



Weller®

Fume Extraction Solutions

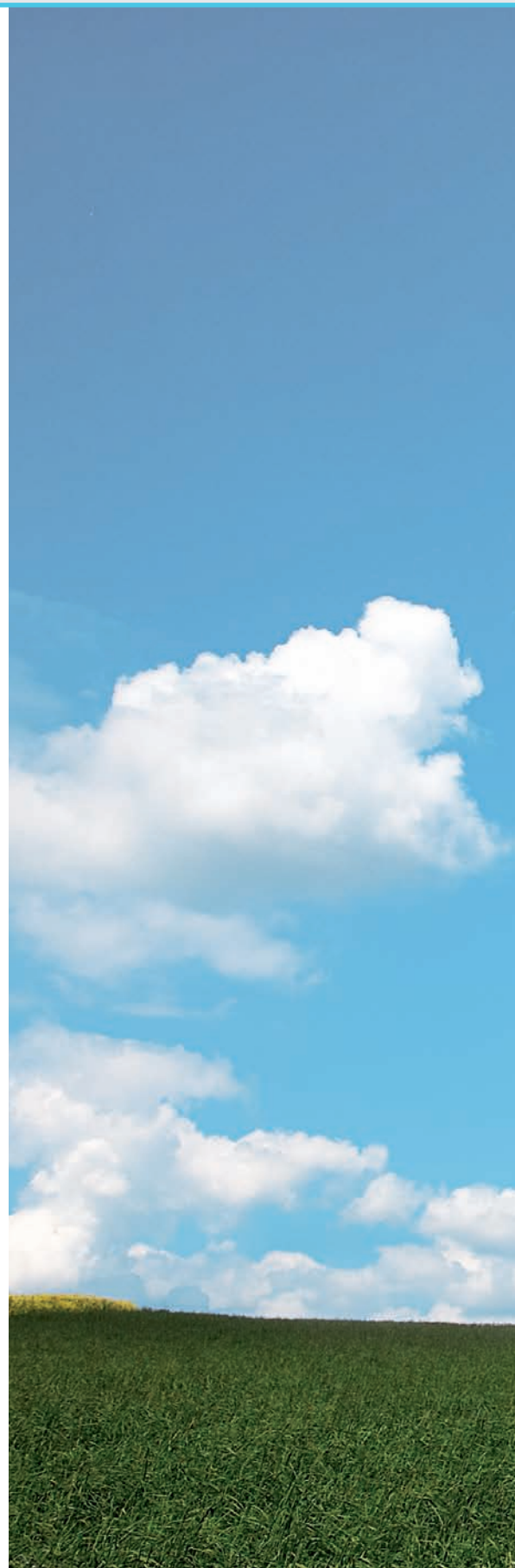
We care for your working environment.


COOPER Tools



Content

Why Fume Extraction?	3
Zero-Smog® System	3
Tip Extraction and Volume Extraction	4
Filter Technology	5
Filter Process	5
Volume Extraction	6 – 17
WFE 8S	8
WFE 4S	9
WFE 2X	10
WFE 2S	11
WFE 2ES / WFE 2CS	12
Installation Options	13
Accessories	14 – 17
Replacement Filters	17
Tip Extraction	18 – 26
WFE	20
WFE P	20
WFE 20D	21
FE (Fume Extraction) Soldering Irons	22 – 23
Safety Rests	23 – 24
Accessories	25
Spare Part Filter	25
Installation Options	26
Pipe Systems for Tip and Volume Extraction	27



Why Fume Extraction?

Many work environments today, including soldering, adhesives, welding and laser applications, create particles and gases that can be harmful to the work place and the environment. Most people thought that the move to lead-free soldering would be more nature friendly. In reality lead-free soldering smoke emissions contain more breathable fine dust particles. More and smaller particles are produced due to the higher working temperatures required and because more flux is used in the soldering process.

In many countries legal regulations governing clean air in the work place require that hazardous substances are removed from the air in order to avoid harmful effects on people and machines.

It is important to use the correct safety equipment to remove these hazardous substances. Fine particles are more dangerous to inhale than big particles as they get caught more easily and block the alveoli in the lungs.

To protect the operator it is important to use an extraction system that is able to separate these particles and gases and then re-circulates the cleaned air back into the work place. This saves energy and reduces energy costs.

Zero-Smog® System

The Zero-Smog® Systems from Weller® protect operator and the environment. Their filter systems catch the polluted air right at the source, and prevent the diffusion of particles and gases.

The Zero-Smog® Systems have a broad range of filters that can be combined to provide the best solution to the problem. The standard filters are designed for the needs of lead-free soldering, adhesives and laser applications but Weller® has filters suitable for all the most common applications found in industry and laboratories.

The Zero-Smog® Systems help to create a **good work environment**. They are small and easy to place and have **low noise level** emissions. Extraction arms and nozzles are adjustable so they can get close to the source and guarantee optimum fume capture.

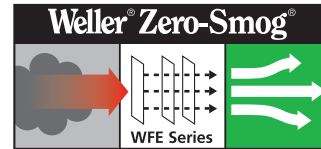
To increase filter lifetime and save energy, most Zero-Smog® Systems are fitted with an **automatic speed control** (dependent on the number of workplaces connected). **Effective pre-filters**, integrated into the units, save the main filter and can be exchanged very simply.

Zero-Smog® System



Weller® Zero-Smog® Systems offer two solutions for fume extraction:

Tip Extraction



Tip Extraction

Weller® FE (Fume Extraction) soldering irons have a smoke tube integrated into the handle. When soldering the tube is positioned directly above the joint and collects any fumes produced. Fume extraction attachments can be retrofitted to non fume extraction Weller® soldering irons.

- Less investment per work place
- Collect pollution direct at source
- Up to 20 collection points with one system (200 m apart)
- Ergonomic friendly with easy access to work piece
- No noise
- Minimal air movement

Volume Extraction



Volume Extraction

More suitable for applications involving, for example, solder baths, hot air soldering, micro solders and gluing work. Weller® offers various mobile systems that purify the air at up to a maximum of 8 workplaces.

- Larger areas can be covered
- Low maintenance
- Mobile
- Quick & easy installation
- Economic for 1 to 8 work places
- Remote control

Filter Technology

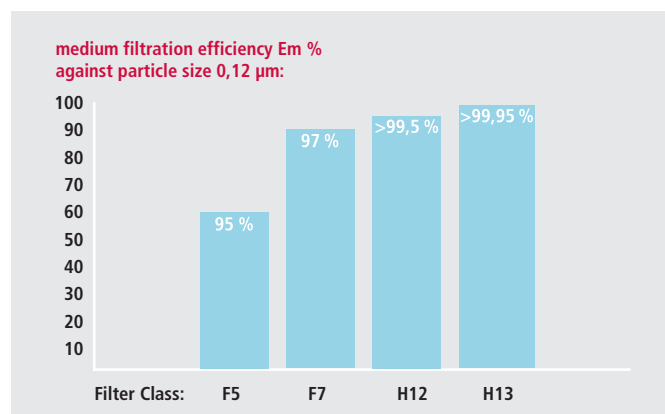
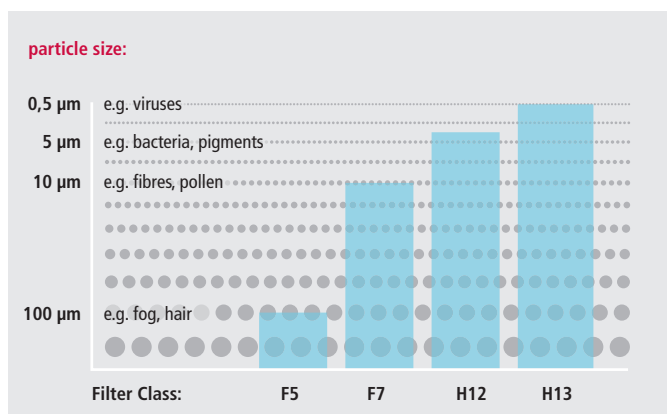
Weller® Zero-Smog® Systems are specifically designed for continuous operation in industrial environments. Care and attention at the design stage plus careful component choice and a high quality manufacturing process have given Weller® extraction systems a world wide reputation for reliability and longevity.

Weller® Zero-Smog® Systems have a **three stage filter system** for removing small particles, fumes and gases that are produced in different working processes:

1. The hazardous substances are efficiently captured by the nozzle and are absorbed into the filter.
2. Bigger particles get caught in the pre-filter and smaller particles get caught in the HEPA (High Efficiency Particulate Air) filter.
3. The Wide Band Gas Filter removes fumes and adhesives.

