.133	37.80
159	611.159	40.40

14.3 Shutters

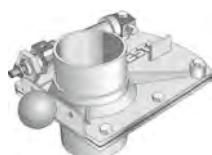
Shutters, manual



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
50	270.050	184.00
76	270.076	222.00
108	270.108	381.00
159	270.159	400.00

Shutters, pneumatic

230 Volt with compressed air



<i>Outer Ø mm</i>	<i>Art. no.</i>	<i>Price €</i>
50	271.050	570.00
76	271.076	590.00
108	271.108	670.00
159	271.159	910.00

14 Steel pipes

14.4 Flap valves

Flap valve

for connecting a suction hose



Outer Ø mm	Art. no.	Price €
50 / 50	260.050	90.80
50 / 76	260.076	92.70
70 / 76	262.070	104.80

Flap valve with integrated microswitch

for switching the extraction system on/off (corresponding control cabinet required)



Outer Ø mm	Art. no.	Price €
50 / 50	261.050	173.00
50 / 76	261.076	175.00
70 / 76	263.070	187.00

Coupling sleeves

for suction hose



Outer Ø mm	Art. no.	Price €
38	60.038	20.60
50	60.050	21.80

Special versions

All steel pipes are also available in stainless steel. Suitable extraction accessories can be found from page 35 onwards. Other accessories on request.

If you have any questions, we are happy to help.

Extraction arms

Extraction hoods

Welding helmets

 Protective walls
Curtains / Lamellas

Extraction cabins

 Slotted suction
channels

 Extraction
accessories

Extraction hoses

 Pre-separators for
extraction systems

Discharge systems

Safety systems

Post-filters

 Spiral seam pipes/
steel pipes

15 ESTA Service – Filter cleaning



Before | After

- ✓ **Effective**
- ✓ **Ecofriendly**
- ✓ **Affordable**



As of now, ESTA filter cartridges can be regenerated easily and within a very short time.

Using ultrasound, the special ESTA process thoroughly cleans the filter material of adhering dirt particles in an environmentally friendly way – without compromising on filter performance and separation efficiency.

Impressive filter technology impresses!

Application

- » Filter cartridges for the separation of dust and welding fumes*

Special features

- » Pre-cleaning
- » Visual inspection by ESTA specialists
- » Ultrasonic cleaning
- » Rinsing
- » Drying
- » ESTA final inspection

Benefits

- » Extension of the service life of the filter cartridges by up to 10 times
- » Reduction of the spare parts costs by up to 50 %
- » Filter performance same as new cartridges
- » Careful testing and cleaning by ESTA specialists
- » Your active contribution to environmental protection without sacrificing performance and separation efficiency
- » Multiple filter cleaning possible

Ultrasonic filter cleaning

ESTA cleans your filter using ultrasound that propagates in the form of longitudinal waves in the water. These vibrations cause so-called cavitation bubbles that implode and result in high localised pressures and currents, thereby effectively releasing the dirt from the filter material.

The optimum interaction of ultrasound, temperature and detergents enables effective cleaning of the ESTA filter cartridges up to new filter quality – filters from other manufacturers can also be regenerated easily by using this method.



Filter elements of the ESTA FILTOWER-F and DUSTMAC F welding fume filter systems can be regenerated repeatedly and at low cost

* Ultrasonic cleaning can only be carried out for washable filter cartridges.

ESTA Maintenance Service - *Think about tomorrow today!*

ESTA maintenance service offers these advantages!

- Inspection of your extraction system by an experienced and well-trained ESTA team of service technicians
- Assurance of optimum functionality and performance of your extraction devices & systems, even many years after initial commissioning
- Minimising the risk of a loss in productivity
- Reducing the risk of expensive repair costs
- Maintaining the value of your system
- Regulatory compliance
- Detailed maintenance documentation to demonstrate compliance with legal requirements
- Short response times
- Reducing the workload for in-house service staff
- Permanent cleanliness of the workplaces

Service telephone +49 (0) 7307 804-831

Online support www.esta.com/kontakt

Office hours

Monday to Thursday 8 am to 5 pm

Friday 8 am to 4 pm



ESTA maintenance contract – Your service bonus!

