STAUFF Connect

Metric tube connectors, assembly tools and accessories

Product Catalogue

Version
10/2026

Germany

www.stauff.com

STAUFF products and services are globally available through wholly-owned subsidiaries and a tight network of authorised distributors and representatives in all major industrial regions of the world.

Please note: Unless otherwise stated, all data and figures in this product catalogue are Approximate values and are only valid as references, which are not binding (also in respect to any third parties' rights of protection) and thus do not release the customer / user from checking and testing the suitability of the products for the foreseen purposes. Therefore, data and figures can only be used in a limited sense for construction purposes.

The application of the products is beyond the control possibilities of the manufacturer and, therefore, is exclusively subject to the responsibility of the customer / user.

In the event that a liability is nevertheless considered, any compensation will be limited to the value of the goods supplied by the manufacturer and used by the customer / user. As a matter of course, the manufacturer guarantees the perfect quality of all products in accordance with the General Terms and Conditions of Business and Sale.

Subject to modifications due to the ongoing development and improvement of the products.

With the publication of this product catalogue, previous editions are no longer valid.

Cutting Ring Final Assembly Machine with Cloud connection
SPR-PRC-POC-A-A-IOT 250

Cutting Ring Assembly Stud for Machine-Assisted Assembly
FI-MFK 252

Support Plate for Machine-Assisted Assembly
FI-GP 253

IoT
Cloud connection
SPR-PRC-POC-A-A-IOT 254

Optional tool holder for tubes with small bending radii
SPR-PRC-POC-RTH 254

Accessories 254

Cutting Ring Assembly and 37° Flaring Machine with Automatic / Manual Pressure Setting
SPR-PRC-MA-D-A 256

Accessories 258

Cutting Ring Assembly Stud for Machine-Assisted Assembly
FI-MFK 259

Support Plate for Machine-Assisted Assembly
FI-GP-PRC 260

Clamping Jaws for 37° Flaring
FI-KB-PRC 261

Portable Cutting Ring Assembly Machine with Manual Pressure Setting (Set)
SPR-PRC-H-E-SET 262

Cutting Ring Assembly Stud for Machine-Assisted Assembly
FI-MVK-PRC-H-M 264

Manual Cutting Ring Pre-Assembly Device
SPR-PRC-MP 266

Cutting Ring Assembly Stud for Manual Assembly
FI-MFK 267

Support Plate for Manual Assembly
FI-GP-PRC 268

Final Assembly Stud for the Manual Cutting Ring Assembly
FI-FK 270

STAUFF Form EVO Tube Forming Machine with Cloud connection
SFO-F-A-A-IOT 272

IoT
Cloud connection
SFO-F-A-A-IOT 272

Tube Shapers
FI-FST 274

Internal Tube Supports
FI-ID 274

Clamping Jaws
FI-FB 275

Accessories 276

P

STAUFF Press
Cutting Ring Final Assembly Machine
Type SPR-PRC-POC-A-A-IOT

Product Description

The STAUFF Press Assembly Machine SPR-PRC-POC-A-A-IOT allows the pressure/position-controlled final assembly of cutting rings from the Extra-Light Series (LL), the Light Series (L) and the Heavy Series (S) according to ISO 8434-1 / DIN 2353 on tube ends with outer diameters between 4 mm and 42 mm.

The machine is designed as a robust table-top device for continuous operation in the workshop. It is used in connection with hardened and wear-resistant assembly studs FI-FMK and support plates FI-GP which are specially designed for the machine-assisted assembly.

The combined pressure/position-control of the device allows wear on the assembly tools to be detected in time before it can have a negative influence on the assembly result. Maximum service life of the tools is achieved through careful handling of the components and practical operation of the assembly machine. Other factors are proper storage (protected against contamination and corrosion), regular cleaning and lubrication (with suitable lubricants) and thorough preparation of the tube ends before assembly (cutting, deburring and cleaning).

Short times for tool changes, setup and assembly make it possible to carry out series assembly of cutting rings as well as assembly of small and medium quantities with a high level of economic efficiency, reproducibility and process reliability. Among other things, this is achieved with the RFID transponders – which are integrated into the support plates for automatic tool size identification as a standard – and with the tool contact switch: this allows assembly processes to be automatically started and completed by simply pushing the tube end into the assembly stud without having to press any buttons. The assembly area is secured against interference by a light grid to comply with current accident prevention regulations.

With machine-assisted **final assembly**, the cutting ring has already cut 100% into the tube and the fitter only has to tighten the union nut by 30° (corresponds to 1/12 turns) from the fix point. Please pay attention to the corresponding assembly instruction.

Final assembly (100%) minimises the risk for errors (insufficient or excessive manual tightening) and the resulting leak potentials which can often lead to time consuming and expensive machine downtimes and environmental impact. Due to the time benefits during final tightening, final assembly by machine also generates clear saving potentials compared to manual direct assembly as well as to machine-assisted pre-assembly.

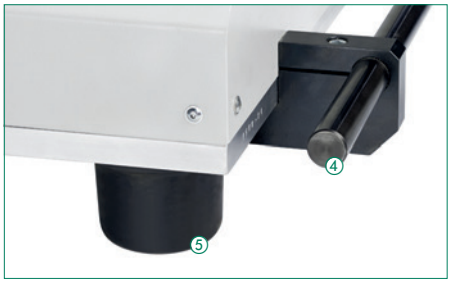
In case of incorrect or incomplete assembly where pressure and position parameters significantly deviate from the values stored in the machine, it automatically stops the assembly process and displays a corresponding warning message on the operating panel.

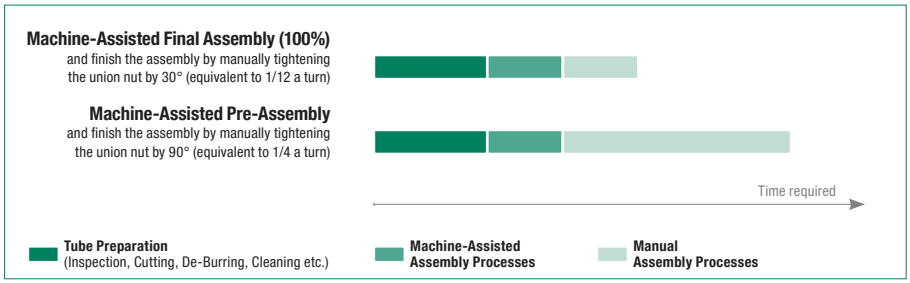
The integrated Cloud connection allows preventive maintenance via remote access and facilitates the documentation of assembly process. For more information please see page 256.

Operating elements of the assembly machine

Noise-reducing tool tray with durable rubber mat

Electrical connection plug and Ethernet port (RJ45)


Lateral handle bars and rubber machine feet with suitable clearance height



Comparison of the total times required for the assembly and installation of cutting ring connections (medium size)

STAUFF Press
Cutting Ring Final Assembly Machine
Type SPR-PRC-POC-A-A-IOT

Characteristics

Performance

- final assembly (100 %)
- Short times for tool changes, setup and assembly
- Tool size detection via RFID transponders in the support plates
- Automatic assembly start through integrated tool contact switch
- Tool wear detection through combined pressure/position-control
- Internal memory for up to 9 assembly programs which can be selected on the operating panel: predefined are tube materials steel E235 and E355 as well as stainless steel 316; parameters for other materials (copper, CuNiFe, Tungum, polyamide etc.) can be added by the manufacturer if required
- Counters for lot/batch sizes and total quantities (separated by tool size)
- Documented process control through programmable logic control (PLC)
- Predefined menu languages: English, German, French and Italian
- Manual pressure adjustment possible

Design

① Robust and ergonomically designed machine housing
② Optimised assembly area, which allows processing of tubes with low bending radii (to at least 31 mm distance from the tube axis to the interfering edge of the machine housing) or complex geometries
③ Noise-reducing tool tray with durable rubber mat
④ Lateral handle bars as attachment points for transport (e.g. with lifting belts)
⑤ Secure positioning thanks to flexible rubber machine feet
⑥ Type plate, with technical data, serial number, year of manufacture, etc.

Operating Elements

⑦ Operating panel for display and selection of all relevant settings and assembly parameters
⑧ Button for definite confirmation of entries made on the operating panel
⑨ Status light to indicate readiness for operation and running assembly processes

Safety Devices

⑩ Main power switch (can be secured against unauthorised actuation when required)
⑪ Separate emergency stop button to immediately stop all machine movements
⑫ Light grid to protect users when reaching into the assembly area

Connections (at the back of the machine)

⑬ Electrical connection according to IEC 60309 CEE 16A (cable length: 4 m) and Ethernet connection (RJ45) for maintenance and data input by the manufacturer

Assembly Tools

⑭ Wear-resistant assembly stud FI-MFK
⑮ Support plate FI-GP with RFID transponder

Technical Data

Area of Application

▪ Function:	final assembly (100%) of cutting rings on metric tube ends
▪ Operating principle:	Assembly with combined pressure/position-control
▪ Series and diameters:	Extra-Light Series (LL): 4, 6, 8, 10, 12 mm Light Series (L): 6, 8, 10, 12, 15, 18, 22, 28, 35, 42 mm Heavy Series (S): 6, 8, 10, 12, 14, 16, 20, 25, 30, 38 mm

Dimensions / Weight

▪ Dimensions (W x D x H):	780 mm x 650 mm x 305 mm with lateral handle bars (detachable)
▪ Distance from the tube axis to the interfering edge of the machine housing:	80 mm
▪ Clearance height:	65 mm (height of the machine feet) enables simple and safe transport using a forklift or pallet jack
▪ Weight:	95 kg (incl. operating fluid, excl. assembly tools)

Materials

▪ Machine frame:	Aluminium
▪ Machine housing:	Steel, painted
▪ Tool tray:	NBR (Perbunan®)
▪ Machine feet:	Natural rubber
▪ Assembly studs:	Steel, PVD coated
▪ Support plates:	Steel, browned

Motor Configuration

▪ Power supply:	400 V AC @ 50 Hz - 3 phases 460 V AC @ 60 Hz - 3 phases
▪ Current consumption:	2,7 A
▪ Connected load:	0,9 kW
▪ Electrical connection:	Phase reversing plug according to IEC 60309 CEE 16A
▪ Cable length:	4 m

Alternative motor configurations and plug types are available on request. Please contact STAUFF for details.