End product – clean air – is re-circulated into the workplace.

Filter Class	Recommended Application
F5	for standard applications
F7	for applications with high flux content
H12 / H13	filter for clean rooms 1000 – 100

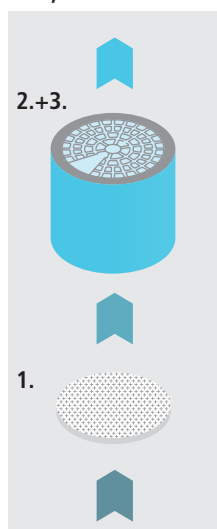


Filter Class F5, F7: Fine dust filter as per EN 779

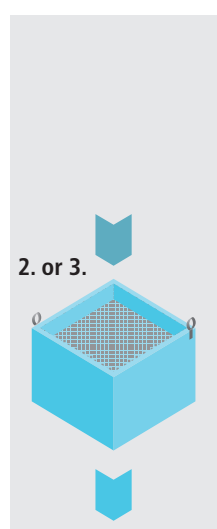
Filter Class H12/H13: According EN 1822 HEPA (High Efficiency Particulate Air) Filter

Filter Process

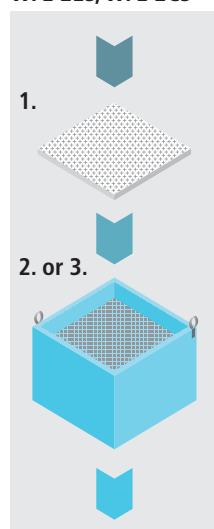
WFE, WFE P



WFE 2X



WFE 20D, WFE 2S,
WFE 4S, WFE 8S,
WFE 2ES, WFE 2CS



1. Fine dust filter

For standard applications with a small amount of flux and pollution gases with high solid content, Weller® offers filter classes **F5** or **F7**.

2. Compact filter consisting of: HEPA filter

Filters particles up to 0,3 µm. Weller offers HEPA (High Efficiency Particulate Air) filters of class **H12** and **H13**, medium filtration efficiency 99,5 % / 99,95 %.

Wide band gas filter

For cleaning harmful fumes and vapours. The Weller wide band gas filter consists of **50 % active carbon** and **50 % Puratex**. Harmful gases with a high molecular weight are cleaned by the active carbon. Puratex is suitable for absorbing gases of lower molecular weight. Because of its composition, Puratex is able to convert a large number of chemical pollutants by means of molecular modification into non-polluting gases.

3. Gas filter (option)

The gas filter is used for extracting adhesive fumes and solvents. Experience has shown that filtering suspended particles is not so vital in this respect. The gas filter is filled with **50 % active carbon** and **50 % Puratex**. The HEPA H12 and H13 is omitted.

filter drawings not true to original

Volume Extraction

Volume Extraction

Volume extraction is the **best choice** where extraction over a wide area is required. It is an **economical** way to eliminate polluted process air as there is no need for fixed installations and maintenance requirements are minimal. Arms and nozzles do not require daily cleaning. Energy costs are saved because the cleaned air is re-circulated back into the work area and does not need to be heated or cooled like external air.

Weller® has a broad range of filter units for volume extraction applications. Speed control allows optimal air flow regulation for each working place independent of the connected workplaces. Units can be remotely controlled via a remote control system (available as accessory) or by a PC (RS232) connection.



Volume Extraction Units



■ WFE 8S

up to 8 workplaces, small solder ovens, selective and reflow soldering equipment



■ WFE 4S

up to 8 workplaces



■ WFE 2S

up to 4 workplaces



■ WFE 2X

up to 2 workplaces



■ WFE 2ES / WFE 2CS

up to 2 workplaces

Characteristics

- For applications where extraction over a wide working area is required
- Mobile units suitable for stand alone and central applications
- All units equipped with maintenance free brushless turbine
- Connectable to external air outlet
- Low vacuum up to 2.800 Pa and high volume for efficient volume extraction
- Maximum bridging distance 30 m (WFE 4S using Weller® pipe system 75) equally distributed to all connected exhausts
- Cost saving through automatic air flow control which provides each workplace with intelligent air flow regulation regardless of the connected workplaces
- Filter condition monitoring on the unit or by remote control (accessory)
- Wide range of extraction arms and nozzles available to achieve optimal workplace configuration

Areas of application

- Hot air soldering
- Soldering machines, robots, solder baths
- Laser processing
- Adhesive fumes
- Clean room applications (on request)
- Microscope workplaces
- Other fume emitting processes

Volume Extraction

WFE 8S

Powerful fume extraction unit
with large integrated pre-filter



ESD safe



low sound level

The fume extraction unit WFE 8S can be connected to up to 8 extraction arms. This makes the unit suitable to use as a small central system in applications such as soldering, adhesives, clean-room work and laser work. It is also capable for connection to small, selective reflow and soldering ovens. The large integrated pre-filter makes the WFE 8S very suitable for lead-free soldering as it is able to catch a large quantity of particles. The WFE 8S is a mobile system that is simple to install – it does not require any permanent installation.

Its high quality components keep service needs to a minimum. The combination of low running costs and a flexible system independent of fixed installations produces a unit with a very low cost of ownership. WFE 8S can be connected so that it exhausts air. This is an advantage in applications where re-circulation is not allowed. To further increase the filter lifetime and save energy, the WFE 8S has an automatic airflow control - depending on the number of connected workplaces.

Attributes

- Mobile fume extraction unit purifies air up to 8 workplaces
- Large built-in pre-filter
- The adjustable pressure control guarantees the optimal air flow regulation for each working place - independent of the connected workplaces
- Electronic filter control and easy filter exchange
- 4 wheels to allow easy movement of the unit
- Remote control with alarm function
- Noise damped metal housing
- Quick and simple installation

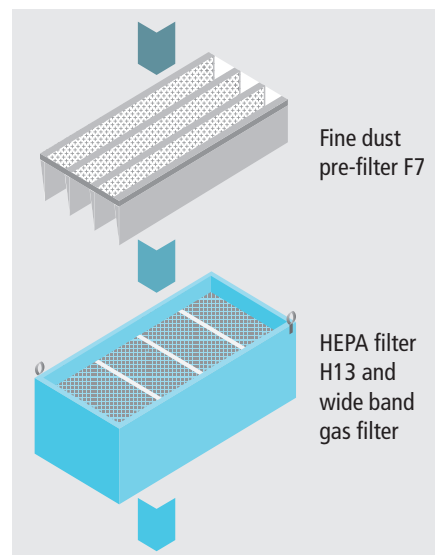
Technical Data

Maximum capacity	8 workplaces, small and medium sized reflow, wafer, selective equipment
Maximum extraction rate	615 m³/h
Sound level	< 55 db (A) at 1 m distance
Operating voltage	230/120 V / 50/60 Hz
Power input	450 VA
Maximum vacuum	2.800 Pa
Dimensions (L x W x H)	402 x 796 x 1016 mm 15.9 x 31.3 x 40 in
Weight	68 kg / 150 lb

Scope of supply WFE 8S

- WFE 8S Fume extraction unit 230/120 V / 50/60 Hz with built-in pre-filter
- Compact filter
Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)

Order No. 230V	005 36 586 99
Order No. 120V	WFE8S



WFE 4S

Mobile fume extraction unit purifies air up to 8 soldering workplaces



Attributes

- Mobile fume extraction unit purifies air up to 8 workplaces
- The adjustable pressure control guarantees optimal air flow regulation for each working place independent of the connected workplaces
- Electronic filter control and easy filter exchange
- 4 wheels to allow easy movement of the unit
- Remote control with alarm function
- Noise damped metal housing
- Quick and simple installation



ESD safe



low sound level

The fume extraction system WFE 4S is user-friendly with quick and simple installation and filter exchange. It has a low noise emission level and is small and convenient to locate within the work area.

The high quality components used in the WFE 4S result in low servicing requirements and long system life. To increase filter lifetime and save on energy, the WFE 4S is fitted with an automatic airflow speed control - depending on the number of connected workplaces. To extend the capacity an external pre-filter can be fixed directly to the WFE 4S.

The powerful maintenance free variable speed turbine is electronically controlled and has a maximum capacity of 615 m³/h. It has 3 operating modes:

1. Standard speed control – selected by the user irrespective of the load on the system.
2. Speed limiting control – the pump speed is automatically varied to match the load on the system.
3. Economy control – the rate of fume absorption is maintained at a constant value. The operating hours and the filter condition are recorded for maintenance purposes.

