Exento
Fume Extraction Torch

Fronius International, PM Welding Torches
Information Class: Confidential

MTW/MTG Exento Fume Extraction Torch

Improved accessibility
due to new extraction nozzle design

Regulation of the extraction power

TPS/i UserInterface

Comfortable handling due to new handle design, ball joint and lower weight

Standard wear parts of the TPSi generation

LED lighting of the welding point

Leather protection hose 1,3m
(Possible as a project over the whole length)

Accessibility | Energy Saving

Improved accessibility:
Even without extraction nozzle, the standard EN ISO 21904-1 is fulfilled. Therefore best accessibility.

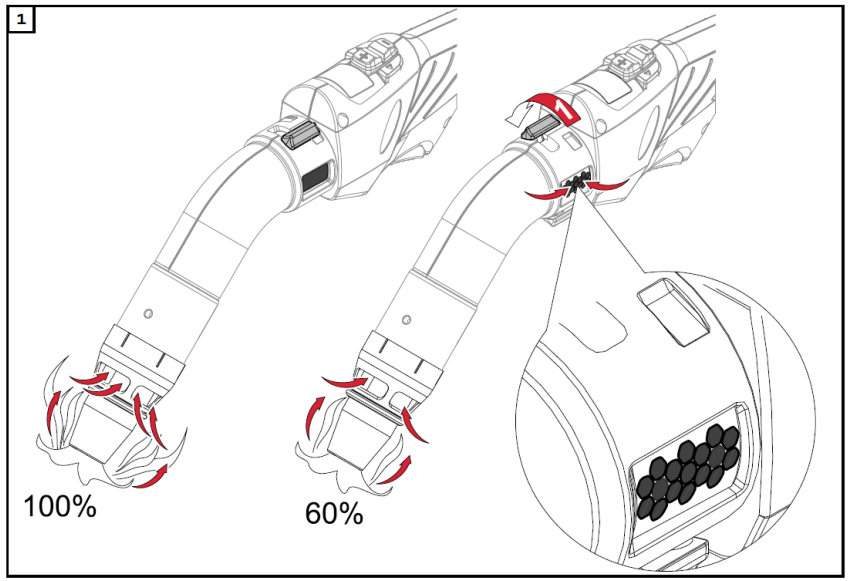
With extraction nozzle
10% energy saving
Extraction nozzle for best energy- and extraction efficiency.

Regulation of the Extraction Power on the Welding Torch

Closed:
Standard setting

Open

- Opening the bypass slider reduces the extraction rate by approx. 40%.
- Application example: prevents extraction of shielding gas in corners or narrow welding spots



UserInterface

Standard

UpDown

JobMaster

Torch trigger top

(Possible as a project)

LED Lighting of the Welding Point

Lighting of the welding point before and after welding

Control via two-step torch trigger

Standard Wear Parts of the TPSi Generation

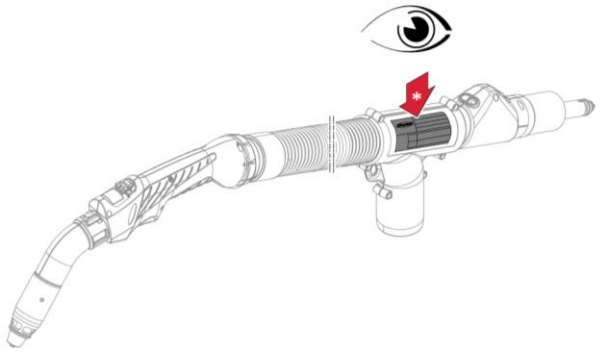
Exento Extraction Torches Fulfill the Norm EN ISO 21904-1

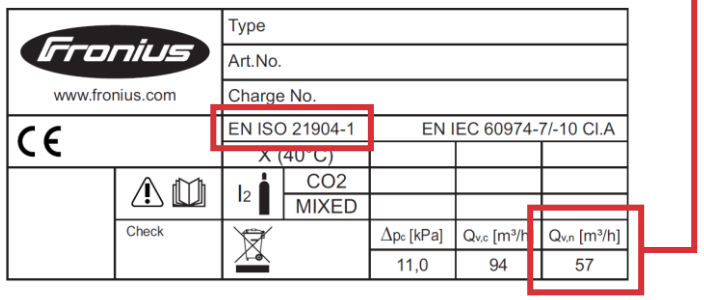
- Extraction torches capture and separate welding fumes directly where they are generated.

