

WELDING FUME EXTRACTION SYSTEMS



Welding fume extraction systems

Procedure	Emission rate (mg/s)	Substances harmful to the respiratory tract and lungs	Toxic or toxic-irritant substances	Carcinogenic substances
Submerged arc welding	<1	low	low	low
Gas welding (oxyfuel process)	<1	low	low	–
TIG	<1	low	medium	medium
Laser beam welding without filler material	1 to 2	medium	high	high
MIG/MAG low-energy gas-shielded welding), brazing	1 to 4	low	medium	medium to high
LBH, MIG (general) MAG (solid wire) Flux-cored wire welding with shielding gas Laser beam welding with filler material	2 to 25	high	high	high
MAG (flux-cored wire) Flux-cored wire welding without shielding gas Oxyfuel flame cutting Arc spraying	>25	very high	very high	very high

Comparison test

Mobile filter devices with disposable filter

312 A
30.3V
1.2 mm
11 m/min

Continuous measurement: Welding time and welding wire consumption until filter change

Device type	Frequency of use	Filter area	Welding time (arc on)	Consumption Welding wire	Filter service life (factor)
SRF Master	occasional use	13 m ²	6 ¾ h	40.7 kg	100%
SRF Professional	regular use	17 m ²	13 h	86 kg	210%
SRF Maxi	intensive use	42 m ²	33 ¼ h	218 kg	540%

Selection criteria

Emission rate	Material	USE			
Application example	↓	sporadically	occasionally to frequently	regularly	permanent
Class I & II < 1-2 mg/s Submerged arc welding TIG welding Laser welding	unalloyed to lightly alloyed	1800020 SRF Master 1800005 SRF WallMaster	1800020 SRF Master 1800025 SRF Profi 1800031 SRF SmartFil 1800005 SRF WallMaster	1800025 SRF Profi 1800031 SRF SmartFil 1800030 SRF Maxi 1800005 SRF WallMaster	1800031 SRF SmartFil 1800030 SRF Maxi
	Aluminium	1800020 SRF Master 1800005 SRF WallMaster	1800020 SRF Master 1800025 SRF Profi 1800031 SRF SmartFil 1800005 SRF WallMaster	1800025 SRF Profi 1800031 SRF SmartFil 1800030 SRF Maxi 1800005 SRF WallMaster	1800031 SRF SmartFil 1800030 SRF Maxi
	Highly alloyed Non-ferrous material	1800020 SRF Master 1800005 SRF WallMaster	1800020 SRF Master 1800025 SRF Profi 1800031 SRF SmartFil 1800005 SRF WallMaster	1800025 SRF Profi 1800031 SRF SmartFil 1800030 SRF Maxi 1800005 SRF WallMaster	1800031 SRF SmartFil 1800030 SRF Maxi
Class III 2-25 mg/s Manual arc welding MIG/MAG welding	unalloyed lightly alloyed aluminium	1800020 SRF Master 1800005 SRF WallMaster	1800025 SRF Profi 1800031 SRF SmartFil 1800005 SRF WallMaster	1800031 SRF SmartFil 1800030 SRF Maxi 1800040 SRF Master XL	1800040 SRF Master XL
	Highly alloyed Non-ferrous material	1800020 SRF Master 1800005 SRF WallMaster	1800025 SRF Profi 1800031 SRF SmartFil 1800005 SRF WallMaster	1800031 SRF SmartFil 1800030 SRF Maxi 1800040 SRF Master XL	1800040 SRF Master XL
Class IV > 25 mg/s Flux-cored wire welding	unalloyed lightly alloyed aluminium	1800025 SRF Profi 1800031 SRF SmartFil 1800005 SRF WallMaster	1800031 SRF SmartFil 1800030 SRF Maxi 1800040 SRF Master XL	1800040 SRF Master XL	1800040 SRF Master XL
	Highly alloyed Non-ferrous material	1800025 SRF Profi 1800031 SRF SmartFil 1800005 SRF WallMaster	1800031 SRF SmartFil 1800030 SRF Maxi 1800040 SRF Master XL	1800040 SRF Master XL	1800030 SRF Maxi 1800040 SRF Master XL

Recommendations based on European standards and expected filter change/cleaning intervals.