Scope of supply

- WFE 4S Fume extraction unit 230/120 V / 50/60 Hz
- Compact filter
Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)
- Fine dust pre-filter F7

Order No. 230V 005 36 256 99

Order No. 120V WFE4S

Pre-filter to extend capacity of WFE 2S, WFE 4S, WFE 2X



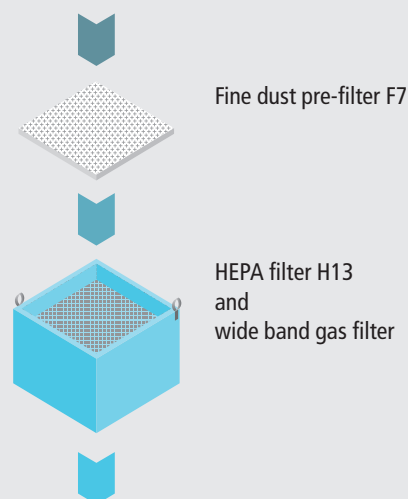
The pre-filter is recommended for use with solder bath, automatic soldering, laser or other major dust emitting applications. It acts as a first stage in the filter process increasing the lifetime of the main filter units. The pre-filter can be fixed directly to the top of the WFE 4S or in conjunction with the WFE 2S and WFE 2X as an external part of the fume extraction system.

Scope of supply

- Filter box
 - 2 x hose connections 75
- Filters must be ordered separately (see page 17)

Order No.

005 87 358 62



Option: WFE 4S with gas filter

- Compact filter for adhesive fumes, consists of: Wide band gas filter (50 % active carbon, 50 % Puratex)
- Fine dust filter F7

Order No. 230V 005 36 496 99

Order No. 120V WFE4SG

Technical Data

Maximum capacity	8 workplaces
Maximum extraction rate	615 m³/h
Sound level	51 db (A) at 1 m distance
Standard connection	pipe system 75
Operating voltage	230/120 V / 50/60 Hz
Power input	450 VA
Maximum vacuum	2.800 Pa
Dimensions (L x W x H)	450 x 450 x 650 mm 17.7 x 17.7 x 25.6 in
Weight	21 kg / 46.3 lb

Volume Extraction

WFE 2X

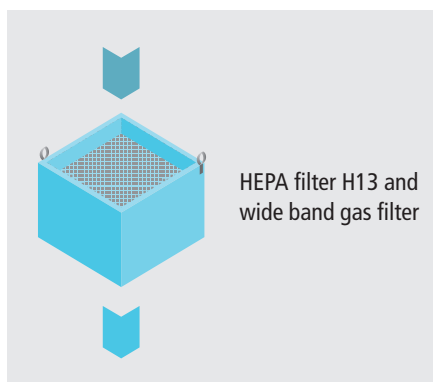
Mobile fume extraction unit
purifies air up to two workplaces



ESD safe low sound level

The WFE 2X is a fume extraction unit and is suitable for applications with a high demand for gas and particle filtration, e.g. soldering, adhesives, clean room work and laser.

It can be placed on a trolley and be moved easily between different work places. Variable speed and the alarm function for filter exchange can be set via the remote control. For applications which produce a large quantity of particles, e.g. lead-free soldering, an external pre-filter can be fitted to increase the lifetime of the main filter. To make installation easier, the WFE 2X can be suspended under the work table with special fittings. An RS 232 interface makes it possible to integrate the software with other process equipment.



HEPA filter H13 and
wide band gas filter

Technical Data	
Maximum capacity	2 work places
Maximum extraction rate	140 m³/h
Sound level	< 52 db (A) at 1 m distance
Operating voltage	100 – 240 V / 50/60 Hz
Power input	100 W
Maximum vacuum	2.300 Pa
Dimensions (L x W x H)	210 x 460 x 660 mm 8.3 x 18.1 x 26 in
Weight	15 kg / 33 lb

Scope of supply

- WFE 2X Fume extraction unit 100-240 V / 50/60 Hz
- Compact filter
consists of: HEPA filter H13, wide band gas filter
(50 % active carbon / 50 % Puratex)

Accessories for WFE 2X see on page 16.

Order No. 230V plug	005 36 588 99
Order No. 120V plug	WFE2X

Attributes

- Mobile fume extraction unit purifies air at up to 2 workplaces
- Electronic filter control and easy filter exchange
- Wireless remote control with alarm function
- Extra noise damped metal housing
- Quick and simple installation
- Trolley available as accessory
- Minimized foot print
- Switching power supply fits for all global voltages
- Optimized lifetime filter

WFE 2X Kit 1S



Mobile fume extraction kit

Scope of supply

- 005 36 588 99 WFE 2X Fume extraction unit 100-240 V / 50/60 Hz
- 005 36 579 99 KIT 1 WF 60
Sloped stativ extraction arm for volume extraction
consists of:
005 36 598 99 Stativ extraction arm
005 36 573 99 Sloped nozzle
005 365 75 99 Bench mounting clamps, 2 x
005 36 576 99 Extraction hose, 3 m
005 36 578 99 Extraction arm

Order No. 230V	005 36 587 99
Order No. 120V	WFE2XKIT1S

WFE 2S

**Mobile fume extraction unit
available in two kits**



ESD safe

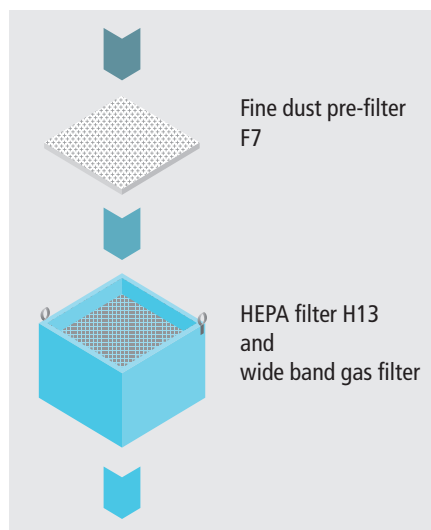


low sound level

The fume extraction unit WFE 2S is easy to install and operate. It is designed as a smaller, central system and is supplied complete with flexible hose, arm and bracket, ready for installation at the workplace. A powerful, maintenance-free pump provides continuous fume extraction at a maximum air extraction rate of 230 m³/h. A built-in microprocessor controls the adjustable pump speed avoiding unnecessary waste of suction power and saving energy. To optimize the degree of pollutant separation, the WFE 2S can be modified with filters for different applications.

Attributes

- Mobile fume extraction unit purifies air at up to 4 workplaces
- Electronic filter control and easy filter exchange
- 4 wheels to allow easy movement of the unit
- Remote control with alarm function
- Noise damped metal housing
- Quick and simple installation
- Two kits available



Scope of supply WFE 2S

- WFE 2S Fume extraction unit 120/230 V / 50/60 Hz
- Compact filter consists of: HEPA filter H13, wide band gas filter (50 % active carbon / 50 % Puratex)
- Fine dust pre-filter F7

Order No. 230V 005 36 266 99

Order No. 120V WFE2S

Option: WFE 2S with gas filter

- Compact filter for adhesive fumes. Consists of: Wide band gas filter (50 % active carbon / 50 % Puratex)

Order No. 230V 005 36 466 99

Order No. 120V WFE2SG

WFE 2 Kit 1



Portable fume extraction kit for one work station

Scope of supply

- 005 36 266 99 WFE 2S Fume extraction unit 120/230 V / 50/60 Hz
- 005 36 572 99 KIT 1 WF Sloped 60 for volume extraction consists of:
 - 005 36 578 99 Extraction arm
 - 005 36 577 99 Sloped nozzle
 - 005 36 574 99 Stop valve
 - 005 36 575 99 Bench mounting clamps, 2 x
 - 005 36 576 99 Extraction hose, 3 m

Order No. 230V

005 36 436 89

Order No. 120V

WFE2SKIT1

WFE 2 Kit 2



Portable fume extraction kit for two work stations

Scope of supply

- 005 36 266 99 WFE 2S Fume extraction unit 120/230 V / 50/60 Hz
- 2 x 005 36 572 99 KIT 1 WF Sloped 60 for volume extraction consists of:
 - 2 x 005 36 578 99 Extraction arm
 - 2 x 005 36 577 99 Sloped nozzle
 - 2 x 005 36 574 99 Stop valve
 - 2 x 005 36 575 99 Bench mounting clamps, 2 x
 - 2 x 005 36 576 99 Extraction hose, 3 m

Order No. 230V

005 36 456 89

Order No. 120V

WFE2SKIT2

Volume Extraction

WFE 2ES / WFE 2CS

Fume extraction unit
as economical solution



Portable fume extraction kit for one work station

The fume extraction unit WFE 2ES is easy to install and operate. It is designed as a smaller central system and is supplied complete with flexible hose, arm and bracket, ready for installation at the workplace.