- They fulfill the requirements of the EN ISO 21904-1 norm for occupational health and safety in welding and allied processes.

Option „Exentometer“ 44,0350,2079

- The measuring tube is used for precise adjustment of the optimum extraction power
- The optimum extraction rate depends on many things, welding process, power, material, welded parts....
- Example MTG 400i: According to the norm, a value of at least 57 m³/h extraction rate must be set here. (The value can be found on the rating plate)





Extraction "On“

Set value

Check

- Each Exentometer is checked before delivery.
- The upper Exentometer is designed as a testing device at Fronius and is checked once a year.
- The lower Exentometer is a new one which is tested
- Tested with 55 m^3/h
- Tolerance is between +/- 5m^3/h

Testing device

New one which is tested

Option „Exentometer“ for competitor torches

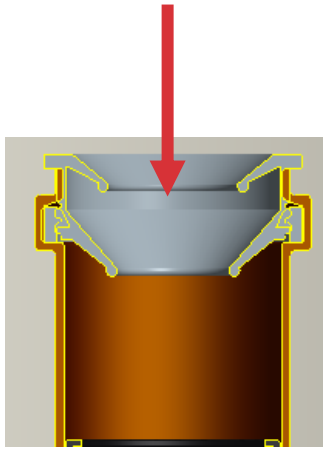
– Competitor torches can also be checked using an exentometer.

– The following parts must be ordered optionally:

– Sleeve: 42,0402,0327

– Corrugated ring: 42,0402,0326

– The extraction nozzle is pushed into the corrugated ring until the double lip seals.



Variants & Technical Data

Gas cooled:

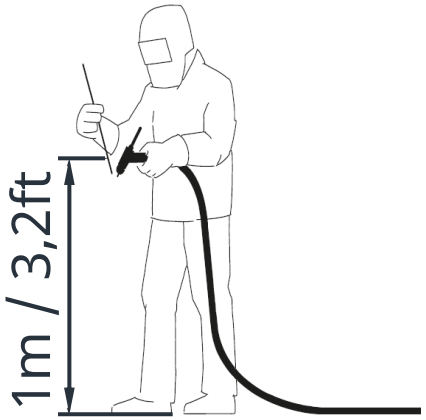
- MTG 250i Exento – 250A 40% DC (Gas nozzle ø22mm)
- MTG 320i Exento – 320A 40% DC (Gas nozzle ø25mm)
- MTG 400i Exento – 400A 40% DC (Gas nozzle ø25mm)

Welding torch lengths:
3,5m and 4,5m

Water cooled:

- MTW 300i Exento – 300A 100% DC (Gas nozzle ø22mm)
- MTW 500i Exento – 500A 40% DC (Gas nozzle ø25mm)

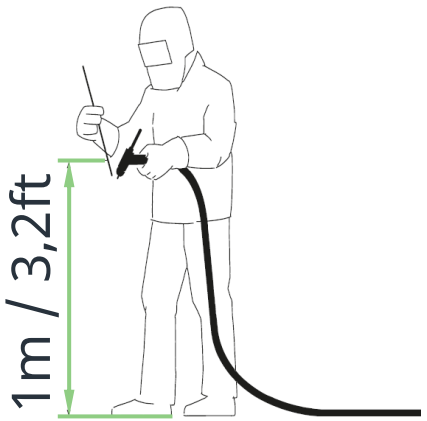
Weight



Gas cooled:		**3,5m | 4,5m**
– MTG 250i Exento	Manual weight: 1,4 kg	Net weight: 3,34 kg | 3,77 kg
– MTG 320i Exento	Manual weight: 1,7 kg	Net weight: 4,08 kg | 4,69 kg
– MTG 400i Exento	Manual weight: 1,75 kg	Net weight: 4,15 kg | 4,85 kg
Water cooled:		
– MTW 300i Exento	Manual weight: 1,33 kg	Net weight: 3,01 kg | 3,36 kg
– MTW 500i Exento	Manual weight: 1,42 kg	Net weight: 3,62 kg | 4,11 kg

Comparison weight with standard torches

	Hand weight	Weight standard torch
MTG 250i Exento	1,4 kg	MTG 250i: 1,02 kg
MTG 320i Exento	1,7 kg	MTG 320i: 1,35 kg
MTG 400i Exento	1,75 kg	MTG 400i: 1,4 kg
MTW 300i Exento	1,33 kg	MTW 250i: 0,94 kg MTW 400i: 1,0 kg
MTW 500i Exento	1,42 kg	MTW 500i: 1,2 kg