Enjoy even more benefits from the comprehensive range of services with an **ESTA maintenance contract** – so that you can concentrate fully on your production and keep track of your maintenance costs.

- Service provided at a fixed price – regardless of workload and time
- Prioritised appointments
- Reminder service for your individual maintenance interval



For maintenance, service and installation requests that are more urgent than usual. Ask for our express service by telephone at **+49 (0) 7307 804-830**.

NEW

ALX extraction arm



Ideal for

Dust

Fumes

Chippings

Welding fumes

Areas of application

- » Direct connection to extraction systems and devices
- » Flexible and precise capture of dust, vapours and welding fumes
- » Price-friendly solution for all standard applications in the manufacturing industry



Special features

- » External support structure
- » Absolutely maintenance-free
- » Robust designs
- » Gas pressure springs for ease of movement

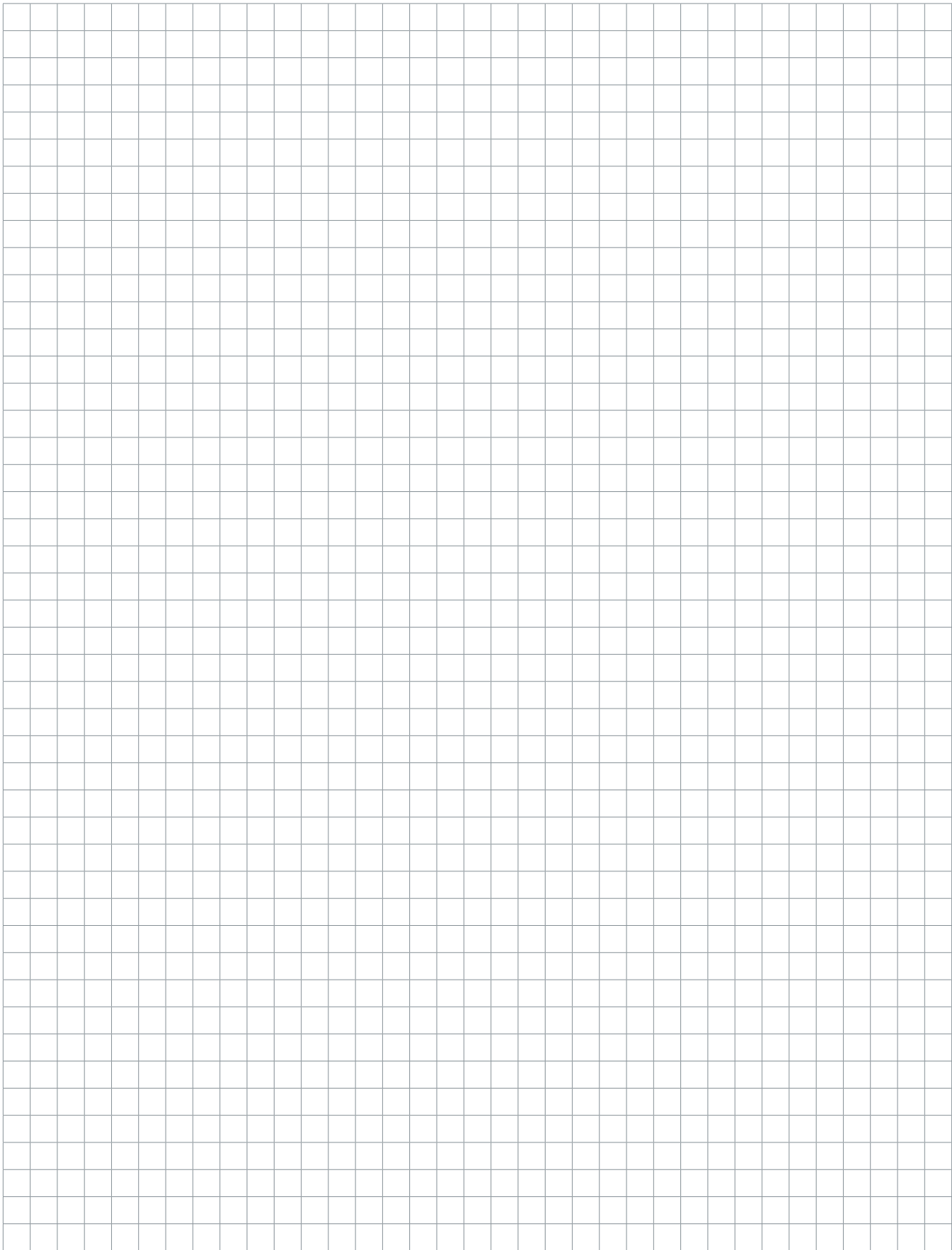
Benefits

- » Greater capture zone
- » High flexibility
- » Easy handling
- » Precision capturing



This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.

Notes



This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.

General Terms and Conditions

1. General information

- 1.1 These General Terms and Conditions (GTC) apply to all quotations submitted by ESTA and contracts entered into with ESTA. Our GTCs also apply to all future business transactions. For those transactions with consumers, however, only if they are identical with this business transaction.
- 1.2 These GTCs apply exclusively. The terms and conditions of the customer or other deviating agreements shall apply only insofar as ESTA has agreed to them expressly and in writing. Furthermore, ESTA hereby expressly vetoes the inclusion of the business conditions or other deviating agreements of the customer.
- 1.3 For the legal relationships of the parties, German law applies exclusively excluding the principles of conflict of laws of private international law and with the exception of the UN Convention on Contracts for the International Sale of Goods (CISG).