Hydraulic System

▪ Operating fluid:	Hydraulic oil Shell Tellus S2 MA 46 or equivalent (filled and ready for operation when delivered)
▪ Fluid volume:	4 litres
▪ Max working pressure:	450 bar

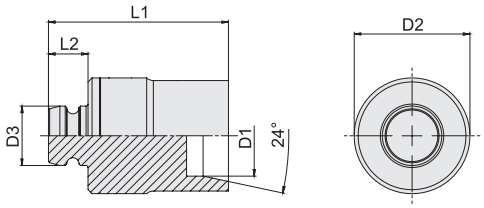
Operating Conditions

▪ Storage temperature:	-10°C … +70°C
▪ Ambient temperature:	+15°C … +35°C
▪ Ambient conditions:	Dry, no condensing humidity, operation in horizontal position only
▪ Noise emission:	less than 66 dB(A) as per EN ISO 11202 at full-load operation with maximum tube dimensions

STAUFF Maintenance Contracts
Please contact STAUFF for a maintenance contract, that provides optimum service for your STAUFF assembly machine.

STAUFF Machine Rental
Please contact STAUFF for a rental machine and further details of what this service can offer.

Cutting Ring Assembly Stud for Machine-Assisted Assembly
Type FI-MFK ▪ Series LL / L / S



Series	Tube OD mm D1	Dimensions mm D2	D3	L1	L2	Weight kg ca. per 100	Ordering Codes
LL	4	30	14,8	50	10	12,98	FI-MFK-04LL-W100
	6	30	14,8	50	10	13,28	FI-MFK-06LL-W100
	8	30	14,8	50	10	13,68	FI-MFK-08LL-W100
L	6	30	14,8	50	10	13,57	FI-MFK-06L-W100
	8	30	14,8	50	10	14,01	FI-MFK-08L-W100
	10	30	14,8	50	10	14,63	FI-MFK-10L-W100
	12	30	14,8	50	10	16,09	FI-MFK-12L-W100
	15	30	14,8	50	10	16,63	FI-MFK-15L-W100
	18	30	14,8	50	10	18,23	FI-MFK-18L-W100
	22	30	14,8	49	10	19,13	FI-MFK-22L-W100
	28	33,8	14,8	48	10	24,43	FI-MFK-28L-W100
	35	42,8	14,8	45	10	32,72	FI-MFK-35L-W100
	42	49,8	14,8	44	10	41,17	FI-MFK-42L-W100
S	6	30	14,8	50	10	14,14	FI-MFK-06S-W100
	8	30	14,8	50	10	14,68	FI-MFK-08S-W100
	10	30	14,8	50	10	15,23	FI-MFK-10S-W100
	12	30	14,8	50	10	15,89	FI-MFK-12S-W100
	14	30	14,8	49	10	15,98	FI-MFK-14S-W100
	16	30	14,8	49	10	16,65	FI-MFK-16S-W100
	20	30	14,8	45	10	16,43	FI-MFK-20S-W100
	25	33,8	14,8	42	10	19,02	FI-MFK-25S-W100
	30	39,8	14,8	40	10	22,88	FI-MFK-30S-W100
	38	49,8	14,8	36	10	26,41	FI-MFK-38S-W100

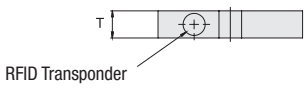
Materials / surface finishings: **W100** Steel, PVD coated

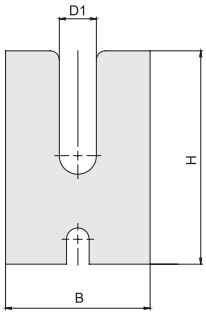
Accessories

Cone Gauges Page 283

P

Support Plate for Machine-Assisted Assembly
Type FI-GP ▪ Series LL / L / S





Series	Tube OD mm D1	Dimensions mm B	H	T	Weight kg ca. per 100	Ordering Codes
LL	4	80	118	15	104,43	FI-GP-04LL-W101
	6	80	118	15	102,97	FI-GP-06LL-W101
	8	80	118	15	101,46	FI-GP-08LL-W101
L	6	80	118	15	102,97	FI-GP-06L-W101
	8	80	118	15	101,46	FI-GP-08L-W101
	10	80	118	15	99,93	FI-GP-10L-W101
	12	80	118	15	98,35	FI-GP-12L-W101
	15	80	118	15	95,91	FI-GP-15L-W101
	18	80	118	15	93,40	FI-GP-18L-W101
	22	80	118	15	89,91	FI-GP-22L-W101
	28	80	118	15	84,41	FI-GP-28L-W101
	35	80	118	15	77,56	FI-GP-35L-W101
	42	80	118	15	70,27	FI-GP-42L-W101
S	6	80	118	15	102,97	FI-GP-06S-W101
	8	80	118	15	101,46	FI-GP-08S-W101
	10	80	118	15	99,93	FI-GP-10S-W101
	12	80	118	15	98,35	FI-GP-12S-W101
	14	80	118	15	96,73	FI-GP-14S-W101
	16	80	118	15	95,08	FI-GP-16S-W101
	20	80	118	15	91,67	FI-GP-20S-W101
	25	80	118	15	87,20	FI-GP-25S-W101
	30	80	118	15	82,50	FI-GP-30S-W101
	38	80	118	15	74,49	FI-GP-38S-W101

Materials / surface finishings: **W101** Steel, browned

STAUFF Press
Cloud connection allows preventive maintenance via remote access and facilitates the documentation of assembly processes
Type SPR-PRC-POC-A-A-IOT

Cutting ring assembly machines type SPR-PRC-POC are equipped at the factory with a built-in module for direct connection to a cloud operated by STAUFF. This solution is realised with an integrated SIM card which can be used in all industrial regions of the world.

This enables software updates, for example, without having to connect the machine to a local network on site. Parameter sets, which have been determined by STAUFF for non-standard tube materials can also be transferred quickly and directly to the machine in this way.

Customers are given access to the cloud via a protected online portal, where they can get detailed information on the assembly processes performed, among other things.

The required data security is guaranteed by encryption in both directions.

STAUFF Press
Optional tool holder for tubes with small bending radii
Type SPR-PRC-POC-RTH

The assembly head differs from the standard model by the holder for the cutting ring assembly socket being moved upwards, shortening the distance from the tube axis in the assembly socket to the upper edge of the machine from the standard 77 mm to 31 mm.

This means that cutting rings can be fitted with ease to tubes with small axis distances.

If tubes with complex geometries are to be handled (e.g. with short tube end and 90°tail), the safety light barrier, which secures the assembly area, can be disabled if required.

The optional assembly head enables tubes with a diameter of 6 to 18 mm in the Light Series and 6 mm to 16 mm in the Heavy Series to be handled.

Existing assembly tools can also continue to be used. The user simply needs to import new parameter sets into the machine.

P

Assembly Tool Magazine
Type SPR-TM

- Provides safe and convenient storage for up to 10 assembly studs (type FI-MFK) as well as up to 10 support plates (types FI-GP and FI-GP-PRC) for the machine-assisted cutting ring assembly
- Assembly studs and support plates are not included in the scope of delivery for this item and have to be ordered separately

External Foot Control Switch
Type SFO/PRC-POC-FS

- Enables the operator to trigger assembly processes from a larger distance to the machine (cable length: 7 m)

STAUFF Press
Combined Cutting Ring Assembly and 37° Tube Flaring Machine with Automatic or Manual Pressure Setting and Control ▪ Type SPR-PRC-MA-D-A

Product Description

The electro-hydraulically operated STAUFF Press Assembly Machine SPR-PRC-MA-D-A allows the assembly of cutting rings in the Light Series (L) as well as in the Heavy Series (S) according to ISO 8434-1 / DIN 2353 on metric tube ends with outer diameters from 4 mm to 42 mm.

Exchangeable heads allows the device to be adapted for 37° flaring of metric and imperial tube ends with outer diameters from 4 mm to 42 mm and from 1/4 in to 1 1/2 in respectively according to DIN 3949 or SAE J514 / ISO 8434-2.

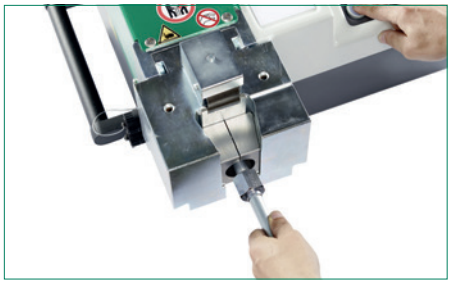
Short times for tool changes, setup and assembly (even when changing the assembly type from cutting ring assembly to 37° tube flaring) make it possible to carry out series production as well as the assembly of small and medium quantities with a high level of economic efficiency, reproducibility and process reliability with considerable reduction of times and cost of assembly of fittings.