Central connectors

FSC for TPS/i and TransSteel power sources

- TPSi supports Standard, UpDown and JobMaster
- TransSteel supports Standard and UpDown

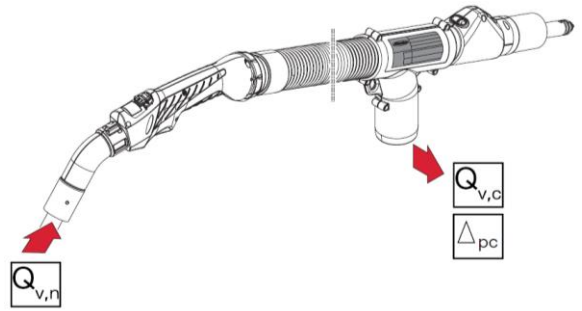
Euro Connector

- With part number only Standard UserInterface
- As a project also UpDown possible
  - For Fronius power sources with Tuchel control plug
  - For competitor power sources with 3-pole control line without control plug
    - **Please specify when ordering!!!**

Adapter FSC to F/F++ and Euro for TPS power sources

- Standard and UpDown possible (Attention! UpDown adapter only works with Fronius power sources)
- Note: BasicKits with .000 or .001 to be ordered as well

Part numbers



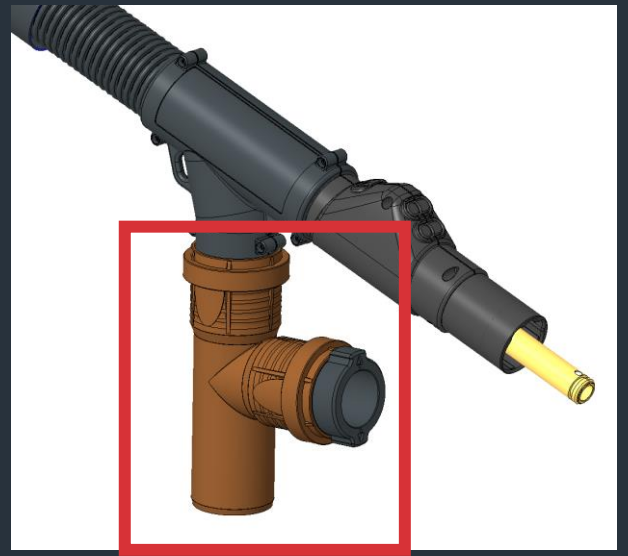
Variants	Part numbers	Description	User interface	Available with Euro connector ending in ,001	Qv,n [m³/h]	Qv,c [m³/h]	Δpc [kPa]
MTG 250i Exento	4,036,454	MTG 250i Exento/FSC/3,5m	Standard	X	52	70	10,0
	4,036,455	MTG 250i Exento/FSC/4,5m	Standard	X		80	10,8
	4,036,456	MTG 250i Exento/FSC/UD/3,5m	Up/Down			70	10,0
	4,036,457	MTG 250i Exento/FSC/UD/4,5m	Up/Down			80	10,8
	4,036,458	MTG 250i Exento/FSC/JM/3,5m	JobMaster			70	10,0
	4,036,459	MTG 250i Exento/FSC/JM/4,5m	JobMaster			80	10,8
MTG 320i Exento	4,036,460	MTG 320i Exento/FSC/3,5m	Standard	X	57	90	10,2
	4,036,461	MTG 320i Exento/FSC/4,5m	Standard	X		94	11,0
	4,036,462	MTG 320i Exento/FSC/UD/3,5m	Up/Down			90	10,2
	4,036,463	MTG 320i Exento/FSC/UD/4,5m	Up/Down			94	11,0
	4,036,464	MTG 320i Exento/FSC/JM/3,5m	JobMaster			90	10,2
	4,036,465	MTG 320i Exento/FSC/JM/4,5m	JobMaster			94	11,0
MTG 400i Exento	4,036,466	MTG 400i Exento/FSC/3,5m	Standard	X	57	90	10,2
	4,036,467	MTG 400i Exento/FSC/4,5m	Standard	X		94	11,0
	4,036,468	MTG 400i Exento/FSC/UD/3,5m	Up/Down			90	10,2
	4,036,469	MTG 400i Exento/FSC/UD/4,5m	Up/Down			94	11,0
	4,036,470	MTG 400i Exento/FSC/JM/3,5m	JobMaster			90	10,2
	4,036,471	MTG 400i Exento/FSC/JM/4,5m	JobMaster			94	11,0
MTW 300i Exento	4,036,472	MTW 300i Exento/FSC/3,5m	Standard	X	52	95	13,5
	4,036,473	MTW 300i Exento/FSC/4,5m	Standard	X		100	15,0
	4,036,474	MTW 300i Exento/FSC/UD/3,5m	Up/Down			95	13,5
	4,036,475	MTW 300i Exento/FSC/UD/4,5m	Up/Down			100	15,0
	4,036,476	MTW 300i Exento/FSC/JM/3,5m	JobMaster			95	13,5
	4,036,477	MTW 300i Exento/FSC/JM/4,5m	JobMaster			100	15,0
MTW 500i Exento	4,036478	MTW 500i Exento/FSC/3,5m	Standard	X	57	100	11,9
	4,036,479	MTW 500i Exento/FSC/4,5m	Standard	X		105	14,0
	4,036,480	MTW 500i Exento/FSC/UD/3,5m	Up/Down			100	11,9
	4,036,481	MTW 500i Exento/FSC/UD/4,5m	Up/Down			105	14,0
	4,036,482	MTW 500i Exento/FSC/JM/3,5m	JobMaster			100	11,9
	4,036,483	MTW 500i Exento/FSC/JM/4,5m	JobMaster			105	14,0