SRF Master / SRF Profi / SRF Maxi

Compact and robust filter units with suction arms for low to medium quantities of smoke and dust. For occasional to regular use

SRF Master

Area of application

- ▶ Low levels of smoke/dust
- ▶ Occasional use

Benefits

- ▶ Little adjustment of the extraction hood required
- ▶ More flexible due to additional hose connection at the rear

Properties

- ▶ Safe operation thanks to filter monitoring
- ▶ Extraction hood can be rotated and swivelled 360 degrees
- ▶ Push handle and cable holder



SRF Professional

Area of application

- ▶ Low to medium amounts of smoke/dust
- ▶ Occasional to frequent use

Benefits

- ▶ Little adjustment of the extraction hood required
- ▶ Convenient filter change through maintenance door
- ▶ Safe operation thanks to rotating field detection

Properties

- ▶ Safe operation thanks to filter monitoring
- ▶ Extraction hood can be rotated and swivelled 360 degrees
- ▶ Automatic start/stop (optional)



SRF Maxi

Area of application

- ▶ Medium amounts of smoke/dust
- ▶ Regular use

Benefits

- ▶ Little adjustment of the extraction hood required
- ▶ Contamination-free filter change
- ▶ Safe operation thanks to rotating field detection
- ▶ High efficiency due to long filter service life

Properties

- ▶ Safe operation thanks to filter monitoring
- ▶ Extraction hood can be rotated and swivelled 360 degrees
- ▶ Automatic start/stop (optional)



Model	SRF Master	SRF Professional	SRF Maxi
Art. no.	1800020	1800025	1800030
Technical data			
Filters			
Procedure	3-stage	2-stage	2-stage
Filter type	Disposable filter	Disposable filter	Disposable filter
Filter area	approx. 13 m ²	approx. 17 m ²	approx. 42 m ²
Degree of separation	> 99 %	> 99 %	> 99 %
Filter material	Glass fibre fleece	Glass fibre fleece	Polyester fleece
Welding fume separation class	W3	W3	W3
Additional filters	Two pre-filters	Pre-filter	Pre-filter (aluminium mesh)
Basic data			
Suction capacity	max. 950 m ³ /h	max. 1100 m ³ /h	max. 1100 m ³ /h
Suction arm	Ø 150 mm	Ø 150 mm	Ø 150 mm
Suction arm length	2 m	3 m	3 m
Extraction connection	Ø 150 mm	Ø 150 mm	Ø 150 mm
Motor power	1.1 kW	1.1 kW	1.1 kW
Electrical connection ~ 50 Hz	230V	400V	400V
Sound pressure level	72 dB(A)	70 dB(A)	70 dB(A)
Dimensions (L x W x H) approx.	705 x 655 x 900 mm	785 x 730 x 950 mm	790 x 815 x 1080 mm
Weight approx.	71 kg	106 kg	120 kg

ACCESSORIES



ACCESSORY SRF Master	Art. no.
Main filter	1810020
Pre-filter cassette	1810021
10 x pre-filter mats	1810022
ACCESSORY SRF Profi	Art. no.
Main filter	1810025
10 x pre-filter mats	1810026
Automatic start/stop	1810100
ACCESSORY SRF Maxi	Art. no.
② Extraction hood with lighting	1810222
Replacement filter	1810030
② Automatic start/stop	1810100
Additional equipment on request	

SRF Master XL / SRF Maxi C

Self-cleaning filter units with suction arms for large quantities of smoke and dust.
For occasional to regular use

SRF Master XL

Area of application

- ▶ Large amounts of smoke/dust
- ▶ Regular use

Benefits

- ▶ Little adjustment of the extraction hood required
- ▶ Convenient filter change through maintenance door
- ▶ Dust discharge into collection container
- ▶ High efficiency thanks to automatic filter cleaning

Properties

- ▶ Safe operation thanks to filter monitoring
- ▶ Extraction hood can be rotated and swivelled 360 degrees