The adjustable return stoke of the cylinder helps the operator to further optimise the total cycle times.

The machine is designed as a robust table-top device for continuous operation in the workshop. It is used in connection with hardened and wear-resistant assembly tools which are specially designed for the machine-assisted assembly.

Tooling head for cutting ring assembly based on pre-defined settings / automatic tool size detection

Tooling head for cutting ring assembly based on settings manually defined by the operator



Tooling head for 37° tube flaring based on settings manually defined by the operator

Smart programmable control panel with push/turn button and back-lit parameter display

Noise-reducing tool tray with durable rubber mat

Robust rubber feet providing secure positioning and dampening during operation

USB connection for maintenance and data input by the manufacturer

Electrical connection with a phase reversing plug according to IEC 60309 CEE 16A

Connections for the tool head as well as for the external foot control switch

STAUFF Press
Combined Cutting Ring Assembly and 37° Tube Flaring Machine with Automatic or Manual Pressure Setting and Control ▪ Type SPR-PRC-MA-D-A

Characteristics

Performance

- Pressure-controlled assembly of cutting rings on metric tube ends as well as 37° tube flaring of metric/imperial tube ends due to exchangeable tool heads
- Cutting ring assembly with Tooling Head SPR-PRC-TH-C-MA based on pre-defined pressure settings (with automatic tool size detection) or with Tooling Head SPR-PRC-TH-C-M based on pressure settings as manually defined by the operator
- Short times for tool and head changes, setup and assembly (even when changing the assembly type from cutting ring assembly to 37° tube flaring)
- Adjustable return stoke of the cylinder in order to further optimise the total cycle times
- Internal memory for up to 8 assembly programs which can be selected on the operating panel: predefined are tube materials steel E235 and E355 as well as stainless steel 316; parameters for other materials (copper, CuNiFe, Tungum, polyamide etc.) can be added by the manufacturer if required
- Counters for lot/batch sizes and total quantities
- Operator-friendly and easy to maintain and service

Design

① Robust and compact table-top device allowing for maximum mobility and flexibility
② Optimised assembly area with approx. 65 mm distance from the tube axis to the interfering edge of the machine housing, which allows processing of tubes with low bending radii or complex geometries
③ Noise-reducing tool tray with durable rubber mat
④ Lateral handle bars as attachment points for transport (e.g. with lifting belts)
⑤ Robust rubber feet providing secure positioning and dampening during operation
⑥ Type plate, with technical data, serial number, year of manufacture, etc.

Operating Elements

⑦ Push/turn control button to select all relevant settings and assembly parameters
⑧ Smart programmable control panel with back-lit parameter display
⑨ Button for definite confirmation of entries made on the operating panel
⑩ Illuminated pushbutton to reset the cylinder and to indicate incorrect assemblies

Safety Devices

⑪ Selector switch to choose the operation mode (can be locked with a key and secured against unauthorised actuation, if required)
⑫ Main power switch
⑬ Separate emergency stop button to immediately stop all machine movements

Connections

⑭ Electrical connection according to IEC 60309 CEE 16A (cable length: 4 m)
⑮ USB connection for maintenance and data input by the manufacturer
⑯ Connections for tool heads for cutting ring assembly based on pre-defined pressure settings as well as for the external foot control switch SPR-PRC-FS (available on request)

Assembly Tools

- Tooling head SPR-PRC-TH-C-MA for cutting ring assembly based on autmatic pressure setting (Pre-assembly is pre-defined) and with tool size detection via the support plates
- Tooling head SPR-PRC-TH-C-M for cutting ring assembly based on manual settings
- Tooling head SPR-PRC-TH-F-M for 37° tube flaring based on manual settings
- Wear-resistant cutting ring assembly stud FI-MFK
- Support plate FI-GP-...-PRC
- Clamping jaws FI-KB-...-PRC for 37° tube flaring

Technical Data

Area of Application

- Function:

Pressure-controlled assembly of cutting rings
Light (L): 6, 8, 10, 12, 15, 18, 22, 28, 35, 42 mm
Heavy (S): 6, 8, 10, 12, 14, 16, 20, 25, 30, 38 mm

Pressure-controlled 37° flaring of metric tube ends (according to DIN 3949 bzw. SAE J 514 / ISO 8434-2):
Light (L): from 6 x 1 mm to 42 x 4 mm
Heavy (S): from 6 x 1 mm to 38 x 5 mm

Pressure-controlled 37° flaring of imperial tube ends (according to SAE J 514 / ISO 8434-2):
1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1-1/4, 1-1/2 inch

Dimensions / Weight

- Dimensions (W x D x H): 660 mm x 515 mm x 265 mm with lateral handle bars (detachable)
- Distance from the tube axis to the interfering edge of the machine housing: 65 mm
- Clearance height: 30 mm (height of the machine feet)
- Weight (basic machine): 66 kg (incl. operating fluid, excl. assembly tools)
- Weight (tooling heads): SPR-PRC-TH-C-A: 6,0 kg
  SPR-PRC-TH-C-M: 5,5 kg
  SPR-PRC-TH-F-M: 19,5 kg

Materials

- Machine frame: Steel
- Machine cover: Plastic
- Tool tray: NBR (Perbunan®)
- Machine feet: Natural rubber
- Assembly tools: Steel, uncoated, hardened

Motor Configuration

- Power supply: 400 V AC @ 50 Hz - 3 phases
- Current consumption: 2,8 A
- Connected load: 1,2 kW
- Electrical connection: Phase reversing plug according to IEC 60309 CEE 16A
- Cable length: 4 m

Alternative motor configurations and plug types are available on request.
Please contact STAUFF for details.

Hydraulic System

- Operating fluid: Hydraulic oil Shell Nuto H 32 or equivalent (filled and ready for operation when delivered)
- Fluid volume: 4 litres
- Max working pressure: 200 bar

Operating Conditions

- Storage temperature: -10°C … +70°C
- Ambient temperature: +10°C … +50°C
- Ambient conditions: Dry, no condensing humidity, operation in horizontal position only
- Noise emission: less than 60 dB(A) as per EN ISO 11202

STAUFF Maintenance Contracts
Please contact STAUFF for a maintenance contract, that provides optimum service for your STAUFF assembly machine.

STAUFF Machine Rental
Please contact STAUFF for a rental machine and further details of what this service can offer.

Tooling Head for Cutting Ring Assembly (based on pre-defined settings)
Type SPR-PRC-TH-C-MA

- Tooling head SPR-PRC-TH-C-MA for cutting ring pre-assembly based on pre-defined settings and with automatic tool size detection via the support plates
- Requires cutting ring assembly studs FI-MFK and support plates FI-GP-PRC

Tooling Head for Cutting Ring Assembly (based on manual settings)
Type SPR-PRC-TH-C-M

- Tooling head SPR-PRC-TH-C-M for cutting ring pre-assembly based on manual settings
- Requires cutting ring assembly studs FI-MFK and support plates FI-GP-PRC

Tooling Head for 37° Tube Flaring (based on manual settings)
Type SPR-PRC-TH-F-M

- Tooling head SPR-PRC-TH-F-M for 37° tube flaring based on manual settings
- Requires clamping jaws FI-KB-PRC

P

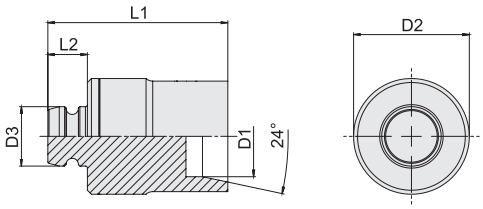
Assembly Tool Magazine
Type SPR-TM

- Provides safe and convenient storage for up to 10 assembly studs (type FI-MFK) as well as up to 10 support plates (types FI-GP and FI-GP-PRC) for the machine-assisted cutting ring assembly
- Assembly studs and support plates are not included in the scope of delivery for this item and have to be ordered separately

External Foot Control Switch
Type SPR-PRC-FS

- Enables the operator to trigger assembly processes from a larger distance to the machine (cable length: 5 m)

Cutting Ring Assembly Stud for Machine-Assisted Assembly
Type FI-MFK ▪ Series LL / L / S



Series	Tube OD mm D1	Dimensions mm D2	D3	L1	L2	Weight kg ca. per 100	Ordering Codes
L	6	30	14,8	50	10	13,57	FI-MFK-06L-W100
	8	30	14,8	50	10	14,01	FI-MFK-08L-W100
	10	30	14,8	50	10	14,63	FI-MFK-10L-W100
	12	30	14,8	50	10	16,09	FI-MFK-12L-W100
	15	30	14,8	50	10	16,63	FI-MFK-15L-W100
	18	30	14,8	50	10	18,23	FI-MFK-18L-W100
	22	30	14,8	49	10	19,13	FI-MFK-22L-W100
	28	33,8	14,8	48	10	24,43	FI-MFK-28L-W100
	35	42,8	14,8	45	10	32,72	FI-MFK-35L-W100
	42	49,8	14,8	44	10	41,17	FI-MFK-42L-W100
S	6	30	14,8	50	10	14,14	FI-MFK-06S-W100
	8	30	14,8	50	10	14,68	FI-MFK-08S-W100
	10	30	14,8	50	10	15,23	FI-MFK-10S-W100
	12	30	14,8	50	10	15,89	FI-MFK-12S-W100
	14	30	14,8	49	10	15,98	FI-MFK-14S-W100
	16	30	14,8	49	10	16,65	FI-MFK-16S-W100
	20	30	14,8	45	10	16,43	FI-MFK-20S-W100
	25	33,8	14,8	42	10	19,02	FI-MFK-25S-W100
	30	39,8	14,8	40	10	22,88	FI-MFK-30S-W100
	38	49,8	14,8	36	10	26,41	FI-MFK-38S-W100