- 1.4 Where these GTCs use terms which are also used by the consumer/contractor, the legal definitions laid down in §§ 13/14 German Civil Code shall apply.

2. Quotations and Conclusions of Contracts

- 2.1 The quotations from ESTA are non-binding and subject to confirmation. ESTA shall be bound to especially developed quotations for thirty (30) calendar days. Prior to acceptance by the customer, ESTA can retract these quotations at any time.
- 2.2 A contract is concluded at the written request of the customer (order) as soon as acceptance by ESTA of the request is confirmed in writing (order confirmation) or by delivery of the ordered goods or fulfillment of the service owed. The order of the customer is binding for the customer until it is accepted or rejected by ESTA, but for a maximum period of three weeks. This period begins from the point in time when the order is received by ESTA.
- 2.3 The information in our catalogues, brochures, circulars, advertisements, illustrations and price lists concerning the performance, dimensions, weights, price, etc. is non-binding unless it has been expressly specified as part of the contract.
- 2.4 Documents that are part of a quotation such as illustrations, drawings, weights and dimensional information are deemed as only approximate unless they have been expressly declared as binding. ESTA reserves the right to amend the order provided this does not change the delivery object and its appearance significantly. ESTA retains ownership and rights for cost estimates, drawings and other documentation; furthermore, they must not be made accessible to third parties. ESTA is obligated to obtain the contractual partner's approval to show plans that are designated as confidential to third parties.

3. Content of the contract

- 3.1 For the extent and method of services to be provided, the information specified in the order confirmation from ESTA applies and if no order confirmation has been issued, the information provided in quotations from ESTA is authoritative.
- 3.2 ESTA reserves the right to make changes to the design and form with regard to execution of the order as long as this does not change the delivery object and its appearance significantly.