3m suction arm
Automatic filter
cleaning

SRF Master XL

Model	SRF Master XL
Art. no.	1800040
Technical data	
Filters	
Procedure	2-stage
Filter type	Cleaning filter
Filter area	approx. 10 m ²
Degree of separation	> 99 %
Filter material	ePTFE membrane
Welding fume separation class	W3
Additional filters	–
Basic data	
Suction capacity	max. 1000 m ³ /h
Suction arm	Ø 150 mm
Suction arm length	3 m
Compressed air connection	5-6 bar
Motor power	1.5 kW
Electrical connection ~ 50 Hz	400V
Sound pressure level	69 dB(A)
Dimensions (L x W x H) approx.	655 x 655 x 1,355 mm
Weight approx.	135 kg

ACCESSORIES



ACCESSORY SRF Master XL	Art. no.
Replacement filter	1810040
② Extraction hood with lighting	1810222
Set of 4 dust cartridges	1810036
② Automatic start/stop	1810100
Additional equipment on request	

SRF SmartFil

The mobile welding fume extraction system for regular use

Application

- ▶ Medium amounts of smoke/dust
- ▶ Regular use
- ▶ Changing workplaces

- ▶ 360 degree rotating extraction bonnet with throttle valve
- ▶ Filter area for replacement filters: 42 m²
- ▶ Large filter surface
- ▶ Compact and stable design

Benefits

- ▶ Safe operation due to rotating field detection
- ▶ Less tracking of the suction arm thanks to the flow-optimised design of the extraction hood
- ▶ Increased safety through filter monitoring
- ▶ Increased safety thanks to contamination-free filter changes
- ▶ High efficiency thanks to large capacity and long filter service life

Characteristics



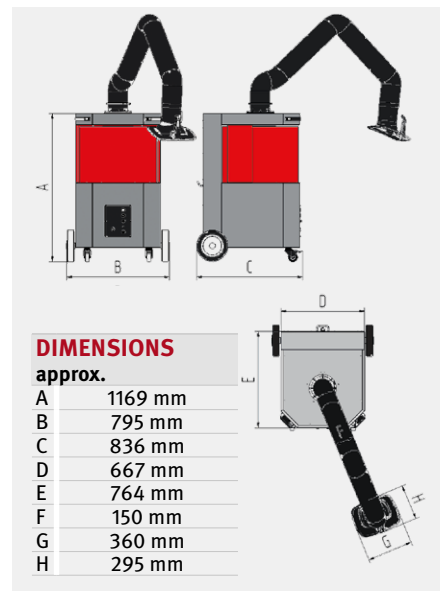
Ideal for changing work-stations and confined work areas



Centrifugal fan

Suction arm, hose version

3m suction arm



DIMENSIONS approx.

A	1169 mm
B	795 mm
C	836 mm
D	667 mm
E	764 mm
F	150 mm
G	360 mm
H	295 mm

Model	SRF SmartFil
Art. no.	1800031

Technical data

Filters	
Filter stages	2
Filter area	25 m ²
Filter type	Disposable filter
Filter material	Polyester fleece
Degree of separation	≥ 99.5 %
Filter class	E12
Additional filters	Pre-filter
Basic data	
Suction capacity	1100 m ³ /h
Rated current	3.1 A
Control voltage	24 V, DC
Sound pressure level	70 dB(A)
Motor power	1.5 kW
Electrical connection ~ 50 Hz	400V
Dimensions (L x W x H) approx.	795 x 836 x 1169 mm
Weight approx.	131 kg

ACCESSORIES



ACCESSORIES		Art. no.
①	Replacement filter 25 m ²	1810220
②	Replacement filter 42 m ²	1810221
③	Extraction hood with lighting	1810222

SRF MAXI C 2.0 filter unit – Compact and robust filter unit with suction arms

Neu

- ▶ Automatic cleaning of the filter using compressed air
- ▶ Durable disposable filter with high absorption capacity (42 m² filter surface)
- ▶ High separation efficiency of >99.9%
- ▶ Contamination-free filter change
- ▶ Flexible suction arm with 3 m length
- ▶ High efficiency due to large filter capacity
- ▶ KemTex ePTFE filter cartridge for optimum health protection
- ▶ Safe operation due to rotating field detection