Materials / surface finishings: **W100** Steel, PVD coated

Accessories

Cone Gauges Page 283

P

Support Plate for Machine-Assisted Cutting Ring Assembly
Type FI-GP-PRC ▪ Series L / S

Series	Tube OD mm	Ordering Codes
L	6	FI-GP-06L/S-PRC-MA-W1
	8	FI-GP-08L/S-PRC-MA-W1
	10	FI-GP-10L/S-PRC-MA-W1
	12	FI-GP-12L/S-PRC-MA-W1
	15	FI-GP-15L-PRC-MA-W1
	18	FI-GP-18L-PRC-MA-W1
	22	FI-GP-22L-PRC-MA-W1
	28	FI-GP-28L-PRC-MA-W1
	35	FI-GP-35L-PRC-MA-W1
	42	FI-GP-42L-PRC-MA-W1
S	6	FI-GP-06L/S-PRC-MA-W1
	8	FI-GP-08L/S-PRC-MA-W1
	10	FI-GP-10L/S-PRC-MA-W1
	12	FI-GP-12L/S-PRC-MA-W1
	14	FI-GP-14S-PRC-MA-W1
	16	FI-GP-16S-PRC-MA-W1
	20	FI-GP-20S-PRC-MA-W1
	25	FI-GP-25S-PRC-MA-W1
	30	FI-GP-30S-PRC-MA-W1
	38	FI-GP-38S-PRC-MA-W1

Materials / surface finishings: **W1** Steel, uncoated, hardened

Clamping Jaws for 37° Tube Flaring
Type FI-KB ▪ Series L / S

37° Flaring of Metric Tube Ends

Series	Tube OD mm	Ordering Codes DIN 3949	Ordering Codes SAE J514 / ISO 8434-2
L	6	FI-KB-06L/S-PRC-MF-W1	FI-KB-06-PRC-F-W1
	8	FI-KB-08L/S-PRC-MF-W1	FI-KB-08/5/16-PRC-F-W1
	10	FI-KB-10L/S-PRC-MF-W1	FI-KB-10-PRC-F-W1
	12	FI-KB-12L/S-PRC-MF-W1	FI-KB-12-PRC-F-W1
	15	FI-KB-15L-PRC-MF/F-W1	
	18	FI-KB-18L-PRC-MF/F-W1	
	22	FI-KB-22L-PRC-MF/F-W1	
	28	FI-KB-28L-PRC-MF-W1	FI-KB-28-PRC-F-W1
	35	FI-KB-35L-PRC-MF-W1	FI-KB-35-PRC-F-W1
	42	FI-KB-42L-PRC-MF-W1	FI-KB-42-PRC-F-W1
S	6	FI-KB-06L/S-PRC-MF-W1	FI-KB-06-PRC-F-W1
	8	FI-KB-08L/S-PRC-MF-W1	FI-KB-08/5/16-PRC-F-W1
	10	FI-KB-10L/S-PRC-MF-W1	FI-KB-10-PRC-F-W1
	12	FI-KB-12L/S-PRC-MF-W1	FI-KB-12-PRC-F-W1
	14	FI-KB-14S-PRC-MF/F-W1	
	16	FI-KB-16S-PRC-MF-W1	FI-KB-16-PRC-F-W1
	20	FI-KB-20S-PRC-MF-W1	FI-KB-20-PRC-F-W1
	25	FI-KB-25S-PRC-MF-W1	FI-KB-25-PRC-F-W1
	30	FI-KB-30S-PRC-MF/F-W1	
	30 x 5	FI-KB-30SX5-PRC-MF-W1	
	38	FI-KB-38S-PRC-MF-W1	FI-KB-38/1-1/2-PRC-F-W1
	38 x 5	FI-KB-38SX5-PRC-MF-W1	

Materials / surface finishings: **W1** Steel, uncoated, hardened

37° Flaring of Imperial Tube Ends

Tube OD mm	Ordering Codes SAE J514 / ISO 8434-2
1/4	FI-KB-1/4-PRC-F-W1
5/16	FI-KB-08/5/16-PRC-F-W1
3/8	FI-KB-3/8-PRC-F-W1
1/2	FI-KB-1/2-PRC-F-W1
5/8	FI-KB-5/8-PRC-F-W1
3/4	FI-KB-3/4-PRC-F-W1
7/8	FI-KB-7/8-PRC-F-W1
1	FI-KB-1-PRC-F-W1
1-1/4	FI-KB-1-1/4-PRC-F-W1
1-1/2	FI-KB-38/1-1/2-PRC-F-W1

STAUFF Press
Portable Cutting Ring Assembly Machine with Manual Pressure Setting (Set)
Type SPR-PRC-H-E-SET

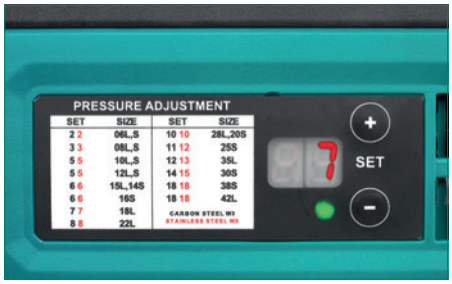
Product Description

With the battery-operated STAUFF Press Assembly Machine SPR-PRC-H-E-SET, STAUFF provides an ergonomically designed, light-weight and at the same time robust device for the assembly of cutting rings made of Carbon Steel and Stainless Steel in the Light Series (L) as well as in the Heavy Series (S) according to ISO 8434-1 / DIN 2353 on metric tube ends with outer diameters from 6 mm to 42 mm.

The machine has been designed for hand-held, tripod- or table-mounted operation and offers the best technical compromise between maximum flexibility, economic efficiency and a high level of process reliability with considerable reduction of time and cost for the assembly of cutting ring fittings.

Short tool change and setup times (with only a few seconds required to manually adjust the assembly pressure) make it possible to carry out the assembly of medium and even small quantities of cutting ring fittings, e.g. during maintenance, servicing, conversion and repair works on hydraulic pipe and tube systems. With the rechargeable battery being able to typically cover more than 200 assembly cycles per charge (depending on pressure settings and other influencing factors), the machine is also suitable for mass processing and production.

The assembly machine is by default supplied in a heavy-duty trolley transport case that is equipped with a range of accessories and also provides suitable space for the assembly studs.



Operating element to adjust the pressure setting (settings indicated on the machine housing) incl. status lights

Assembly machine attached to a tripod stand using a mounting bracket

Heavy-duty trolley transport case

STAUFF Press
Portable Cutting Ring Assembly Machine with Manual Pressure Setting (Set)
Type SPR-PRC-H-E-SET

Technical Data

Area of Application

- Function: Pressure-controlled assembly of cutting rings made of Carbon Steel and Stainless Steel acc. to ISO 8434-1 / DIN 2353 on metric tube ends
  Light (L): 6, 8, 10, 12, 15, 18, 22, 28, 35 and 42 mm
  Heavy (S): 6, 8, 10, 12, 14, 16, 20, 25, 30 and 38 mm

Dimensions / Weight

- Dimensions (L x H x W): 440 mm x 330 mm x 80 mm (including rechargeable battery)
- Weight (basic machine): 6,9 kg (including rechargeable battery)
- Weight (case): 16,6 kg (including assembly machine and accessories)
- Case: IP67 certified, equipped with o-ring seal and automatic pressure valve

Materials

- Machine cover: Plastic
- Tool head: Steel, uncoated, hardened
- Assembly studs: Stainless steel, hardened

Rechargeable Battery

- Typically covers more than 200 assembly cycles per charge (depending on pressure settings and other influencing factors)
- Battery type: Lithium-ion (18V / 5.0 Ah)

Charging Unit

- Charging time for empty batteries is approximately 75 minutes
- Power supply: 230 V AC @ 50 Hz - single-phase
- Electrical connection: 2-pin grounded safety plug (CEE 7/4, type F / Schuko)
- Cable length: 1,10 m

List of Components

Set supplied in a heavy-duty trolley transport case:

① Light-weight and ergonomically designed cutting ring assembly machine for the hand-held, tripod-mounted or table-mounted operation
② Rechargeable battery
③ Additional replacement battery
④ Battery quick charging unit
⑤ Clips (to keep the assembly stud in position)
⑥ Assembly oil with brush (to lubricate the taper of the assembly stud)
⑦ Shoulder strap

Equipment to be ordered separately:

⑧ Cutting Ring Assembly Studs **FI-MVK-PRC-H-M-HR**

Spare Parts

- Assembly oil with brush **SPR-PRC-H-M-OS** (required to lubricate the taper of the assembly stud)
- Rechargeable Battery **SPR-PRC-H-M-BP**
- Battery Quick Charging Unit **SPR-PRC-H-M-BC**

Accessories

- Tripod Stand **SPR-PRC-H-M-TP**

- Table Stand **SPR-PRC-H-M-TS**

- Mounting Bracket **SPR-PRC-H-M-MH** (required as a machine holder for both the tripod stand and the table stand)