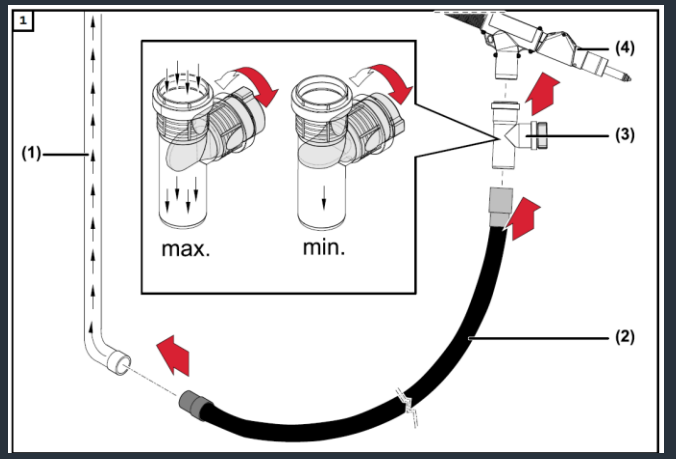
Option “Pistol Grip” 44,0350,2169

- We start with a 3D printed variant
- Material: Fiberglass reinforced plastic
- CE requirements were fulfilled
- Feedback on the design is welcome
- If all requirements are known and the request is big enough we will make an injection mold

Option „Air Regulator“ 44,0350,2082

- For setting the extraction power for central extraction systems
- Is simply mounted between welding torch and extraction hose
- The throttle valve can be easily turned from max. to min. and vice versa from the outside





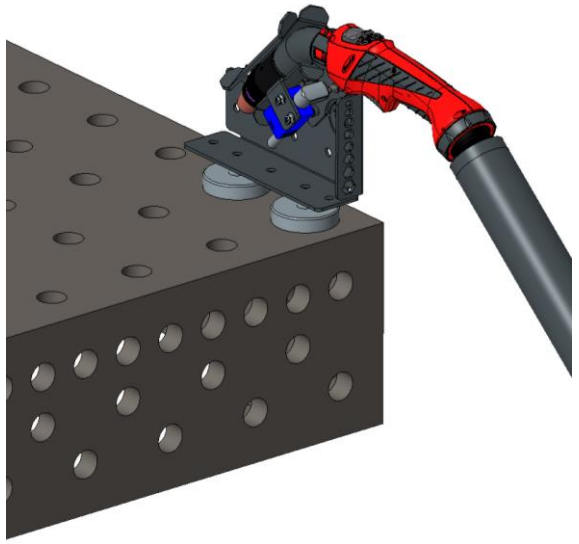
(1) central extraction system, (2) extraction hose, (3) external air flow regulator, (4) welding torch