Technical Data	
Maximum capacity	2 work places
Maximum extraction rate	220 m³/h
Sound level	55 db (A) at 1 m distance
Operating voltage	230V / 50Hz (115V / 60Hz)
Power input	115 VA
Maximum vacuum	1.800 Pa
Dimensions (L x W x H)	320 x 320 x 395 mm
	12.6 x 12.6 x 15.5 in
Weight	9 kg / 19.8 lb

Scope of supply

- 005 36 506 99 WFE 2ES Fume extraction unit consists of:
HEPA filter H12, active carbonate foam
- Fine dust pre-filter F5
- 005 36 571 99 KIT 1 WF Funnel 60 consists of:
005 36 578 99 Extraction arm
005 36 573 99 Funnel nozzle
005 36 574 99 Stop valve
005 36 575 99 Bench mounting clamps, 2 x
005 36 576 99 Extraction hose, 3 m

Order No. 230V	005 36 516 89
Order No. 120V	WFE2ES KIT1

Option: Arm with sloped nozzle

- 005 36 572 99 KIT 1 WF Sloped 60 for volume extraction consists of:
005 36 578 99 Extraction arm
005 36 577 99 Sloped nozzle
005 36 574 99 Stop valve
005 36 575 99 Bench mounting clamps, 2 x
005 36 576 99 Extraction hose, 3 m

Option: WFE 2CS with speed control

Order No. 230V	005 36 526 99
Order No. 120V	WFE2CS

Attributes

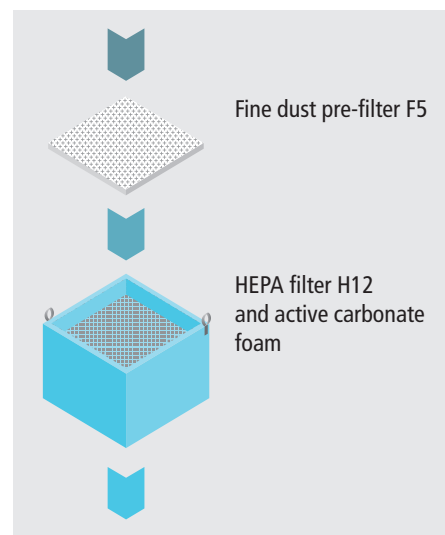
- Mobile fume extraction unit purifies air up to 2 workplaces
- Easy filter exchange
- Quick and simple installation
- Optional: Speed control (WFE 2CS)



ESD safe



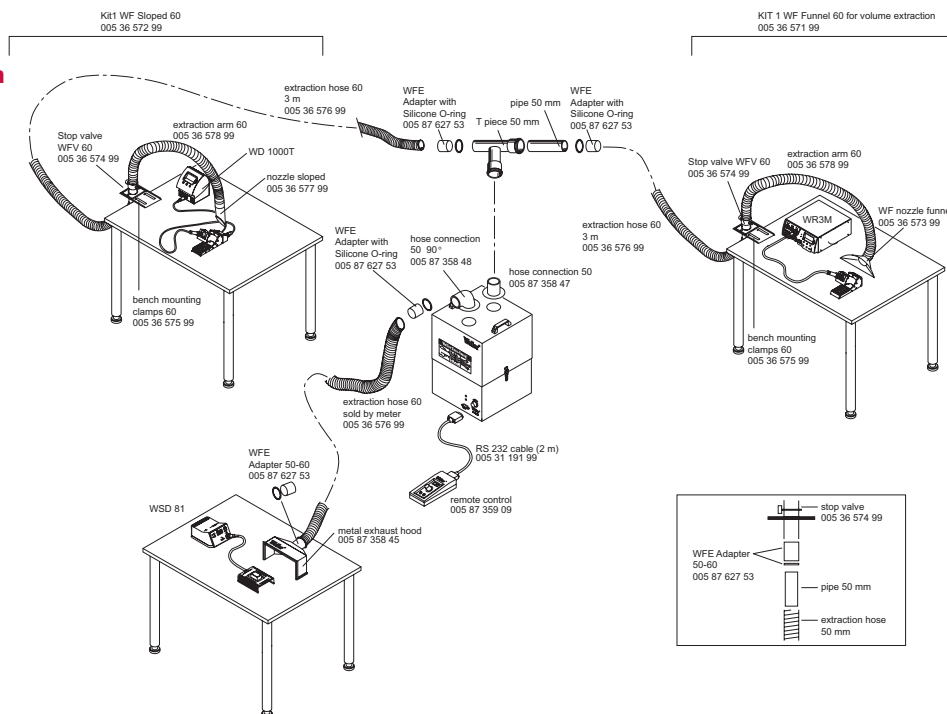
low sound level



Installation Options

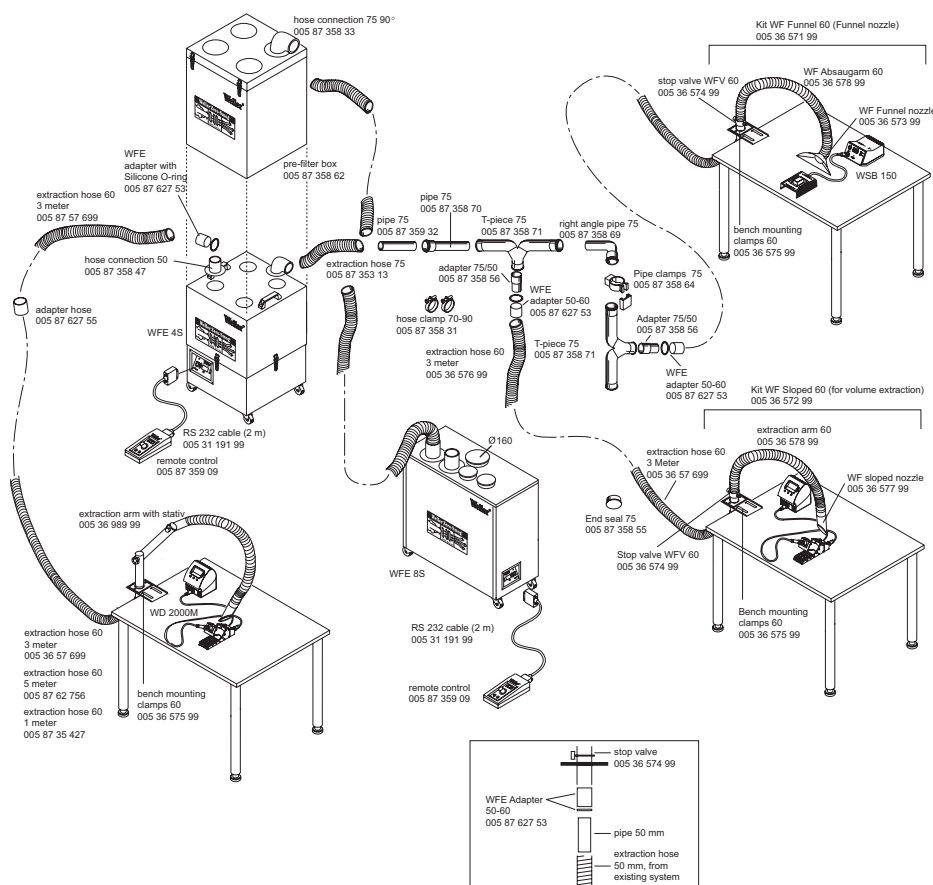
Installation option for a central system with WFE 2S

Total pipe length 15 m (590.55 in)



Installation option for a central and stand alone system with WFE 4S

Total pipe length 30 m (1181.10 in)



Volume Extraction

Accessories

When soldering, gluing or working with solvents it is important to place the nozzle as close to the source as possible to prevent harmful particles and gases being spread into work area.

The Weller® 60 mm (2.36 in) flexible extraction arms allow the quiet and efficient capture of polluted air. The arms and nozzles are simple to install due to the click-on funnels and can easily be fixed into the required position.