P

Cutting Ring Assembly Stud for Machine-Assisted Assembly
Type FI-MVK-PRC-H-M ▪ Series L / S

Series	Tube OD mm	Ordering Codes
L	6	FI-MVK-06L-PRC-H-M-HR
	8	FI-MVK-08L-PRC-H-M-HR
	10	FI-MVK-10L-PRC-H-M-HR
	12	FI-MVK-12L-PRC-H-M-HR
	15	FI-MVK-15L-PRC-H-M-HR
	18	FI-MVK-18L-PRC-H-M-HR
	22	FI-MVK-22L-PRC-H-M-HR
	28	FI-MVK-28L-PRC-H-M-HR
	35	FI-MVK-35L-PRC-H-M-HR
	42	FI-MVK-42L-PRC-H-M-HR
S	6	FI-MVK-06S-PRC-H-M-HR
	8	FI-MVK-08S-PRC-H-M-HR
	10	FI-MVK-10S-PRC-H-M-HR
	12	FI-MVK-12S-PRC-H-M-HR
	14	FI-MVK-14S-PRC-H-M-HR
	16	FI-MVK-16S-PRC-H-M-HR
	20	FI-MVK-20S-PRC-H-M-HR
	25	FI-MVK-25S-PRC-H-M-HR
	30	FI-MVK-30S-PRC-H-M-HR
	38	FI-MVK-38S-PRC-H-M-HR

Materials / surface finishing: **HR** Stainless steel, hardened

Manual Cutting Ring Pre-Assembly Device Type SPR-PRC-MP

Product Description

The manual cutting ring pre-assembly device can be used to pre-assemble hydraulic lines made of steel and stainless steel with an outer diameter of 6 - 42 mm.

For flexible use on site, the tool is supplied in a robust steel case. In the case there is also space for STAUFF cutting ring assembly studs type FI-MFK and support plates type FI-GP-PRC. These are not included in the scope of delivery, but can be purchased separately.

Product Features

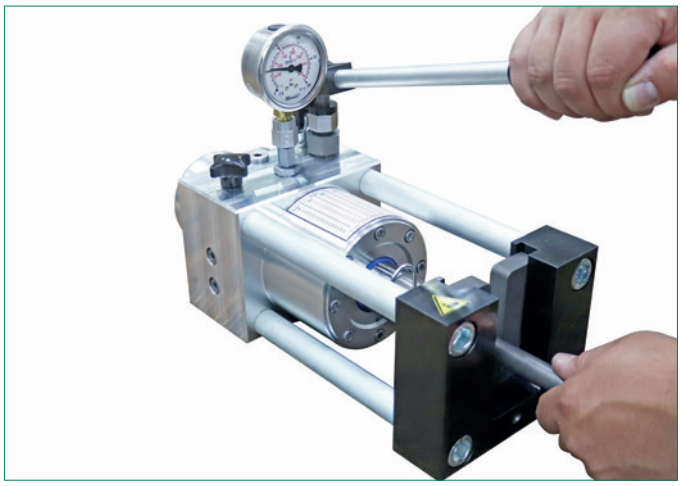
- Pressure-controlled, manual assembly of steel and stainless steel cutting rings (ISO 8434-1 / DIN 2353) on metric tube ends from 6 to 42 mm in the light series and 6 to 38 mm in the heavy series
- For cutting rings of the FI-DS, FI-WDDS and FI-WDDS-W5 series
- Pressure values can be read on the device and Precisely adjustable via manometer
- incl. robust steel case with storage space for accessories
- Ideally suited for flexible on-site use, e.g. for installation on the construction site without a power supply

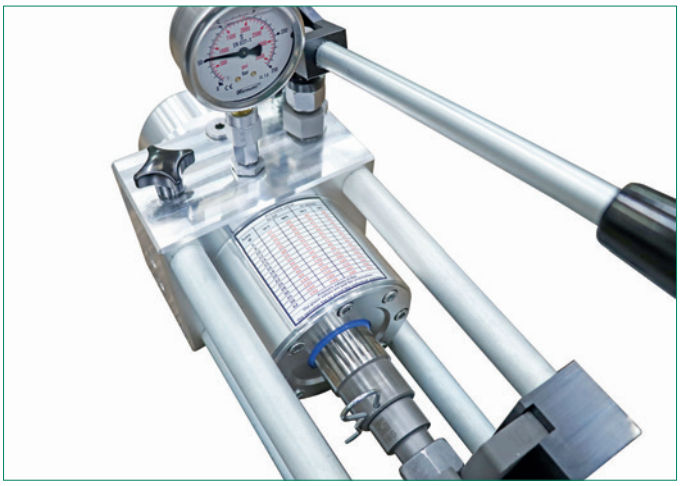
Ordering Code

▪ Manual Cutting Ring Pre-Assembly Device	**SPR-PRC-MP**

Technical Data

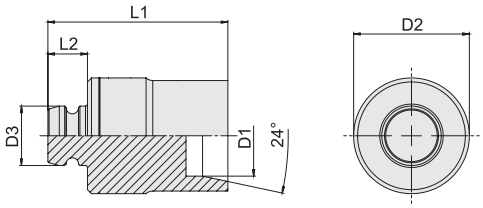
- Dimensions W x D x H (incl. Case):
  435,7 mm x 253 mm x 150 mm
  (750 mm x 335 mm x 175 mm)
- Weight (incl. Case):
  15 kg (23 kg)





P

Cutting Ring Assembly Stud for Manual Assembly
Type FI-MFK ▪ Series LL / L / S



Series	Tube OD mm D1	Dimensions mm D2	D3	L1	L2	Weight kg ca. per 100	Ordering Codes
L	6	30	14,8	50	10	13,57	FI-MFK-06L-W100
	8	30	14,8	50	10	14,01	FI-MFK-08L-W100
	10	30	14,8	50	10	14,63	FI-MFK-10L-W100
	12	30	14,8	50	10	16,09	FI-MFK-12L-W100
	15	30	14,8	50	10	16,63	FI-MFK-15L-W100
	18	30	14,8	50	10	18,23	FI-MFK-18L-W100
	22	30	14,8	49	10	19,13	FI-MFK-22L-W100
	28	33,8	14,8	48	10	24,43	FI-MFK-28L-W100
	35	42,8	14,8	45	10	32,72	FI-MFK-35L-W100
	42	49,8	14,8	44	10	41,17	FI-MFK-42L-W100
S	6	30	14,8	50	10	14,14	FI-MFK-06S-W100
	8	30	14,8	50	10	14,68	FI-MFK-08S-W100
	10	30	14,8	50	10	15,23	FI-MFK-10S-W100
	12	30	14,8	50	10	15,89	FI-MFK-12S-W100
	14	30	14,8	49	10	15,98	FI-MFK-14S-W100
	16	30	14,8	49	10	16,65	FI-MFK-16S-W100
	20	30	14,8	45	10	16,43	FI-MFK-20S-W100
	25	33,8	14,8	42	10	19,02	FI-MFK-25S-W100
	30	39,8	14,8	40	10	22,88	FI-MFK-30S-W100
	38	49,8	14,8	36	10	26,41	FI-MFK-38S-W100

Materials / surface finishings: **W100** Steel, PVD coated

Accessories

Cone Gauges Page 283

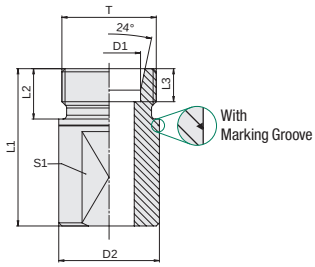
P

Support Plate for Manual Cutting Ring Assembly
Type FI-GP-PRC ▪ Series L / S

Series	Tube OD mm	Ordering Codes
L	6	FI-GP-06L/S-PRC-MA-W1
	8	FI-GP-08L/S-PRC-MA-W1
	10	FI-GP-10L/S-PRC-MA-W1
	12	FI-GP-12L/S-PRC-MA-W1
	15	FI-GP-15L-PRC-MA-W1
	18	FI-GP-18L-PRC-MA-W1
	22	FI-GP-22L-PRC-MA-W1
	28	FI-GP-28L-PRC-MA-W1
	35	FI-GP-35L-PRC-MA-W1
	42	FI-GP-42L-PRC-MA-W1
S	6	FI-GP-06L/S-PRC-MA-W1
	8	FI-GP-08L/S-PRC-MA-W1
	10	FI-GP-10L/S-PRC-MA-W1
	12	FI-GP-12L/S-PRC-MA-W1
	14	FI-GP-14S-PRC-MA-W1
	16	FI-GP-16S-PRC-MA-W1
	20	FI-GP-20S-PRC-MA-W1
	25	FI-GP-25S-PRC-MA-W1
	30	FI-GP-30S-PRC-MA-W1
	38	FI-GP-38S-PRC-MA-W1

Materials / surface finishings: **W1** Steel, uncoated, hardened

Final Assembly Stud for the Manual Cutting Ring Assembly Type FI-FK ▪ Series LL / L / S