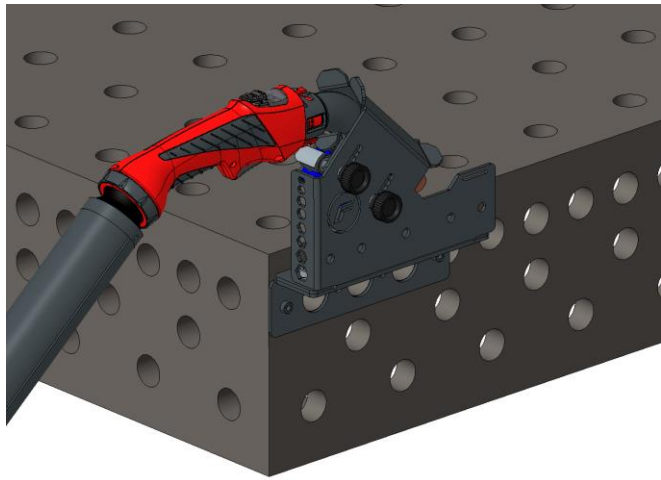
Option Torch Holder

With start/stop switch for extraction unit

- As soon as the torch is removed from the holder, the extraction unit or a pneumatic slide valve in central extraction systems switches on.
  (pay attention to the performance of the switch)

Pneumatic slide valve





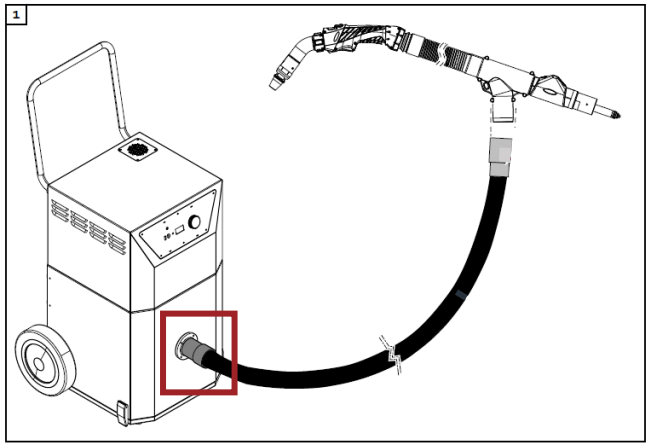
- Full extraction power right at the start of the welding process
- Torch holder is fixed to the workstation either with magnets or with screws
- Part number: 44,0350,4515

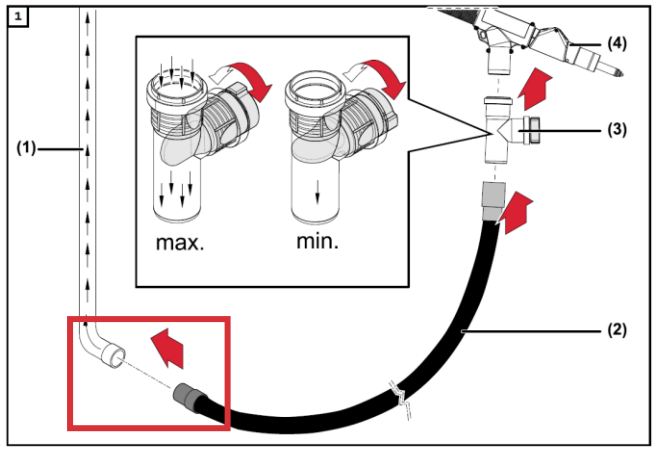
Option Torch Holder

- The supplied cable is one metre long and can be connected directly to the Exento HV.
- If the one metre cable is too short, you can find the article numbers of the extension cables here:
  - 38,0001,0153 Signalkabel M12ST/M12B 0,6m
  - 38,0001,0154 Signalkabel M12ST/M12B 1m
  - 38,0001,0155 Signalkabel M12ST/M12B 2,5m
  - 38,0001,0156 Signalkabel M12ST/M12B 4m
  - 38,0001,0157 Signalkabel M12ST/M12B 5m
  - 38,0001,0158 Signalkabel M12ST/M12B 7m
  - 38,0001,0159 Signalkabel M12ST/M12B 10m
  - 38,0001,0173 Signalkabel M12ST/M12B 15m
  - 38,0001,0174 Signalkabel M12ST/M12B 20m

Extraction Hose

Item number	Description
42,0510,0481	HV extraction hose ø44mm 2,5m
42,0510,0482	HV extraction hose ø44mm 5m
42,0510,0489	HV extraction hose ø63mm 5m
42,0510,0490	HV extraction hose ø63mm 7,5m
42,0510,0483	HV extraction hose ø63mm 10m
42,0510,0491	Reducer 63/44mm IT/IT





(1) Zentralabsaugung, (2) Absaugschlauch, (3) externer Luftstrom-Regler, (4) Schweißbrenner

Note:

When using third-party products or a central exhaust system, the customer is responsible for the correct connection.