Order No.	Description
005 87 358 47	Hose connection 50 for WFE 2S and WFE 4S, e.g. for the direct connection of accessories by means of 50 mm (1.96 in) extraction hose. Plastic, black.
005 87 358 32	Hose connection 75 for WFE 2S and WFE 4S, e.g. for connection to a stand alone system by means 75 mm (2.95 in) pipe or 75 mm (2.95 in) extraction hose. Plastic, black.
005 87 358 48	Hose connection 50, 90° for WFE 2S and WFE 4S, e.g. for the direct connection of accessories by means of 50 mm (1.96 in) extraction hose. Plastic, black.
005 87 358 33	Hose connection 75, 90° for WFE 2S and WFE 4S, e.g. for connection to a stand alone system by means of 75 mm (2.95 in) pipe or 75 mm (2.95 in) extraction hose. Plastic, black.
005 87 353 13	Extraction hose 75 , ø 75 mm (2.95 in), for connection to pipe system 75. Sold by metre. Plastic, grey/black, flexible.
005 87 354 27	Extraction hose 60 , 1 m (39,37 in), ø 60 mm (2.36 in), for connection to pipe system 50. Sold by metre. Plastic, grey/black, flexible.
005 36 576 99	Extraction hose 60 , 3 m (118,11 in), ø 60 mm (2.36 in), for connection to pipe system 50. Plastic, grey/black, flexible.
005 87 627 56	Extraction hose 60 , 5 m (196,85 in), ø 60 mm (2.36 in), for connection to pipe system 50. Plastic, grey/black, flexible.
005 87 627 55	Hose adapter to extend 60 mm hoses
005 87 358 79	Hose clamp 50 – 70 mm , (1.96 - 2.75 in), 2 units, for securing extraction hose 50.
005 87 358 31	Hose clamp 70 – 90 mm , (2.75 - 3.54 in), 2 units, for securing extraction hose 75.



Order No.	Description
005 36 598 99	Articulated extraction arm , 60 mm diameter, flexible extraction arm with articulated joint and bench clamp. ESD safe.
005 36 578 99	Flexible extraction arm , 60 mm (2.36 in) diameter, for sloped and funnel nozzles. Maximum length 1 m (39.37 in), ESD safe.
005 36 577 99	WF 60 sloped nozzle for flexible and static extraction arm.
005 36 573 99	WF funnel nozzle 60 , for flexible and static extraction arm, 230 mm x 100 mm.
005 87 358 45	Exhaust hood , 200 x 100 mm (7.87 x 3.93 in), recommended for use with hot air soldering operations uses extraction hose 60.

Volume Extraction

Accessories



Order No.	Description
005 36 574 99	WFV 60 Stop valve. Table connector for 60 mm (2.36 in) flex arm and extraction tube including air flow valve.
005 36 575 99	Bench mounting clamps, 2 x. Maximum width of clamp 100 mm (3.93 in). 100 mm (3.93 in) diameter. Metal.
005 87 627 53	50/60 Adapter with Silicone O-ring, to connect 60 mm hoses to WFE 2ES, WFE 2CS and WFE 2S.
005 87 627 50	40/60 Adapter for applications using the 60 mm (2.36 in) extraction system connected to the former WFTB 50 and WFFMP 50.

Accessories for WFE 2X



Order No.	Description
005 36 591 99	Hanging device for table mounting for fume extraction unit WFE 2X.
005 36 592 99	Trolley for fume extraction unit WFE 2X.

Exhaust accessories to blow waste air out of a building

Order No.	Description
005 87 359 20	Exhaust adapter of pipe 100 to fume extraction unit WFE 20D.
005 87 358 40	Exhaust adapter of pipe 100 to fume extraction unit WFE 4S.
005 87 359 15	Exhaust adapter of pipe 75 for fume extraction unit WFE 2S.

Remote control for tip and volume extraction units



Order No.	Description
005 87 359 09	Remote control for fume extraction units WFE 20D, WFE 2S, WFE 4S and WFE 8S. Switching unit on/off, speed setting (only WFE 2S / WFE 4S), filter status display.
005 31 191 99	Interface cable RS 232 , 2 m (78.74 in) for remote monitoring by PC (type 1:1).
005 36 593 99	Remote control for fume extraction unit WFE 2X with 2 m (78.74 in) cable.

Replacement Filters

Order No.	Spare filter for WFE 8S:	Order No.	Spare filter for WFE 2X:	Order No.	Spare filter for WFE 4S:
005 36 594 99	Replacement pre-filter	005 36 590 99	Replacement compact filter	005 87 358 37	Fine dust filter F5 (10 pieces)
005 36 595 99	Replacement compact filter (4 pieces in one pack)		Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)	005 87 358 36	Fine dust filter F7 (10 pieces)
	Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)			005 87 358 38	Compact filter
					Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)
				005 87 358 35	Option: Adhesive fume filter (50 % active carbon, 50 % Puratex)
Order No.	Spare filter for WFE 2S:	Order No.	Spare filter for WFE 2ES:	Order No.	Spare filter for pre-filterbox:
005 87 358 84	Fine dust filter F5 (10 pieces)	005 87 627 01	Fine dust filter F5 (10 pieces)	005 87 358 60	Pocket filter F7 for large quantities of dust
005 87 358 85	Fine dust filter F7 (10 pieces)		Compact filter	005 87 359 24	Filter bag for sticky residue (e.g. large quantities of liquid flux)
005 87 358 83	Compact filter		Consists of: HEPA filter H12, wide band gas filter (10 % active carbonate foam)		
	Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)				
005 87 358 95	Option: Adhesive fume filter (50 % active carbon, 50 % Puratex)				

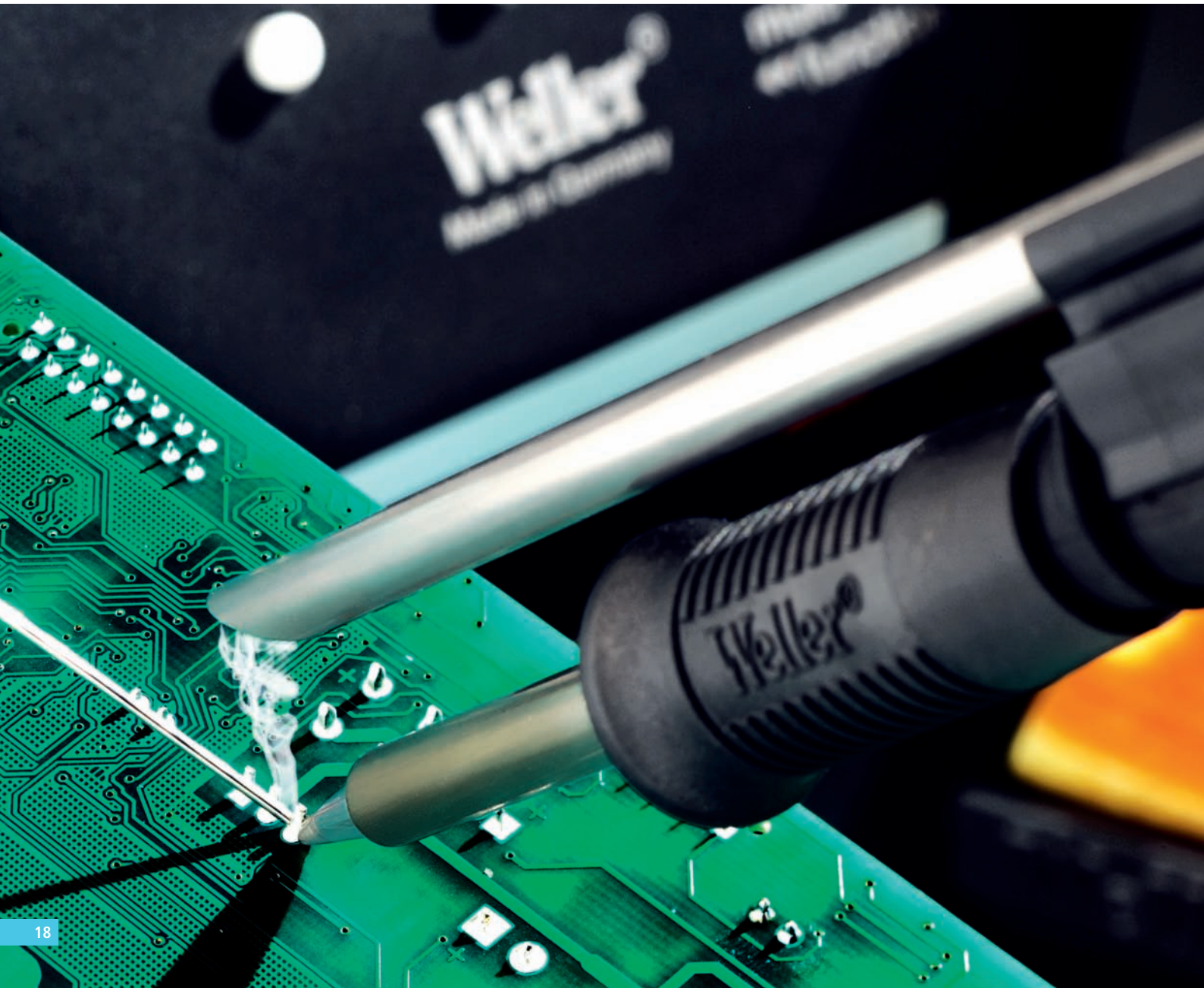
Tip Extraction



Tip Extraction

Weller® FE (Fume Extraction) soldering irons have a smoke tube adapted to the handle. When soldering the tube is positioned directly above the joint and collects any fumes produced. Fume extraction irons can be connected to the Weller® Zero-Smog® Systems WFE, WFE P (both bench mounted units driving up to 2 irons) or WFE 20D – a mobile unit driving up to 40 irons.