4. Prices, terms of payment and default in payment

- 4.1 Unless agreed otherwise, the list prices valid on the day of conclusion of the contract are applicable ex-works (ESTA main premises), plus value added tax (VAT), but not including packaging, transportation, insurance, customs duties and unloading, provided the delivery of the goods and/or services owed is to be made within four months after the conclusion of the contract. Otherwise the list prices valid at the time of fulfillment of the contract are applicable. In the event of actual later delivery and/or performance of services, the prices that are valid on the day of delivery are applicable if the delivery/performance of services is made more than four months later for reasons that are the customer's responsibility.
- 4.2 If a fixed price has been agreed with a contractor, ESTA reserves the right to add any increase in labour or material costs that has been incurred in the period of the contract was concluded and delivery is made/services are performed. If the price increase amounts to more than four percent, the customer can withdraw from the contract by written notice within two weeks from receipt of notification of the price increase.
- 4.3 The receivables for ESTA are due in full on delivery of the goods/unload approval of the services performed. The customer will be in default at the latest 14 days after the due date of our receivables without further notice from ESTA.
- 4.4 Unless otherwise agreed, payment must be made without any deductions and free of charges to an account of ESTA. Payments are to be made as follows: A down payment of 1/3 after receipt of order confirmation, 1/3 after the customer has been informed that the main items are ready for shipment or that the services can be performed, and the remaining balance as specified in section 4.3.
- 4.5 Cheques, bills of exchange and other methods of payment will only be accepted by special agreement and solely as conditional payment.
- 4.6 The assignment of claims against ESTA is only permissible following the prior written consent of ESTA.
- 4.7 The customer does not have the right of retention per § 273 of the German Civil Code insofar as the claims are not undisputed or legally established. In the event that the customer is a consumer, this applies only insofar as it concerns a right of retention that is not based on the same legal relationship.
- 4.8 For contracts with contractors, the right to object if the contract is not fulfilled (§ 320 German Civil Code) is furthermore excluded.
- 4.9 If after conclusion of the contract, the economic conditions of the customer change in a way where the claims of ESTA do not seem to be sufficiently secured, ESTA can demand a further advance payment or other form of security. If the customer refuses this, ESTA reserves the right to withdraw from the contract after a period of grace of fourteen days has passed without result.

5. Delivery time, default and partial deliveries

- 5.1 Specified deadlines for the delivery of shipments or services to be performed are non-binding. Deviating arrangements must be agreed upon explicitly and in writing between the parties. In this case, the deadline commences with receipt of the order confirmation, however not before the customer has submitted the required documents, permits, releases and not before any agreed down-payment. The deadline is met if, before expiry of the time limit, the delivery object has left the factory or if ESTA has performed the agreed services or if the delivery objects are ready for shipment and ESTA has informed the customer of this fact. In the event of subsequent changes to the delivery object, the delivery deadline will be extended accordingly.
- 5.2 If a definite deadline has been agreed with contractors for the delivery, exceeding this deadline represents a default in delivery only after a reminder and a period of grace of at least two weeks given to ESTA has passed without any results. The customer can only withdraw from the contract or claim damages in lieu of fulfillment after a delay in delivery has occurred and after a reasonable period of grace has expired without result.
- 5.3 In the event of unforeseen circumstances that are beyond ESTA's control, such as disruption of business operations, strikes, lockouts, complete or partial closures of a supplier company, for whatever reasons, in the event of regulatory actions as well as in all other cases of force majeure, the delivery deadline will be postponed for the duration of the interruption and the elimination of its effects on the company's operations. This also applies if these circumstances occur at a supplier or subcontractor of ESTA.
- 5.4 In the event of a delivery to a contractor, if ESTA can prove that despite careful selection of its suppliers and in spite of concluding the necessary contracts concerning appropriate terms, ESTA cannot receive deliveries from the suppliers on time, the delivery deadline will be extended by the period of the delay caused by the late deliveries from the suppliers. If it is impossible for the supplier to deliver, ESTA reserves the right to withdraw from the contract.
- 5.5 Exceeding the delivery deadline does not entitle the customer to refuse acceptance.
- 5.6 Partial deliveries are permissible insofar as the customer can be reasonably expected to accept them.
- 5.7 The customer bears the costs of shipping from the ESTA branch site unless they exceed a reasonable proportion of the value of the delivery object. Unless otherwise agreed, ESTA will select packaging and shipping at its discretion. Insurance against transport damage of any kind is only undertaken at the express wish of the customer and the cost of the amount spent will be invoiced to the customer.