Series	Tube OD mm D1	Dimensions mm Thread T	D2	L1	L2	L3	S1	Weight kg ca. per 100	Ordering Codes
LL	4	M 8 x 1	14	40	8	4	11	3,74	**FI-FK-04LL-HR**
	6	M 10 x 1	14	40	8	5,5	11	3,81	**FI-FK-06LL-HR**
	8	M 12 x 1	14	41	9	5,5	11	4,00	**FI-FK-08LL-HR**
L	6	M 12 x 1,5	14	43	10	7	11	4,21	**FI-FK-06L-HR**
	8	M 14 x 1,5	15	43	10	7	12	4,96	**FI-FK-08L-HR**
	10	M 16 x 1,5	17	44	11	7	14	6,57	**FI-FK-10L-HR**
	12	M 18 x 1,5	20	44	11	7	17	9,06	**FI-FK-12L-HR**
	15	M 22 x 1,5	23	45	12	7	19	12,34	**FI-FK-15L-HR**
	18	M 26 x 1,5	29	46	12	7,5	24	19,62	**FI-FK-18L-HR**
	22	M 30 x 2	32	48	14	7,5	27	25,11	**FI-FK-22L-HR**
	28	M 36 x 2	38	48	14	7,5	32	35,07	**FI-FK-28L-HR**
	35	M 45 x 2	48	60	16	10,5	41	69,87	**FI-FK-35L-HR**
	42	M 52 x 2	54	60	16	11	46	87,41	**FI-FK-42L-HR**
S	6	M 14 x 1,5	15	45	12	7	12	5,34	**FI-FK-06S-HR**
	8	M 16 x 1,5	17	45	12	7	14	6,92	**FI-FK-08S-HR**
	10	M 18 x 1,5	20	45	12	7,5	17	9,44	**FI-FK-10S-HR**
	12	M 20 x 1,5	22	45	12	7,5	17	10,87	**FI-FK-12S-HR**
	14	M 22 x 1,5	24	47	14	8	19	13,59	**FI-FK-14S-HR**
	16	M 24 x 1,5	27	48	14	8,5	22	17,49	**FI-FK-16S-HR**
	20	M 30 x 2	32	50	16	10,5	27	25,83	**FI-FK-20S-HR**
	25	M 36 x 2	38	62	18	12	32	46,15	**FI-FK-25S-HR**
	30	M 42 x 2	44	64	20	13,5	36	62,34	**FI-FK-30S-HR**
	38	M 52 x 2	54	66	22	16	46	95,92	**FI-FK-38S-HR**

Materials / surface finishings: **HR** Steel, uncoated, hardened

Accessories

Cone Gauges Page 283

P

STAUFF Form EVO
Tube Forming Machine
Type SFO-F-A-A-IOT

Product Description

The type SFO-F-A-A-IOT tube forming machine facilitates the economical and most reliable production of tube ends made of steel, stainless steel and other materials with a contour typical for the STAUFF Form EVO tube forming system.

The machine is designed as a robust table-top device for continuous operation in the workshop. It is used in connection with FI-FST tube shapers and FI-FB clamping jaws. Tube shapers with FI-ID internal tube supports are used with selected tube dimensions, which prevent the tube from being constricted in the shaping area.

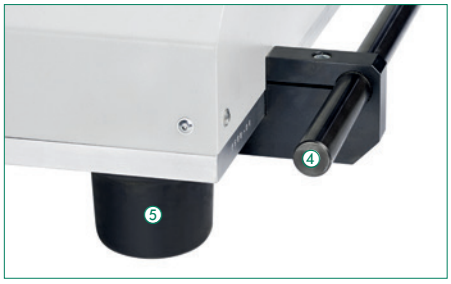
Tube shapers, clamping jaws and internal tube supports have been specifically designed for the mechanical forming process and can be quickly and simply replaced without the need for any tools, if required. The resulting short tool change and set-up times contribute to the high efficiency of the system as well as ensuring low cycle times.

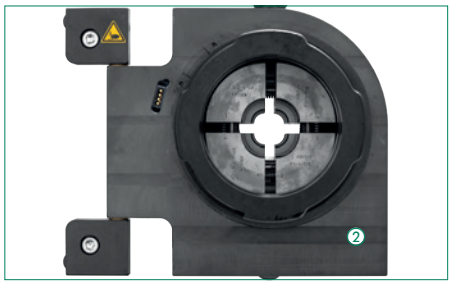
All the tools needed for the forming process are clearly labelled with the tube dimensions so that assembly errors caused by incorrect assignment can be largely ruled out.

STAUFF Form EVO Sealing Ring Type FI-FD, see Page 32

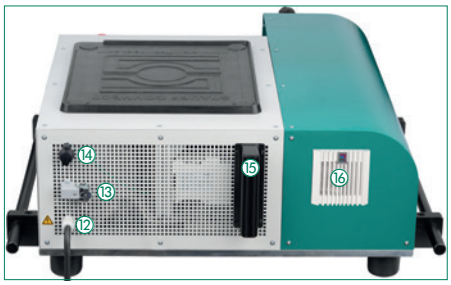
Operating elements of the tube forming machine

Noise-reducing tool tray with durable rubber mat


Lateral handle bars and rubber machine feet with suitable clearance height


Open clamping head with clamping jaws inserted

Inserting the tube shaper into the tool holder – with no tools required


Electrical connections

Cloud connection allows preventive maintenance via remote access and facilitates the documentation of assembly processes

Tube forming machines type SFO-F-A-A are equipped at the factory with a built-in module for direct connection to a cloud operated by STAUFF. This solution is realised with an integrated SIM card which can be used in all industrial regions of the world.

This enables software updates, for example, without having to connect the machine to a local network on site. Parameter sets, which have been determined by STAUFF for non-standard tube materials can also be transferred quickly and directly to the machine in this way.

Customers are given access to the cloud via a protected online portal, where they can get detailed information on the assembly processes performed, among other things.

The required data security is guaranteed by encryption in both directions.

STAUFF Form EVO
Tube Forming Machine
Type SFO-F-A-A-IOT

Characteristics

Performance

- Constant high process safety, reliability and reproducibility by the position-control of the machine, which performs the shaping process following a manual start and monitors it by means of stored parameters
- Integrated Light Barrier Module in Clamping Head automatically moves to the starting point after each shaping process
- Maximum efficiency thanks to short cycle times – ideal for series production
- Quick and simple replacement of tube shapers (with bayonet lock) and clamping jaws when changing the tube dimensions – with no tools required
- Potential risk of confusion and assembly errors caused by incorrect assignment can virtually be ruled out by the clear labelling of all assembly tools
- Surface-friendly clamping of the tube during the forming process
- Counters for lot/batch sizes and total quantities (separated by tool size)
- Predefined menu languages: English, German, French and Italian
- High degree of user comfort with clear information displayed on the operating panel

Design

① Robust and ergonomically designed machine housing
② Easily accessible clamping head with Light Barrier Module for simple positioning of the clamping jaws and optimised assembly area with approx. 110 mm distance from the tube axis to the interfering edge of the machine housing, which allows processing of tubes with low bending radii or complex geometries
③ Noise-reducing tool tray with durable rubber mat
④ Lateral handle bars as attachment points for transport (e.g. with lifting belts)
⑤ Secure positioning thanks to flexible rubber machine feet
⑥ Type plate, with technical data, serial number, year of manufacture etc.

Operating Elements

⑦ Operating panel for display and selection of all relevant settings and forming parameters
⑧ Button for definite confirmation of entries made on the operating panel
⑨ Status light to indicate readiness for operation and running assembly processes

Safety Devices

⑩ Main power switch (can be secured against unauthorised actuation when required)
⑪ Separate emergency stop button to immediately stop all machine movements

Connections (at the back of the machine)

⑫ Electrical connection according to IEC 60309 CEE 16A (cable length: 4 m)
⑬ Connection for External Foot Control Switch Type SFO/PRC-POC-FS
⑭ Ethernet connection (RJ45) for maintenance and data input by the manufacturer
⑮ Aerial IoT Gateway for preventive maintenance via remote access and facilitates the documentation of assembly processes
⑯ Filter Housing with replaceable filter fleece for clean heat regulation

Tube Forming Tools

⑰ Clamping Jaws FI-FB with clear identification of the tube dimension
⑱ Version of a Tube Shaper FI-FST with Internal Tube Support FI-ID
⑲ Tube Shaper FI-FST with clear identification of the tube dimensions

Technical Data

Area of Application

- Function: Cold forming of seamless cold drawn precision steel tubes acc. to to EN 10305-1 (materials E235, E355) and stainless steel tubes (material 1.4571 / AISI 316 Ti)

Parameters for alternative materials can be added by the manufacturer, if required. Please contact STAUFF for details.

- Operating principle: Tube forming with combined pressure/position-control
- Series and dimensions: Light Series (L): 6 x 1,5 mm to 42 x 4 mm
  Heavy Series (S): 6 x 1,5 mm to 38 x 6 mm

Dimensions / Weight

- Dimensions (W x D x H): 850 mm x 890 mm x 330 mm with lateral handle bars (detachable)
- Distance from the tube axis to the interfering edge of the machine housing: 110 mm
- Clearance height: 65 mm (height of the machine feet) enables simple and safe transport using a forklift or pallet jack
- Weight: 210 kg (including operating fluid, excluding forming tools)

Materials

- Machine frame: Aluminium
- Machine housing: Steel, painted
- Tool tray: NBR (Perbunan®)
- Machine feet: Natural rubber
- Form rings: Steel, zinc/nickel-plated
- Form rings (seal): FKM (Viton®)

Motor Configuration

- Power supply: 400 V AC @ 50 Hz - 3 phases
  460 V AC @ 60 Hz - 3 phases
- Current consumption: 2,55 A
- Connected load: 1,0 kW
- Electrical connection: Phase reversing plug according to IEC 60309 CEE 16A
- Cable length: 4 m

Alternative motor configurations and plug types are available on request. Please contact STAUFF for details.