A safety rest with Stop + Go function switches the extraction system on when the FE soldering iron is removed from the safety rest and off after a short delay when the iron is replaced (WFE & WFE P only). Fume extraction attachments can be retro-fitted to non fume extraction Weller® soldering irons.



Tip Extraction Units

Characteristics

- FE (Fume Extraction) soldering irons extract fumes directly at the soldering tip.
- Less airflow and high vacuum, up to 12.000 Pa for efficient fume extraction.
- Maximum bridging distance 200 m (7874 in), WFE 20D requires Weller® pipe system 50.
- Filter condition warning – LED on the unit or remote control via RS 232 and PC (WFE 20D).
- Variable electronically controlled pump speed, adjustable at the unit or by remote control via RS 232 and PC (WFE 20D).

Areas of application

- Hand soldering
- Small solder baths



■ WFE 20D

up to 40 workplaces



■ WFE P

up to 2 workplaces



■ WFE

up to 2 workplaces

Tip Extraction

WFE

Small, portable, compressed air driven fume extraction unit



ESD safe



low sound level

Technical Data

Maximum capacity	2 FE soldering irons
Sound level	< 39 db (A) at 1 m distance
Maximum vacuum	20.000 Pa
Operating pressure	3,5 - 6 bar
Air consumption	30 l/min
Height	200 mm (7.8 in)
Diameter	140 mm (5.5 in)
Weight	2,7 kg / 5.9 lb

The fume extraction unit WFE requires clean and oil-free compressed air. The vacuum is generated by a maintenance-free compressed air converter. The contaminated air is purified by a pre-filter and main filter system. A compressed air cleaning filter removes additional odours caused by the compressed air. This highly efficient filter system makes the WFE a genuine air recovery system. The filter-lift system allows fast and convenient filter cartridge replacement. The FE (Fume Extraction) soldering irons are connected directly to the unit – additional leads are not required.

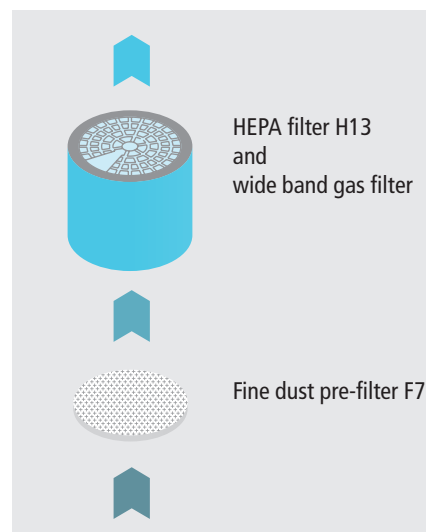
Scope of supply

- WFE Fume extraction unit
- Compressed air cleaning filter
- Compact filter
Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)
- Fine dust filter F7

Order No. 005 36 402 99

Attributes

- Up to 2 FE soldering irons can be connected
- Maintenance-free compressed air converter
- Portable unit for stand alone applications



WFE P

Small, portable, electrically driven fume extraction unit



ESD safe



low sound level

Technical Data

Maximum capacity	2 FE soldering irons
Sound level	< 45 db (A) at 1 m distance
Operating voltage	230 V / 50 Hz
Power input	70 W
Maximum vacuum	30.000 Pa
Height	295 mm (11.6 in)
Diameter	140 mm (5.5 in)
Weight	4 kg / 8.8 lb

The Weller® WFE P is a line voltage fume extraction unit designed to run with one or two FE (Fume Extraction) soldering irons. The WFE P has an electric, long-life, soundproofed vacuum pump to produce the required vacuum – it does not need a compressed air supply. The vacuum pump has two power settings which can be selected by means of rocker switches depending on the number of FE soldering irons connected to the unit. This saves energy. The motor is maintenance-free and has a thermal over load to protect the unit. The filter lift system allows fast and convenient main filter replacement. FE soldering irons are connected directly to unit – additional leads are not required.

Scope of supply

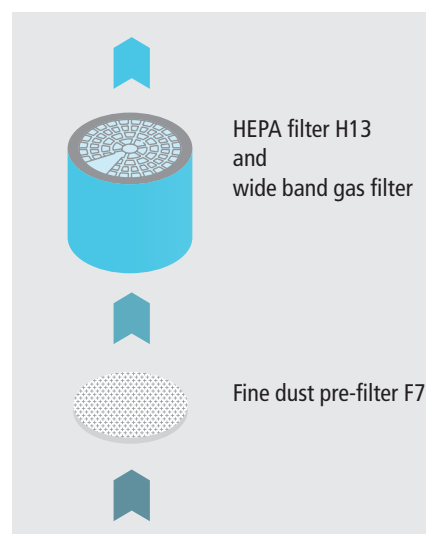
- WFE P Fume extraction unit
- Compact filter
Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)
- Fine dust filter F7

Order No. 230V 005 36 386 99

Order No. 120V 005 36 232 99

Attributes

- Up to 2 FE soldering irons can be connected
- Electric vacuum pump to produce the required vacuum
- 2 power stages for higher extraction performance with 2 FE soldering irons
- Portable unit for stand alone applications



WFE 20D

Mobile, powerful, electronically driven fume extraction unit



ESD safe



low sound level

Up to 5 Weller® FE (Fume Extraction) soldering irons can be connected directly to the fume extraction unit WFE 20D. Using the Pipe System 50 (available as accessory) up to 40 FE soldering irons can be supported by the unit. The powerful maintenance-free turbine generates a vacuum of 12.000 Pa and is electronically

controlled. Operating hours and filter contamination level are also recorded electronically. The filter system achieves a filtration rate of 99,95 % as per EN 1822 with a particle size of 0,12 µm.

Characteristics

- Two operating modes:
Mode 0: Vacuum regulated to 12.000 Pa
Mode 1: Extraction performance can be set between 20 % – 100 % with the control buttons.
- Electronic filter check (LED) through differential pressure measurement. If the specified degree of contamination is exceeded, the unit switches off.
- Electronic filter operation status display. For better management of filter change intervals – the filter operating hours can be pre-specified. The need for filter change is indicated in good time allowing adequate time for filter procurement and replacement. Interface RS 232 for remote monitoring or remote control.
- Remote control available as accessory.

Attributes

- Up to 40 FE soldering irons can be connected
- Electric driven, maintenance free turbine produces the required vacuum
- 4 wheels to allow easy movement of the unit
- Mobile unit for central and stand alone applications
- Central installation for pipe systems up to 200 m (7874 in)

Technical Data

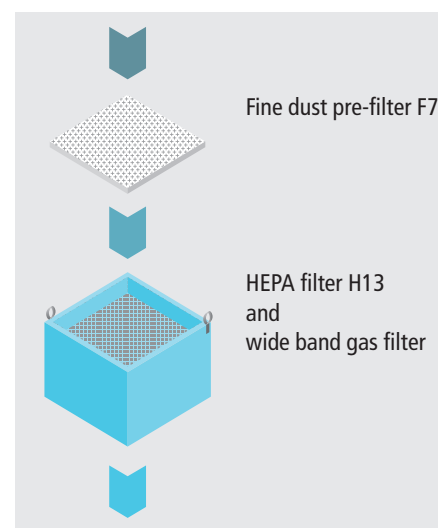
Maximum capacity	40 FE soldering irons
Sound level	< 51 db (A) at 1 m distance
Operating voltage	230 V / 50 Hz 120 V / 60 Hz
Power input	630 VA
Maximum vacuum	12.000 Pa
Max. delivery rate	100 m³/h
Dimension (L x W x H)	450 x 450 x 695 mm 17.7 x 17.7 x 27.3 in
Weight	45 kg / 99 lb

Scope of supply

- WFE 20D Fume extraction unit
- Compact filter
Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)
- Fine dust filter F7

Order No. 230V 005 36 476 99

Order No. 120V WFE20D



Tip Extraction



FE (Fume Extraction) Soldering Irons



The smoke absorption tube is integrated into the handle. It can be placed over the joint when soldering but can be retracted when access to the joint is a problem and can also be removed for cleaning. The irons are temperature controlled, ergonomic and allow precise handling. These electronically controlled irons

can be driven from any Weller® power unit compatible with the rating of the iron or any Weller® rework station. The range of iron power ratings and the extensive range of solder tips mean that there is an iron to suit all applications. The FE soldering irons are supplied with a burn proof hose 5 mm (0.19 in) diameter, 2,5 m (98.42 in) long.