6. Transfer of risk

- 6.1 The risk passes to the customer after the delivery object has left the factory. This also applies if partial deliveries are made or if ESTA has assumed other services, e.g. freight charges or delivery and set-up. If there is to be an acceptance test, this will be authoritative for the transfer of risk. It must be performed immediately on the acceptance date, or alternatively after notification regarding completion has been received.

- 6.2 If the delivery object is ready for shipment and shipping is delayed for reasons that are the responsibility of the customer, the risk passes to the customer with the receipt of the notification that the object is ready for shipment.

- 6.3 Delivered objects are to be accepted by the customer, even if they have insignificant defects, regardless of the rights of section 11.

7. Default of acceptance

- 7.1 The customer is in default of acceptance of the delivery/service to be performed by ESTA when ESTA notifies them in writing of the readiness to ship or to perform the service and the customer refuses the delivery or performance of the service and/or, despite an express request to accept delivery/performance of the service, they do not confirm their consent to acceptance within three days after receipt of the written request. Otherwise the statutory provisions concerning default of the creditor apply.
- 7.2 If the customer is in default of acceptance, they must pay 0.25 % of the net order amount for each week started up to a maximum of 5 % for storage costs. The proof of greater loss is the responsibility of ESTA. The right of the customer to submit proof to ESTA of lower storage costs also remains unaffected.

- 7.3 If after the occurrence of the default, the customer has delayed the acceptance of the delivery object for more than one week, ESTA reserves the right to dispose of the delivery object otherwise and to provide an equal item in fulfillment of the contract within four weeks from the date of its disposal. The continuance of the due date of the purchase price and any interest on arrears remains unaffected. In this event, the customer must pay the purchase price in advance after the due date with the consequence of the exclusions of the right to object if the contract is not fulfilled.

8. Claims for damages against the customer

- 8.1 In all cases of claims for damages against the customer, instead of the performance of the delivery or service, ESTA can dispose freely of the delivery object.
- 8.2 Within the scope of the dissolution of this claim for damages, ESTA reserves the right to claim 20 % of the net order total as general compensation for ESTAs lost profit without any requirements of proof. The right to claim any additional damages remains unaffected. The right of the customer to provide proof to ESTA of a lesser damage remains unaffected.

9. Retention of title

- 9.1 ESTA retains ownership of all objects that are delivered by ESTA until the payment of all monetary receivables existing in connection with the delivery object resulting from the contract have been received. If the customer is a contractor, ESTA retains title of the goods until all payments resulting from the business relationship with the customer have been received.
- 9.2 Unless otherwise stated below, the customer cannot resell the delivery object before the full purchase price has been paid. If it is part of the normal business operations of the customer to resell the items delivered by ESTA to third parties, the customer has the right to resell the goods in the normal conduct of business. In the event of the permissible or non-permissible sale of the delivery object, the customer now assigns us all receivables in the amount of the respective invoice amount (including value added tax) resulting from the sale to their customers or third parties independent of the fact of whether or not the delivery object has been processed further prior to the sale. The customer is entitled to collect these accounts receivable after they have been assigned. ESTAs authorisation to collect the receivable ourselves remains unaffected by this. Nevertheless, ESTA promises not to collect the receivable ourselves as long as the customer resells the delivery object with authorisation and meets his payment obligations to ESTA in a timely manner, especially without payment default.
- 9.3 If the customer breaches the contract, especially through default in payment, ESTA has the right to repossess the delivery objects. The customer is obligated to surrender the goods. If the customer is a consumer, ESTA first sets a deadline and notifies withdrawal when it expires. If the customer is a contractor, the repossession of the delivery object by ESTA does not constitute withdrawal from the contract unless ESTA has expressly stated this in writing. In cases where the items have been resold to third parties, the customer is obligated to inform ESTA of their receivables and their debtors including all information that is required to collect the receivables, to hand over the associated documents to ESTA and to inform the debtor of the customer of the cessation.

- 9.4 If after payments or other third party claims concerning the delivery object, the customer must notify ESTA immediately in writing and forward all necessary documents for an intervention to ESTA.