- ▶ Mobile with robust rollers - easy to move, even in confined spaces
- ▶ Also suitable for chrome-nickel steel
- ▶ Automatic start/stop and extraction bonnet with lighting optionally available



Made in Germany



3 m SUCTION ARM

Model		SRF MAXI C 2.0
Art. no.		1800036

Technical data		SRF MAXI C 2.0
Filter type		Cleaning filter
Filter area approx.	m ²	15
Degree of separation	%	>99.97
Filter material		ePTFE membrane
Filter class		M
Dust class		M
Additional filters		Spark pre-separator made of aluminium mesh
Extraction capacity max.	m ³ /h	1450
Suction arm diameter	mm	150
Suction arm length	m	3
Compressed air connection	bar	5 – 6
Sound pressure level	dB(A)	73
Drive motor power ~50 Hz	kW/V	1.5 / 400
Dimensions (L x W x H) approx.	mm	973 x 834 x 1350
Weight approx.	kg	197



ACCESSORIES	Art. no.
Replacement filter	1810035
Automatic start/stop	1810100
Extraction hood with lighting	1810222
Suction bonnet	1810300
Pre-filter insert Aluminium mesh	1810301
Dust collection bag, set of 5	1810302

SRF WallMaster

Cost-effective welding fume filter solution for modular design with high filter capacity and safe filter replacement

Application

- ▶ Medium amounts of smoke/dust
- ▶ Modular expansion in combination with registration elements
- ▶ One to two workstations

Benefits

- ▶ Increased safety thanks to contamination-free filter changes
- ▶ High efficiency thanks to large capacity and long filter service life
- ▶ Cost-effective welding fume filter by means

of simple retrofitting to existing detection elements

- ▶ Robust filter monitoring with the help of pressure gauge

Properties

- ▶ Retrofittable
- ▶ Integrated lifting device for filter change
- ▶ Quick and easy installation
- ▶ Compact and stable design
- ▶ Mechanical operation of the filter medium



Filter monitoring via pressure gauge



Integrated lifting device for filter change



Fig. shows scope of delivery



Fig. shows SRF WallMaster with 2x SRF exhaust air set (Article no. 1800006)

Exhaust air set – Welding fume exhaust air set with suction arm and fan

Application

- ▶ Large quantities of smoke/dust
- ▶ Permanent use
- ▶ Where air filtration is not absolutely necessary
- ▶ Welding fumes, gases, vapours, light dusts

Benefits

- ▶ Particularly quiet as the housing is made of cast silumin
- ▶ 40% less tracking of the suction arm thanks to the flow-optimised design of the hood
- ▶ User-friendly thanks to particularly smooth operation of the bonnet with one hand
- ▶ Holds set position unsupported thanks to internal support rods

Properties

- ▶ Retrofittable
- ▶ Integrated lifting device for filter change
- ▶ Quick and easy installation
- ▶ Compact and stable design
- ▶ Mechanical operation of the filter medium

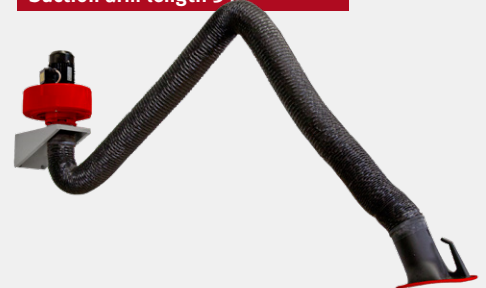
Scope of delivery:

- ▶ Fan, suction arm with hood, wall bracket, motor protection switch, set of connecting materials, exhaust air duct extendable from 1.25 to 5.00 m and matching exhaust nozzle.