Exento HighVac

W3 | EN ISO 21904-1 η ≥ 99% | W3

Filter quality

The extra large vertically mounted filter cartridge separates **99.9%** of the extracted **fine dust**.

Intuitive one-button operation

Easy operation of the unit even with welding gloves

Semi-automatic cleaning

The device warns when the filter is getting clogged – with the rotary/push knob the cleaning process will be started

Constant extraction rate control

Automatic regulation of the air volume flow to the set value (e.g. 80m³/h)

Perfect Match

Best performance with the Exento extraction set or Exento extraction torch

Start-Stop automatic (optional)

Saves time & energy - Extraction only during the welding process

CE, UKCA, UL/CSA, CCC (not required)

Link PowerPoint Presentation

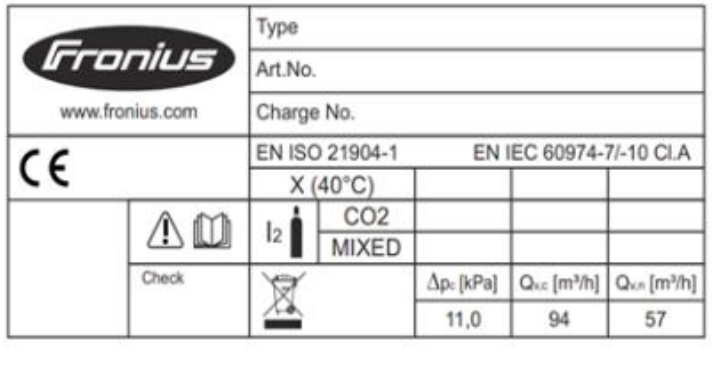
Setting the Exento welding fume extraction system

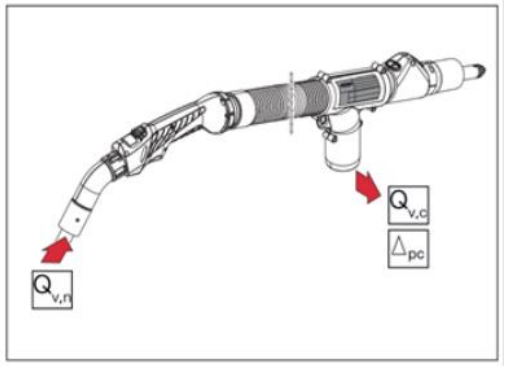
- **Step 1: Setting of welding process**

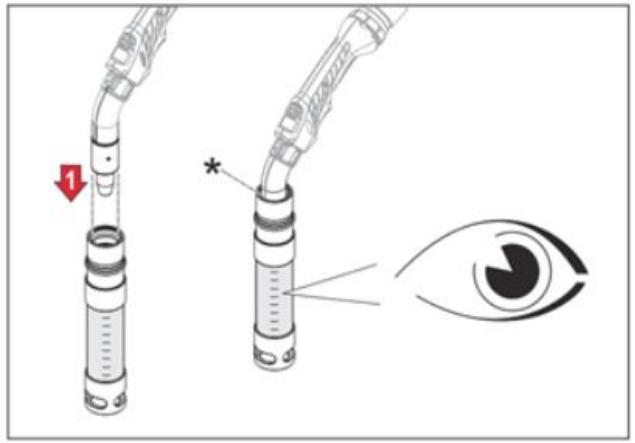
- Welding process must be set **without suction power**, thus an influence on the weld seam is excluded by the suction system. It is important to always use as-new clamping nipples with seals.

- **Step 2: Adjust the suction power of the entire system (welding torch + hoses) using the exentometer at the front of the gas nozzle.**

- Make sure that this is done without the suction nozzle and with the bypass closed. The value according to the standard can be seen on the power plate of the hose pack at the central connection and is given in Qv,n. This value is used to check whether the overall system is functioning correctly according to the standard.