Hydraulic System

- Operating fluid: Hydraulic oil Shell Tellus S2 MA 46 or equivalent (filled and ready for operation when delivered)
- Fluid volume: 6,1 litres
- Max working pressure: 700 bar

Operating Conditions

- Storage temperature: -10°C … +70°C
- Ambient temperature: +15°C … +35°C
- Ambient conditions: Dry, no condensing humidity, operation in horizontal position only
- Noise emission: less than 69 dB(A) as per EN ISO 11202 at full-load operation with maximum tube dimensions

STAUFF Maintenance Contracts
Please contact STAUFF for a maintenance contract, that provides optimum service for your STAUFF Tube Forming Machine.

STAUFF Machine Rental
Please contact STAUFF for a rental machine and further details of what this service can offer.

STAUFF Form EVO Tube Shapers ▪ Type FI-FST
STAUFF Form EVO Internal Tube Supports ▪ Type FI-ID

Materials / surface finishings: **HR** Steel, uncoated, hardened

Tube OD mm	Tube Wall Thickness mm	Weight per piece kg ca.	Ordering Codes: Tube Shapers	Ordering Codes: Internal Tube Supports
6	1,5	1,95	FI-FST-06L/S-F2-S-A	
	2,0			
8	1,5	1,97	FI-FST-08L/S-F2-S-A	
	2,0			
	2,5			
10	1,5	1,98	FI-FST-10L/S-F2-S-A	
	2,0			
	2,5			
	3,0			
12	1,5	1,99	FI-FST-12L/S-1.5-F2-S-A	FI-ID-12x1.5-HR/2
	2,0		FI-FST-12L/S-2/2.5/3-F2-S-A	
	2,5			
	3,0			
15	1,5	2,0	FI-FST-15L-F2-S-A	FI-ID-15x1.5-HR/2
	2,0			FI-ID-15x2.0-HR/2
	2,5			FI-ID-15x2.5-HR/2
16	1,5	2,04	FI-FST-16S-2/2.5-F2-S-A	FI-ID-18x2.5-HR/2
	2,0			FI-ID-16x2.0-HR/2
	2,5			FI-ID-16x2.5-HR/2
	3,0		FI-FST-16S-3/4-F2-S-A	
	4,0			
18	2,0	1,97	FI-FST-18L-2/2.5-F2-S-A	FI-ID-18x2.0-HR/2
	2,5			FI-ID-18x2.5-HR/2
	3,0		FI-FST-18L-3-F2-S-A	
	4,0			
20	2,0	1,98	FI-FST-20S-2/2.5-F2-S-A	FI-ID-20x2.0-HR/2
	2,5			FI-ID-20x2.5-HR/2
	3,0		FI-FST-20S-3/3.5/4-F2-S-A	
	3,5			
	4,0			
22	2,0	1,95	FI-FST-22L-2/2.5-F2-S-A	FI-ID-22x2.0-HR/2
	2,5			FI-ID-22x2.5-HR/2
	3,0		FI-FST-22L-3/3.5-F2-S-A	
	3,5			
25	2,0	1,96	FI-FST-25S-2/2.5-F2-S-A	FI-ID-25x2.0-HR/2
	2,5			FI-ID-25x2.5-HR/2
	3,0		FI-FST-25S-3/3.5/4/5-F2-S-A	
	3,5			
	4,0			
	5,0			
28	2,0	1,96	FI-FST-28L-2/2.5/3-F2-S-A	FI-ID-28x2.0-HR/2
	2,5			FI-ID-28x2.5-HR/2
	3,0			FI-ID-28x3.0-HR/2
	3,5		FI-FST-28L-3.5/4-F2-S-A	
	4,0			
30	2,5	1,95	FI-FST-30S-2.5/3-F2-S-A	FI-ID-30x2.5-HR/2
	3,0			FI-ID-30x3.0-HR/2
	4,0		FI-FST-30S-4/5/6-F2-S-A	
	5,0			
	6,0			
35	2,5	2,0	FI-FST-35L-2.5/3-F2-S-A	FI-ID-35x2.5-HR/2
	3,0			FI-ID-35x3.0-HR/2
	4,0		FI-FST-35L-4/5-F2-S-A	
	5,0			
38	3,0	1,82	FI-FST-38S-3/4-F2-S-A	FI-ID-38x3.0-HR/2
	4,0			FI-ID-38x4.0-HR/2
	5,0		FI-FST-38S-5/6-F2-S-A	
	6,0			
42	3,0	1,94	FI-FST-42L-F2-S-A	FI-ID-42x3.0-HR/2
	3,5			FI-ID-42x3.5-HR/2
	4,0			FI-ID-42x4.0-HR/2

Please note:
The selection chart is only applicable in conjunction with seamless cold drawn precision steel tubes according to EN 10305-1 (materials E235, E355) and stainless steel tubes (material 1.4571 / AISI 316 Ti).
Please consult STAUFF for information regarding the processing of tubes made from stainless steel and other materials.

STAUFF Form EVO Clamping Jaws ▪ Type FI-FB

Tube OD mm	Series	Weight per piece kg ca.	Ordering Codes
6	L / S	2,37	FI-FB-06L/S-F2-S-A
8	L / S	2,36	FI-FB-08L/S-F2-S-A
10	L / S	2,32	FI-FB-10L/S-F2-S-A
12	L / S	2,30	FI-FB-12L/S-F2-S-A
15	L	2,37	FI-FB-15L-F2-S-A
16	S	2,31	FI-FB-16S-F2-S-A
18	L	2,28	FI-FB-18L-F2-S-A
20	S	2,24	FI-FB-20S-F2-S-A
22	L	2,32	FI-FB-22L-F2-S-A
25	S	2,17	FI-FB-25S-F2-S-A
28	L	2,32	FI-FB-28L-F2-S-A
30	S	2,05	FI-FB-30S-F2-S-A
35	L	1,92	FI-FB-35L-F2-S-A
38	S	1,92	FI-FB-38S-F2-S-A
42	L	1,77	FI-FB-42L-F2-S-A

Overview tube dimensions
Parameter and Tools STAUFF Form EVO

Carbon Steel

Size	Wallthickness								
	1	1,5	2	2,5	3	3,5	4	5	6
	E235/ E355	E235/ E355	E235/ E355	E235/ E355	E235/ E355	E235/ E355	E235/ E355	E235/ E355	E235/ E355
6	-			-	-	-	-	-	-
8	-				-	-	-	-	-
10	-					-	-	-	-
12	-	▪				-	-	-	-
15	-	▪	▪	▪	-	-	-	-	-
16	-	▪	▪	▪		-		-	-
18	-	-	▪	▪		-		-	-
20	-	-	▪	▪				-	-
22	-	-	▪	▪			-	-	-
25	-	-	▪	▪					-
28	-	-	▪	▪	▪			-	-
30	-	-	-	▪	▪	-			
35	-	-	-	▪	▪	-			-
38	-	-	-	-	▪	-	▪		
42	-	-	-	-	▪	▪	▪	-	-

Parameter set and tools available. To use without tube supports.

Stainless Steel

Wallthickness								
1	1,5	2	2,5	3	3,5	4	5	6
316ti	316ti	316ti	316ti	316ti	316ti	316ti	316ti	316ti
-			-	-	-	-	-	-
-			-	-	-	-	-	-
-				-	-	-	-	-
-	▪				-	-	-	-
-	▪	▪	▪	-	-	-	-	-
-	-	▪	▪		-		-	-
-	-	▪	▪		-	-	-	-
-	-	▪	▪		-		-	-
-	-	▪	▪		-	-	-	-
-	-	▪	▪					-
-	-	▪	▪	▪	-		-	-
-	-	-	▪	▪	-			-
-	-	-	▪	▪	-			-
-	-	-	-	▪	-	▪		-
-	-	-	-	▪	-	-	-	-

▪ Parameter set and tools available. To use with internal tube supports.

P

External Foot Control Switch
Type SFO/PRC-POC-FS

- Enables the operator to trigger assembly processes from a larger distance to the machine (cable length: 7 m)

STAUFF Form EVO Oil
Type Oel-Stauff-Form-1L

- Enables faultless, mechanical tube forming with STAUFF Form EVO machines when using stainless steel tubes

STAUFF Oil with brush
Type SPR-PRC-H-M-OS

- Enables faultless, mechanical tube forming with STAUFF Form EVO machines when using stainless steel tubes

Thread Identification Board

FI-TIB

282

Cone Gauges

FI-KOL

283

Q

Thread Identification Board
Type FI-TIB

Product Description

The STAUFF Thread Identification Board is intended to be used as a universal tool for workshops, warehouses or sales counters allowing quick and easy determination of common thread types and sizes, e.g. for male stud tube connectors and test couplings.