1 suction arm

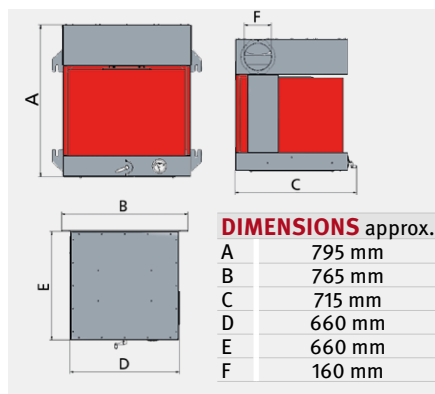
Suction arm diameter 150 mm

Suction arm length 3 m



Model	SRF exhaust air set
Art. no.	1800006
Technical data	
Extraction capacity	1000 m³/h
Max. Fan power	2000 m³/h
Rated current	1.5 A
Sound pressure level	73 dB(A)
Motor power	0.75 kW
Electrical connection ~50 Hz	400V
Weight approx.	43.5 kg

Model	SRF WallMaster
Art. no.	1800005
Technical data	
Filters	
Filter stages	2
Filter area	42 m²
Filter type	Disposable filter
Filter material	Polyester fleece
Degree of separation	≥ 99.5 %
Filter class	E12
Basic data	
Dimensions (L x W x H) approx.	765 x 715 x 795 mm
Weight approx.	65 kg
Suitable for volume flows	up to 1600 m³/h



ACCESSORIES



ACCESSORIES Art. no.
① Replacement filter 1810055

SRF CleanAirTower 2.0

Welding fume extraction unit. Energy-saving room ventilation system with layered ventilation for welding fumes in production halls

Application

- ▶ Workshops where spot extraction is not possible
- ▶ Supplementary to point suction systems
- ▶ Environments with changing sources of dust/smoke
- ▶ Workplaces, production halls, logistics and warehouses

Benefits

- ▶ Minimising heating costs through air recirculation and air distribution
- ▶ High level of safety due to contamination-free dust disposal
- ▶ No distribution of dirty air into uncontaminated hall areas, as there is hardly any air turbulence
- ▶ Cost-effective, even retrofitting, as no pipework is required
- ▶ Safe transport and easy installation thanks to crane eyes
- ▶ Uninterrupted operation thanks to automatic dust removal into dust collection bin

Properties

- ▶ Automatic filter cleaning
- ▶ Crane eyes
- ▶ 360-degree intake grille
- ▶ Cloud connection via mobile radio (12 months cloud use free of charge)
- ▶ Contamination-free dust disposal in disposable containers
- ▶ Slow, low-pulse air circulation
- ▶ Layer ventilation principle, recommended by the employers' liability insurance association
- ▶ System generates hardly any air turbulence

Additional equipment

- ▶ Air monitoring AirWatch

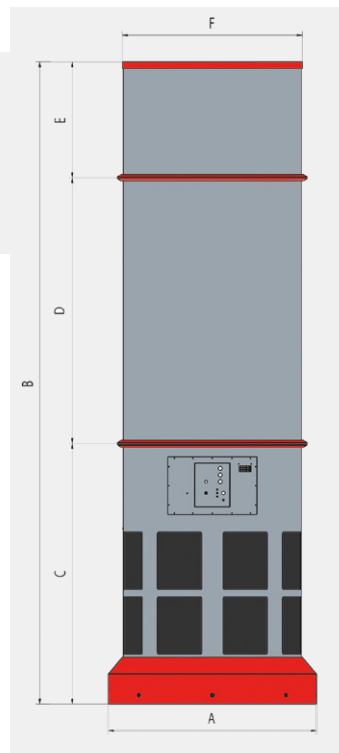
Functionality

- ▶ Intake of ambient air via a built-in fan
- ▶ The purified, clean air exits at the bottom of the system with low momentum
- ▶ The warm fresh air transports the welding fumes back towards the intake grille and a slow air circulation is created at the workstations (layer ventilation)



DIMENSIONS approx.