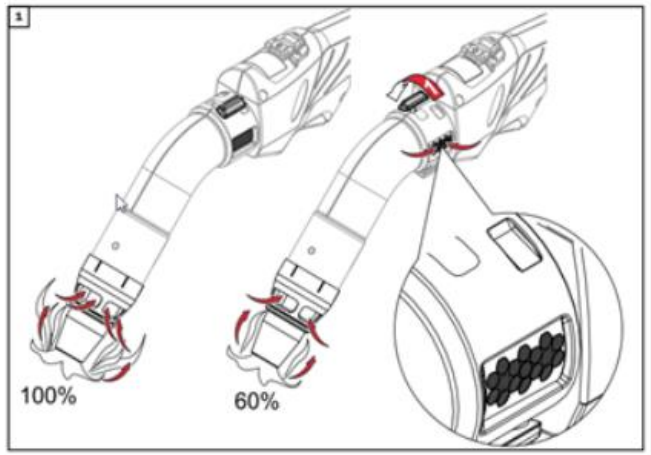


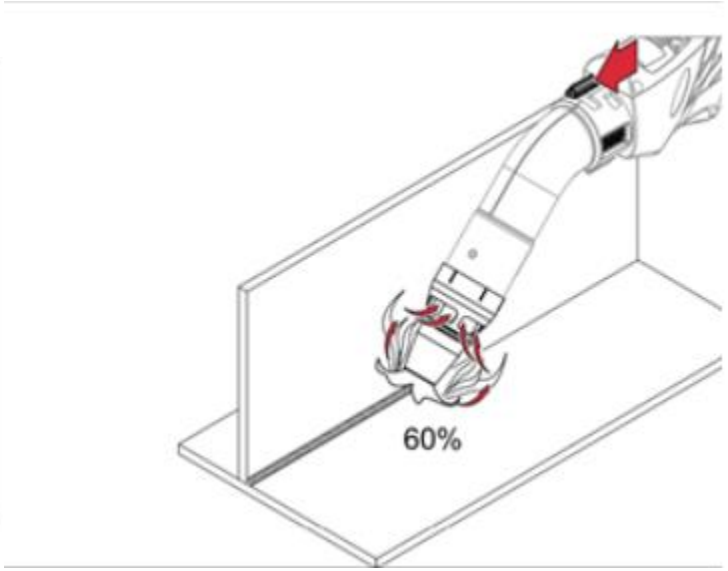


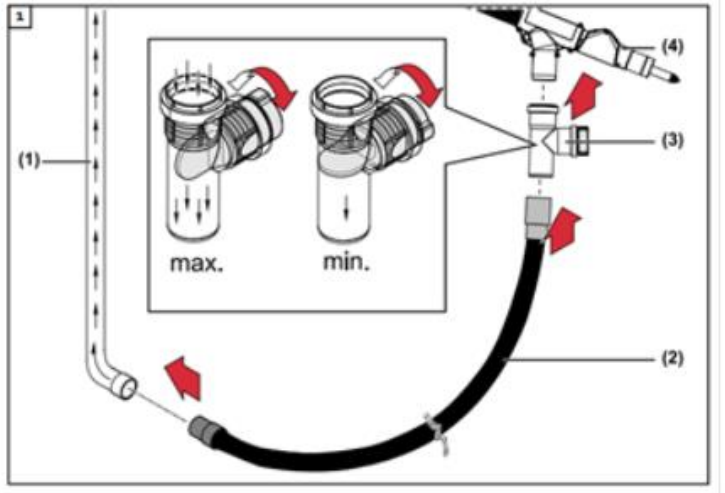
Setting the Exento welding fume extraction system

- **Step 3: Adjust suction power to the welding process**

- If the suction nozzle is used, the suction power can be reduced by 10 %. When welding a fillet weld, the extraction power can be reduced by another 40%. This can be achieved by opening the bypass, or by a general reduction of the extraction power.







Setting the Exento welding fume extraction system

- Attention! These are only guide values
- To prevent a negative influence on the welding process, the **extraction power should be reduced as much as possible**.
- If the welding results are poor, the first step is to **control or reduce the extraction power** and **not to increase the shielding gas quantity**
- Increasing the amount of shielding gas can cause additional turbulence at the gas nozzle, resulting in poorer welding results. Furthermore, the welding fumes are blown further away and can then no longer be captured by the extraction nozzle.

- **Notice:**
- When using an adapter from FSC to F++/Euro, at the moment

  the seal 42,1100,0321 must also be included.
- This will be mounted on the adapter as standard in the future.