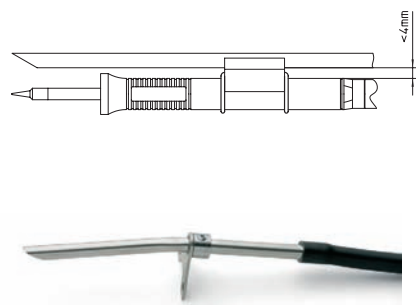


ESD safe

Order No.	Description
005 33 150 99	FE 50 Soldering iron set 50 W / 24 V, with safety rest KH 20*. Not available in US.
005 32 152 99	FE 50M Soldering iron set 50 W / 24 V, Magnastat controlled with safety rest KH 20*. Not available in US.
005 33 151 99	FE 75 Soldering iron set 80 W / 24 V with safety rest KH 20*. For use with LT tips.
005 26 162 99	FE 80 Soldering iron 80 W / 24 V with safety rest KH 20*. Not available in US.

* Cleaning brush for FE tubes and fume extraction funnels are included in the scope of supply of the soldering irons for use with KH 20 and KH 23 safety rests.

FE Attachments



A range of FE attachments are available to fit standard Weller® soldering and desoldering irons to convert them to fume extraction versions. The attachments are supplied with all necessary fittings and hoses. The performance of the retro-fitted tools is not affected.

For Weller® soldering irons WP 120, WP 80, WSP 80, WMP, MLR 21 or soldering irons with handle diameter 10–13 mm (0.39–0.51 in). Clip will be fixed with an silicone O-ring to the soldering iron.

Order No.	Description
005 29 186 99	FE Attachment with tube, ø 6 mm (0.23 in) for WP 120, WSP 80, WP 80, MLR 21, MLR 80, WMP.
005 29 185 99	FE Attachment with tube, ø 4,5 mm (0.17 in) for WP 120, WMRP and WSP 80, WP 80, MLR 21, MLR 80, WMP for fine soldering applications.
005 87 448 75	FE Spare Clip-Set for FE attachment, tube ø 4,5 mm (0.17 in).
005 87 448 76	FE Spare Clip-Set for FE attachment, tube ø 6,0 mm (0.23 in).
005 15 156 99	WDH 50 safety rest for soldering iron with FE attachment.
005 25 125 99	FE Attachment for LR 21, LR 82, TCPS, W 61, W 101, WSP 150 with safety rest AK 1.
005 28 126 99	FE Attachment for WSF 80D5/8.
005 13 125 99	FE Attachment for DS 22, DS 80 and DSX 80 desoldering iron.

Accessories for FE Irons



Order No.	Description
005 36 352 99	Locking clip. The locking clip is used to disconnect FE (Fume Extraction) soldering irons that are not required so that there is no unnecessary loss of extraction power. The clip can be operated quickly and easily.
005 25 410 00	Extraction hose (spare part) Heat-resistant silicone hose, ø 5 mm (0.19 in), for all FE (Fume Extraction) soldering irons (sold by metre).



Order No.	Description
	Cord support. The cord support keeps the soldering iron cord out of the direct working area. This allows easier handling of the soldering iron.
005 15 065 99	Cord support for safety rest AK 20.
005 15 066 99	Cord support for safety rest KH 20/23.

Safety Rests for FE Soldering Irons



Order No.	Description
005 15 030 99	AK 20 Safety rest for FE 50, FE 50M, FE 75, FE 80; for LR 21, LR 82 and TCP with attachment.
005 15 020 99	KH 20 Safety rest for FE 50, FE 50M, FE 75, FE 80.
005 15 023 99	KH 23 Safety rest for FE 25.
005 15 140 99	WPH 80 Safety rest for WSP 80FE; for MLR 21 with FE attachment.

Tip Extraction



Safety Rests with Stop + Go Function for FE soldering irons together with fume extraction units WFE and WFE P

The Weller® Stop + Go safety rests are recommended accessories for FE soldering irons using the WFE or WFE P extraction units. A fibre optic sensor switches the extraction unit on when the FE soldering iron is removed from the

safety rest and off when the FE soldering iron is replaced in the safety rest. After a short delay to gather the fumes from any solder on the tip, it switches the unit off. This saves the soldering tip and reduces the running costs.



Order No.	Description
005 15 086 99	KHP Pneumatic basic unit (for WFE), safety rest with Stop + Go function with fibre optic sensor for soldering irons FE 25, FE 50, FE 50M, FE 75 and FE 80.
005 15 076 99	KHE Electric basic unit (for WFE P), safety rest with Stop + Go function with fibre optic sensor for soldering irons FE 25, FE 50, FE 50M, FE 75 and FE 80.
005 15 080 99	KHE/P Second safety rest with fibre optic sensor for extending to 2 workplaces for soldering irons FE 25, FE 50, FE 50M, FE 75 and FE 80.
005 15 084 99	KHP 80 Basic unit pneumatic (for WFE) safety rest with Stop + Go function with fibre optic sensor for soldering iron WSP 80FE.
005 15 083 99	KHE 80 Basic unit electric (for WFE P) safety rest with Stop + Go function with fibre optic sensor for WSP 80FE.
005 15 141 99	KHE 80/P 80 Second safety rest with fibre optic sensor for extending to 2 workplaces for WSP 80 FE.
005 15 156 70	WDH 50 E/P Safety rest for soldering iron with FE Attachment

Not available in US.

Accessories for workbench installations



Order No.	Description
005 36 316 99	Extraction hose 40 , 1 m (39.37 in), ø 40 mm (1.5 in). Complete with 2 connecting elements for direct connection of unit (WFE 20D) to pipe system 50. Plastic, grey/black, flexible.
005 36 414 00	Extraction hose 40 , ø 40 mm (1.5 in) without connecting elements. Sold by metre. Plastic, grey / black, flexible.
005 36 415 99	Connecting element 40 – 50 for connecting extraction hose 40 and pipe system 50. Rubber, black.
005 36 326 99	Extension hose DN 17 (13 x 3 mm), 5 m (198.85 in), ø 17 mm (0.6 in), used where the fume extraction iron is further than 2,5 m (98.42 in) from the pipe system 50. Note: Connection nipple for hose 17 and adapter 17 will be required. Plastic, transparent.
005 87 358 65	Connection nipple for extension hose 17. Amend direction to read direct.
005 87 358 66	Nut G 3/8" for connection nipple.
005 36 343 99	Adapter 17 for connection extension hose DN 17 with ø 5 mm (0.19 in) extension hose of FE irons.
005 36 338 99	Connection nipple for 5 mm (0.19 in) diameter extraction hose to connect FE soldering irons directly to pipe system 50. The connection nipple is screwed at any point into the pipe system.
005 87 350 50	End cap to close off to connection nipple.