A	1172 mm
B	3622 mm
C	1463 mm
D	1502 mm
E	600 mm
F	1004 mm



Model	SRF CleanAirTower 2.0
Art. no.	1802000

Technical data	
Filters	
Filter stages	1
Filter process	Cleaning filter
Cleaning process	Rotary nozzle
Filter area	20 m ²
Number of filter elements	3
Total filter area	60 m ²
Filter material	PTFE membrane
Degree of separation	≥ 99.9 %
Dust class	M

Additional information	
IFA approval	W3-tested
Fan type	Centrifugal fan, direct drive
Compressed air supply	5 – 6 bar
Dust collection container volume	10 l

Basic data	
Suction capacity	6000 m ³ /h
Rated current	11 A
Control voltage	24 V, DC
Sound pressure level	72 dB(A)
Motor power	5.5 kW
Electrical connection ~ 50 Hz	400V
Dimensions (H x Ø) approx.	3622 x 1172 mm
Weight approx.	666 kg

ACCESSORIES



ACCESSORIES	Art. no.
① ePTFE replacement filter set	1810250
② Dust collector	1810251

Training welding table series

Sturdy tables with support made of fireclay bricks and angle iron

Application

- ▶ Teaching and training centres
- ▶ Training departments in companies

Benefits

- ▶ By dividing the work surface, two welding processes can be learnt at one workstation
- ▶ Long service life thanks to stable sectional steel construction

Properties

- ▶ Sturdy sectional steel construction
- ▶ Work area divided into two parts: rod iron grate and sheet steel support with fireclay plates
- ▶ Can be integrated into extraction cabins



Picture shows training welding table with optionally available forced position welding device



Can be integrated into extraction cabins

SCOPE OF DELIVERY:

- Bar grate
- Sheet steel support with fireclay plates

Model	600 x 600 x 800 mm	900 x 600 x 800 mm	1200 x 600 x 800 mm
Art. no.	1801000	1801005	1801010

Basic data		600 x 600 x 800	900 x 600 x 800	1200 x 600 x 800
Dimensions (L x W x H) approx.	mm	600 x 600 x 800	900 x 600 x 800	1200 x 600 x 800
Weight approx.	kg	39	47	54.5



ACCESSORIES

Accessories	Art. no.
Forced position welding device	1810260

Downdraft table series for extraction – Robust downdraft tables with return flow frame and fold-down side panels

Application

- ▶ Industrial grinding of machined workpieces

Benefits

- ▶ Safe working thanks to robust material support
- ▶ Also suitable for larger workpieces, as side panels can be folded down
- ▶ Reduced noise emission due to soundproofed side panels
- ▶ Higher grinding dust collection rate due to the return flow frame

- ▶ Easy cleaning thanks to integrated slag drawer
- ▶ Pleasant working thanks to the ergonomically adapted sheet steel construction

Properties

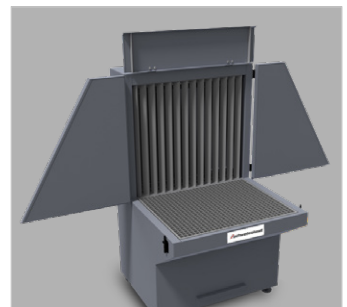
- ▶ Robust grating support
- ▶ Side panels can be folded down
- ▶ Side walls with sound insulation material
- ▶ Return flow frame
- ▶ Integrated slag drawer
- ▶ Connection to new or integration into an existing extraction system



Higher grinding dust collection rate due to the return flow frame



1510 x 1060 x 1700 mm



Also suitable for larger workpieces, as side panels can be folded down

Model		Downdraft table for extraction			
		1010 x 1060 x 1700 mm	1360 x 1060 x 1700 mm	1510 x 1060 x 1700 mm	2000 x 1060 x 1700 mm
Art. no.		1801105	1801110	1801115	1801120
Basic data					
Suction nozzle Ø	mm	250	250	250	250
Suction capacity recommended	m ³ /h	1500 – 1800	1500 – 1800	2000 – 3000	2000 – 3000
Table height	mm	800	800	800	800
Table top length	mm	1010	1360	1510	2000
Table top width	mm	760	760	760	760
Dimensions (L x W x H) approx.	mm	1010 x 1060 x 1700	1360 x 1060 x 1700	1510 x 1060 x 1700	2000 x 1060 x 1700
Weight approx.	kg	159	191.5	210	271