- 9.5 Until the final transfer of ownership, the customer is obligated to insure the delivery object sufficiently against theft, breakage, fire and water damage at their own expense. Corresponding proof of insurance must be presented to ESTA on request.

- 9.6 With regard to the utilisation of the goods subject to retention of title and receivables assigned to us, the following applies: ESTA is authorised to utilise the released items subject to retention of title to the best of its judgement and in particular to sell them at their own discretion. The proceeds of disposal of the goods less the incurred expenses will be applied against the outstanding receivables of the purchase. Any surplus will be paid out to the customer. ESTA can collect receivables assigned to ESTA directly from the buyer of the customer. The collected receivables less any incurred expenses will be applied against the purchase price, any and any surplus will be paid out to the customer.
- 9.7 Insofar as the possible value of all security interests assigned to ESTA exceeds the value of all secured receivables by more than 10 %, ESTA will release the portion of the security interests in excess of the value of the receivables. ESTA reserves the right to choose the security interests that are to be released.

10. Withdrawal

- 10.1 The customer can only withdraw from the contract in accordance with legal provisions if ESTA is responsible for the breach of duty. If there are breaches, and after being requested by ESTA, the customer must explain within a reasonable time whether they will withdraw because of the breach of the contract or insist on delivery.
- 10.2 In the event of defects, the statutory provisions on withdrawal shall apply however.

11. Rights accruing from defects

- 11.1 If the customer is a contractor, claims for defects do not apply in the event of any negligible deviation from the agreed quality or in the event of only negligible impairment of usability.
- 11.2 Defects that are so obvious that they are apparent even to a non-expert customer without close inspection must be reported to ESTA in writing within a period of grace of 7 days after delivery or acceptance. It is sufficient to send the written notification within the time limit. The defects must be described in as much detail as possible. If the customer is a contractor, § 377 of the German Commercial Code applies exclusively.
- 11.3 Otherwise defects must be reported to ESTA in writing without undue delay and giving a detailed description of the problem.
- 11.4 If provided for by law, in the event of a defect ESTA has the choice of supplementary performance by delivering or manufacturing a new item or eliminating the defect. If, within the scope of the statutory rights arising from defects, ESTA chooses supplementary performance, all exchanged parts become the property of ESTA.
- 11.5 For carrying out all reworking or substitute deliveries which ESTA deems necessary, upon notifying ESTA of the problem, the customer must grant ESTA the necessary time and opportunity to remedy the problem; otherwise ESTA is released from any liability for resulting consequences. Only in urgent cases of danger to operational safety or to prevent excessive damage, of which ESTA must be notified immediately, the customer is entitled to correct the fault himself or to have the defect eliminated by third parties and to claim reimbursement of the necessary expenses from ESTA.
- 11.6 Especially in the following cases, the customer is not entitled to rights accruing from defects: Improper use or use other than intended use, incorrect assembly or commissioning by the customer or a third party, normal wear and tear, incorrect or neglectful handling, inappropriate maintenance, unsuitable operating materials, faulty construction work, unsuitable construction ground, chemical, electrochemical or electrical influences – insofar as they are not the responsibility of ESTA.
- 11.7 If the customer or a third party makes improper repairs, ESTA is not liable for the resulting consequences. The same applies to changes that are made to the delivery object without obtaining the prior consent of ESTA.
- 11.8 If the use of the delivery object leads to a violation of domestic industrial property rights or copyrights, ESTA will obtain authorisation at its own expense for the competent authorities or a specially appointed legal representative in a way that will eliminate the violation of the protected rights in a manner that is reasonable for the customer. If this is not possible under economically reasonable conditions or within a reasonable period of time, the customer has the right to withdraw from the contract. Under the stated requirements, ESTA also has the right to withdraw from the contract. Furthermore, ESTAs claim against the customer from undisputed or legally established claims of the respective holders of the intellectual property rights.