Spare Part Filters

Order No.	Spare filter for WFE:
005 87 357 57	Compressed air - cleaning filter
005 36 410 99	Compact filter Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)
005 36 407 99	Compact filter Consists of: HEPA filter H13, wide band gas filter (100 % active carbon)
005 36 421 99	Fine dust filter F7 (3 pieces)
005 36 597 99	Compact filter with enlarged pre-filter

Order No.	Spare filter WFE 20D:
005 87 358 37	Fine dust filter F5
005 87 358 36	Fine dust filter F7
005 87 358 38	Compact filter Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)

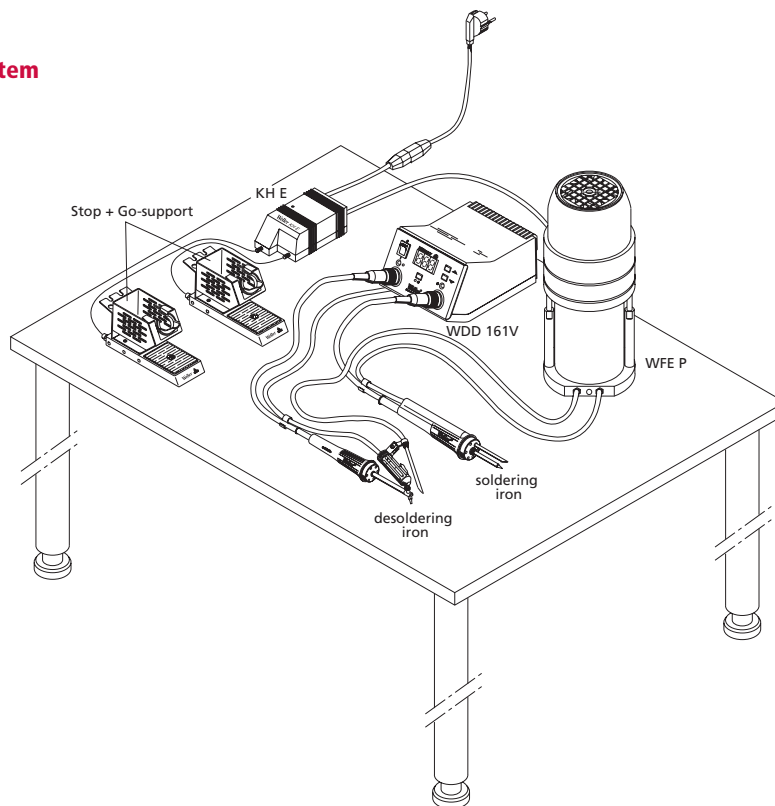
Order No.	Spare filter for WFE P:
005 36 410 99	Compact filter Consists of: HEPA filter H13, wide band gas filter (50 % active carbon, 50 % Puratex)
005 36 407 99	Compact filter Consists of: HEPA filter H13, wide band gas filter (100 % active carbon)
005 36 421 99	Fine dust filter F7 (3 pieces)
005 36 597 99	Compact filter with enlarged pre-filter

Tip Extraction



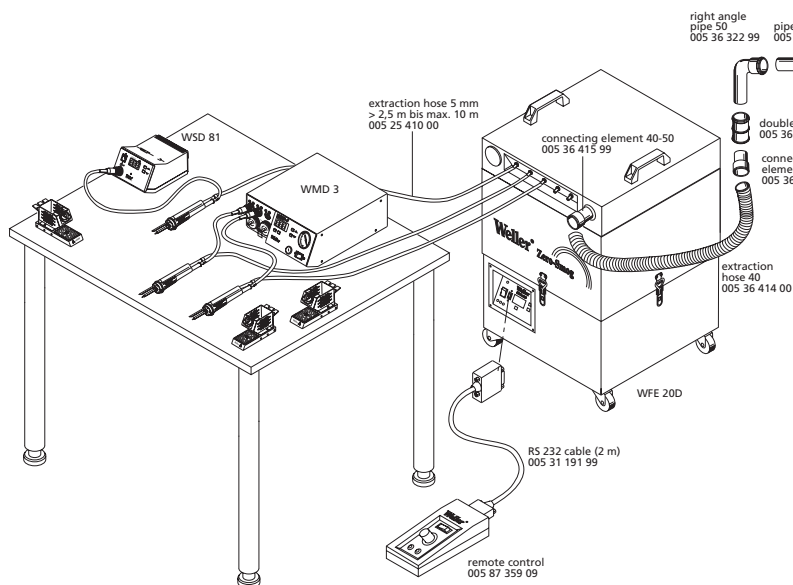
Installation Options

Installation option for a central system with WFE P

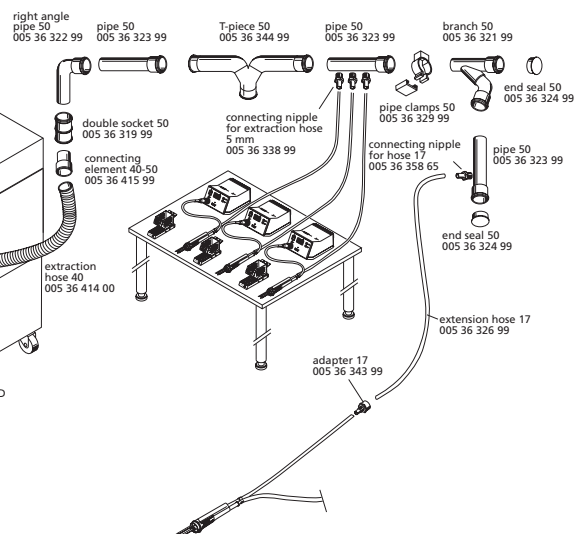


Installation option for a central and stand alone system with WFE 20D

central system



stand alone system with pipe system 50 upto ca. 200 m



Pipe Systems for Tip and Volume Extraction

Pipe System 50 Tip Extraction

Tip extraction systems demand a high quality, constant level of vacuum across the installation. To achieve this it is necessary to use a pipe system with a relatively small diameter. The Weller® pipe system 50 allows extraction **installations of up to 200 m (7874 in)** when used with the WFE 20D unit in a stand alone system. The pipe sections are designed to join together and have internal sealing bushes. In a central system, the FE soldering irons are connected directly to the fume extraction units.



Pipe System 75 Volume Extraction

Volume extraction systems require a large volume of air to be extracted and the level of vacuum is of lesser importance. This means that a relatively large diameter pipe system is required. If the pipe diameter is too small the flow resistance is increased and extraction capacity reduced. The pipe system 75 allows **installations up to 30 m (1191.1 in)** with the WFE 4S used in a stand alone system. The pipe sections are designed to join together and have internal sealing bushes.

Order No. Pipe System 50	Pipe System 70	Description
005 36 323 99	005 87 358 70	Pipe , 2 m (78.74 in), with seal at one end. PEHD*, black.
005 36 322 99	005 87 358 69	Right angle pipe , 90°, 0,2 m (7.87 in), with seal at one end. PEHD*, black.
005 36 344 99	005 87 358 71	T-piece , 2 x 90°, 0,5 m (19.68 in), with 3 seals. PEHD*, black.
005 36 321 99		Branch , 2 x 45°, 0,3 m (11.81 in), with 2 seals. PEHD*, black.
005 36 319 99		Double socket . PEHD*, black.
005 36 324 99	005 87 358 55	End seal . Plastic, transparent.
005 36 329 99	005 87 358 64	Pipe clamps for pipes, e.g. for securing to wall. Plastic, grey.
	005 87 358 63	Adapter pipe system 75 to pipe system 50 with seals.
	005 87 358 56	Adapter PEHD* pipe system 75 to pipe system 50, without seals.

*PEHD = Polyethylen High Density

GERMANY

Cooper Tools GmbH

Carl-Benz-Straße 2
74354 Besigheim
Tel: (07143) 580-0
Fax: (07143) 580-108

USA

Cooper Hand Tools

World Headquarters

1000 Lufkin Road
Apex, NC 27539 USA
Tel: (919) 387 0099
Fax: (919) 387 2614

FRANCE

Cooper Tools S.A.S.

25 Rue Maurice Chevalier BP 46
77832 Ozoir-la-Ferrière Cedex
Tel: (01) 60.18.55.40
Fax: (01) 64.40.33.05

ITALY

Cooper Italia S.r.l.

Viale Europa 80
20090 Cusago (MI)
Tel: (02) 9033101
Fax: (02) 90394231

SWITZERLAND

Erem S.A.

Rue de la Roselière 8
1400 Yverdon-les-Bains
Tel: (024) 426 12 06
Fax: (024) 425 09 77

GREAT BRITAIN

Cooper Tools

A Division of Cooper (GB) Ltd.
4th Floor Pennine House
Washington, Tyne & Wear
NE37 1LY
Tel: (0191) 419 7700
Fax: (0191) 417 9421

CANADA

Cooper Hand Tools – Canada

164 Innisfil Street
Barrie, Ontario
Canada L4N 3E7
Tel: (705) 728 5564
Fax: (800) 403 8665

CHINA

Cooper Hand Tools

18th Floor, Yu An Building
738 Dongfang Road
Pudong, Shanghai
200122 China
Tel: (21) 5111 8300
Fax: (21) 5111 8446

AUSTRALIA

Cooper Tools Pty. Limited

P.O. Box 366
519 Nurigong Street
Albury, N.S.W. 2640
Australia
Tel: (2) 6058-0300
Fax: (2) 6021-7403

www.coopertools.eu
www.weller.eu