- 11.9 The obligations of ESTA as outlined in section 11.8 are final in the case of a violation of protected rights or copyrights. They exist only if:

- the customer notifies ESTA immediately of alleged infringements of protected rights or copyrights,
- the customer supports ESTA adequately in its defence against the alleged claims or enables ESTA to perform the modification measures as described in section 11.8,
- ESTA reserves the right to exercise all defensive measures including out of court settlements,
- the defect of title is not the result of an instruction by the customer
- and the infringement was not caused by the fact that the customer has modified the delivery object arbitrarily or has not used it as provided in the contract.

- 11.10 If the delivery object cannot be utilised by the customer as agreed in the contract through the fault of ESTA as a result of omission or faulty execution of proposals and consultations before or after the contract was concluded or through violation of other secondary contractual obligations – especially the availability of a manual for operation and maintenance of the delivery object – the regulations as described in sections 11.1 to 11.7 apply accordingly.

12. Liability

- 12.1 In accordance with the legal regulations, ESTA is liable in cases of intent or gross negligence of ESTA or a representative or vicarious agent. In all other cases, we are liable only in accordance with the product liability law, by reason of the defect to life, body or health, by reason of culpable violation of fundamental contractual obligations or insofar as ESTA has maliciously concealed a deficiency or assumed a guarantee for the condition of a delivery object or works performed. The claim for damages from the violation of fundamental contractual obligations is however limited to the foreseeable damage that is typical for the contract unless a further case of mandatory liability pursuant to sections 1 and 2 exists at the same time.
- 12.2 The provisions of 12.1 apply to all claims for damages, whatever the legal reason, especially as a result of defects, breach of duties under the obligation or from unlawful acts. They also apply to reimbursement of fruitless expenditure, damages due to loss of production and the loss of materials necessary for production. The liability for delay is determined in accordance with section 12.3 and for impossibility in accordance with section 12.4 of these terms.
- 12.3 In the event of delays in performance in cases of intent or gross negligence on the part of ESTA or a representative or vicarious agent, ESTA shall be liable in accordance with the statutory regulations. Apart from the cases in clause 1, the liability of ESTA due to delay for damages in addition to performance and/or in lieu of performance, including compensation of fruitless expenditure, is limited to a total of 15 % of the net order total. The limitation does not apply in case of culpable breach of contractual obligations. The claim for damages from the violation of fundamental contractual obligations is however limited to the foreseeable damage that is typical for the contract, unless a further case according to § 1. section 12.3. has occurred at the same time. Further claims or insofar as ESTA has maliciously concealed a deficiency or assumed a guarantee for the condition of a delivery object after expiry of a deadline set by ESTA for performance.
- 12.4 Section 12.3 applies accordingly if there is an impossibility of performance with the change that the customer's claim for damages in addition and / instead of performance, including compensation for fruitless expenditure, is limited to 10 % of the value of the delivery.
- 12.5 The right of the customer to withdraw from the contract and the provisions of sections 12.1., 12.3 and 12.4 remain unaffected.
- 12.6 No change of the burden of proof to the disadvantage of the customer is associated with the preceding regulations.

13. Statute of limitation for consumers

For contracts with consumers, the following applies:

- 13.1 For claims for damages, the statute of limitations regarding claims for damages as a result of defects – for whatever legal reason – is one year.
- 13.2 The deadline as stated in section 13.1 also applies to other damage claims against ESTA, regardless of their legal basis. It is also applicable if the claims are not associated with a defect.
- 13.3 For work contracts, section 13.1 shall apply mutatis mutandis to all claims for damages as a result of defects. The time limitation also applies to other damage claims against ESTA, regardless of their legal basis. It is also applicable if the claims are not associated with a defect.
- 13.4 All statutes of limitations according to sections 13.1 to 13.3 apply subject to the following provisions:
 - a) The limitation periods generally do not apply in cases of intent.
 - b) They also do not apply if ESTA has maliciously concealed a deficiency or if ESTA has adopted a guarantee for the quality of a delivery object.
 - c) The aforementioned limitation periods per section 13.1 do not apply if the delivery object is a structure or an object that is commonly utilised for a structure and is causing the defect. In turn, the limitation period of section 13.3 also does not apply for structures or works whose success depends on the performance of planning or supervisory services.
 - d) Lastly, the limitation periods do not apply for damage claims in the event of injury to life, the body, health or freedom, for claims in accordance with the product liability law, for a grossly negligent breach of duties or a culpable violation of fundamental contractual obligations.

- 13.5 The statute of limitations begins with the delivery or, in the case of contracts for services, with the acceptance.

- 13.6 Wherever this provision mentions compensation claims, this shall also include claims for reimbursement of fruitless expenditure.

- 13.7 Unless expressly agreed otherwise, the statutory provisions on the start of the period of limitations, suspension of the expiry of the limitation periods, suspension and commencement of the limitation periods remain unaffected.

- 13.8 No change in the onus of proof to the disadvantage of the contractual partner is associated with the preceding regulations.

14. Statute of limitation for contractors

For contracts with contractors, the following applies:

- 14.1 The statute of limitation concerning claims and rights of the contract partner resulting from defects in supplies and/or services performed – whatever the legal reason – is one year. However, this does not apply in the cases of § 438 I No. 1 German Civil Code (defects of title with immovable items), § 438 I No. 2 German Civil Code (structures, items for structures), § 479 I German Civil Code (claims under right of recourse) or § 634a I No. 2 German Civil Code (structures or works where their success depends on the performance of planning or supervision services). In these cases, the statute of limitation is three years.

- 14.2 The statutes of limitations according to clause 14.1 also apply – whatever the legal reason – for all damage claims against ESTA that are associated with a defect. Insofar this correlation does not exist, the statute of limitations is one year.

- 14.3 Otherwise clauses 13.4 a), b) and d), 13.5 to 13.8 apply accordingly.

15. Software usage

If software is included in the scope of delivery or services, the customer is given a non-exclusive right to use the software and its documentation. It is made available for use on the object for which it is intended. The use of the software on more than one system is prohibited. The customer may only copy, revise, translate or convert the software from the object code into the source code to the extent permitted by law. The customer undertakes not to remove manufacturer details – especially copyright notices – or to change such details without the prior express written approval of ESTA. All other rights concerning the software and the documentation including copies thereof are retained by ESTA or the software supplier. The granting of sub-licenses is not permitted.

16. Place of Jurisdiction and Place of Performance

- 16.1 The place of performance for ESTAs obligations arising from the contractual relationship is Sندن, Germany.

- 16.2 In respect of all claims arising from the business relationship with contractors, including actions on documents, cheques and bills of exchange, the place of performance is Sندن.

17. Applicability of the General Terms and Conditions

- 17.1 Should one of the clauses of these General Terms and Conditions or a contract made with ESTA be or become invalid, the validity of all other clauses remains unaffected.
- 17.2 Amendments and additions to the contract can only be made in writing by the customer or a specially appointed legal representative of the customer or by ESTA. Verbal side agreements and subsequent changes to the contract by other persons are only legally binding if they have been confirmed in writing by ESTAs company management. The waiving of this written form requirement must itself also be made in writing.

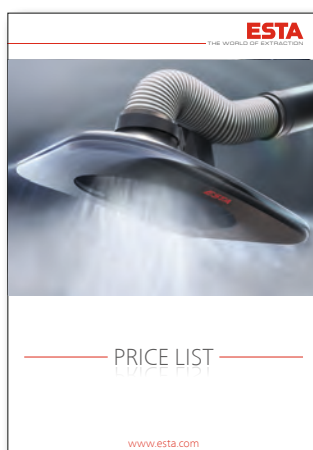
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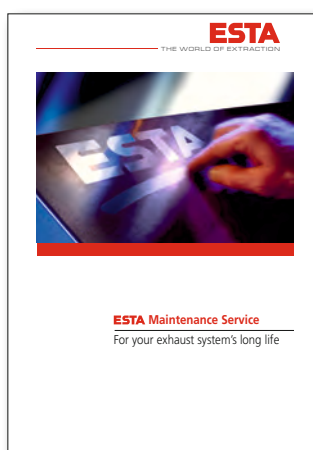
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