The board is available in two different versions:

FI-TIB-M/G

- **13 Metric Parallel Threaded Ports**
  M8 x 1 / M10 x 1 / M12 x 1,5 / M14 x 1.5 / M16 x 1,5 / M18 x 1,5 / M20 x 1,5 / M22 x 1.5 / M26 x 1,5 / M27 x 2 / M33 x 2 / M42 x 2 / M48 x 2
- **8 Whitworth Parallel Pipe Threaded Ports**
  G1/8 / G1/4 / G3/8 / G1/2 / G3/4 / G1 / G1 1/4 / G1 1/2

FI-TIB-N/U

- **8 National Pipe Threaded Ports**
  1/8–27 NPT / 1/4–18 NPT / 3/8–18 NPT / 1/2–14 NPT / 3/4–14 NPT / 1–11.5 NPT / 1 1/4–11.5 NPT / 1 1/2–11.5 NPT
- **9 UNF/UN Threaded Ports**
  7/16–20 UNF / 1/2–20 UNF / 9/16–18 UNF / 3/4–16 UNF / 7/8–14 UNF / 1 1/16–12 UN / 1 5/16–12 UN / 1 5/8–12 UN / 1 7/8–12 UN

Product Features

- Covering all relevant thread type and sizes of male stud tube connectors and test couplings
- Boards made of hardened quality steel
- Finished with an extremely resistant cathodic electrodeposition coating
- Laser markings indicating the thread types and sizes next to the threaded ports
- Non-slip rubber feet providing good stability

Technical Data

▪ Dimensions (W x D x H):	275 mm x 190 mm x 31 mm
▪ Clearance height:	13 mm (height of the rubber feet)
▪ Weight:	6,0 kg

Note

Thread identification boards are intended to be tools for the basic determination of thread types and sizes. They do not replace high-precision thread gauges and measurement devices (should these become necessary at any point).

Cone Gauges
Type FI-KOL

Product Description

These cone gauges are designed for wear checks on the 24° cone for all STAUFF final assembly studs 6 - 42 mm. To ensure accuracy during cutting ring assembly, the assembly stud has to be checked for wear and damage after max. 50 assembly processes (DIN 3859-2).

This set is suitable for all final assembly studs of type FI-MFK as well as for manual assembly cones of type FI-FK.

The cone gauges are available individually or as a complete set for all sizes in a convenient case.

Product Features

- Ensure accurate cutting ring assembly because the target cone in the stud can be verified with precision
- Prevents premature replacement of the studs
- Easy handling

Technical Data

- Dimensions Case (W x D x H): 357 mm x 305 mm x 80 mm
- Dimensions Cone Gauges (H) 95 mm

Ordering Code

- Cone Gauge Kit in Box (Size 6 to 42) **FI-Box-Cone-Gauge-Kit-6-42**

Single Cone Gauges

Size	Ordering Codes
06L/S	FI-KOL-06L/S-W1
08L/S	FI-KOL-08L/S-W1
10L/S	FI-KOL-10L/S-W1
12L/S	FI-KOL-12L/S-W1
14S	FI-KOL-14S-W1
15L	FI-KOL-15L-W1
16S	FI-KOL-16S-W1
18L	FI-KOL-18L-W1
20S	FI-KOL-20S-W1
22L	FI-KOL-22L-W1
25S	FI-KOL-25S-W1
28L	FI-KOL-28L-W1
30S	FI-KOL-30S-W1
35L	FI-KOL-35L-W1
38S	FI-KOL-38S-W1
42L	FI-KOL-42L-W1

STAUFF Clean
Pipe, Tube and Hose Cleaning System
SC
286

Manual Tube Bender
TUB-MA
288

Tube Bending and Saw Device
TUBSD-MA
289

Tube Saw Devise
TUSD-MA
290

Tube Reamer
TUD-MA
291

R

STAUFF Clean
Pipe, Tube and Hose Cleaning System

Product Description

The STAUFF Clean System comprises of a pneumatic launcher and a range of specially designed nozzles and projectiles.

The launcher uses standard industrial compressed air pressure between 6 and 8 bar to propel a foam projectile through the nozzle and into the pipe, tube or hose bore to have their inside surface cleanedfrom any unwanted contamination.

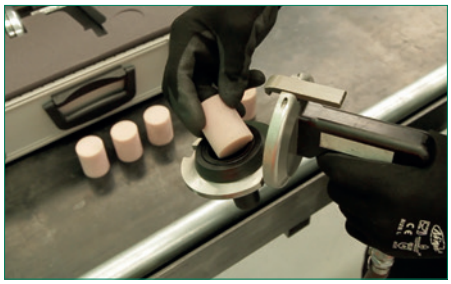
This provides a safe and environmentally friendly tool that requires little formal expertise to operate and apply.

The **launcher** is the part of the system that controls the air supply to propel the projectile from start to finish of the cleaning job.

The **nozzles** are specially designed to affect an airtight seal on any pipe, tube or hose with or without end fittings. Its main purpose is to compress the foam projectile allowing it to enter the internal diameter of the pipe, tube or hose to be cleaned.

The **projectile** is the part of the system that does the cleaning: The foam projectile is sized to be approximately 15 % larger than the internal diameter of the pipe, tube or hose to be cleaned. The compression of the projectile against the internal wall cleans the internal surface and expels any loose contaminants from the end of the pipe, tube or hose.

The STAUFF Clean System is available as separate components or in a variety of kit forms comprising various nozzle types, adaptor and launcher, all contained in a heavy duty carrying case.



R

STAUFF Clean
Launchers / Launcher Kits

Characteristics

- Pneumatic pistol-grip launcher
- Light-weight and ergonomic design
- Easy to operate and apply
- Connection to air suppy with quick release coupling
- Suitable for any type of nozzle
- Delivered separately or in a variety of kit forms including carrying case, adaptor ring and nozzles (if required)

Technical Data

- Air compressor requirement: 6 ... 8 bar
- Effective air volume: 250 ... 400 l/min

Ordering Codes

▪ Launcher only	**SC-LG**
▪ Launcher kit (launcher, kit and adaptor)	**SC-LK**
▪ Kit (launcher, kit and adaptor) with set of 10 Universal nozzles	**SC-10UV-K**
▪ Kit (launcher, kit and adaptor) with set of 18 Metric Tube nozzles	**SC-18MT-K**

Contact STAUFF for alternative connection adaptors and couplings.

STAUFF Clean Nozzles / Nozzle Sets

Universal Nozzle Set (SC-U-SET)

The Universal Nozzle is designed with a tapered seat that will allow it to suit for 90% of applications, including Hose, Tube and Pipe, with or without fittings, in hydraulic and pneumatic pipe systems, condenser tubes, boiler tubes and food lines.

The Universal Nozzle kit fits all and will accommodate applications with JIC, SAE and BSP end fittings.

The set of 10 nozzles consists of the following sizes: 6 mm, 8 mm, 10 mm, 13 mm, 16 mm, 19 mm, 25 mm and 32 mm.

Metric Tube Nozzle Set (SC-M-SET)

The Metric Tube Nozzle is intended for use specifically with Metric sized tube and is designed to fit over the outside of the tube or pipe being cleaned.

The inside diameter of the nozzle is reduced to match the inside diameter of the tube. The nozzles are machined from solid bar stock and designed for superior strength.

The set of 18 nozzles consist of the following sizes: 6 mm, 8 mm, 10 mm, 12 mm, 14 mm, 15 mm, 16 mm, 18 mm, 20 mm, 22 mm, 25 mm, 28 mm, 30 mm, 35 mm, 38 mm, 42 mm, 50 mm and 60 mm.

Adaptor Ring for Nozzels (SCN-AR)
Required for sizes 6-32 mm / 1/4-1 1/4 in

If required, nozzles can be supplied separately. Contact STAUFF for details.

JIC Nozzle Set (SC-J-SET)

The JIC Nozzle is designed specifically for use with JIC and SAE type fittings. The nozzles are machined to accommodate both male and female configuration, ensuring a perfect airtight seal every time.

The set of 10 nozzles consist of the following sizes: 6 mm, 8 mm, 10 mm, 13 mm, 16 mm, 19 mm, 25 mm, 32 mm, 38 mm and 50 mm.

BSP Nozzle Set (SC-B-SET)

The BSP Nozzle is designed specifically for BSP configuration fittings. The nozzles are machined to accommodate both male and female configurations, ensuring a perfect airtight seal every time.

The set of 7 nozzles consist of the following sizes: 6 mm, 10 mm, 13 mm, 16 mm, 19 mm, 25 mm and 32 mm.

STAUFF Clean Projectiles

Standard Projektiles
Type SCP-S
Intended for the cleaning of hose, tube or pipe without end fittings or restrictions.

Abrasive Projektiles
Type SCP-A
Intended for the internal cleaning of metal pipe and tube to remove light contaminants (rust and scale).

Coupling Projektiles
Type SCP-C
Intended for the cleaning of hose assemblies or the removal of loose contamination from pipe, tube or hose.

Grinding Projektiles
Type SCP-G
Intended for the internal cleaning of metal pipe and tube to remove medium and heavy contamination (rust and scale).

Size	Pipe / Tube / Hose ID		Ordering Codes			
	(mm)	(in)	Coupling Series (SCP-S)	Coupling Series (SCP-C)	Coupling Series (SCP-A)	Coupling Series (SCP-G)
07	4,8	3/16	SCP-S-07-V100	SCP-C-07-V100	SCP-A-07-V100	SCP-G-07-V100
10	6,4	1/4	SCP-S-10-V100	SCP-C-10-V100	SCP-A-10-V100	SCP-G-10-V100
12	7,9	5/16	SCP-S-12-V100	SCP-C-12-V100	SCP-A-12-V100	SCP-G-12-V100
14	9,5	3/8	SCP-S-14-V100	SCP-C-14-V100	SCP-A-14-V100	SCP-G-14-V100
16	11,1	7/16	SCP-S-16-V100	SCP-C-16-V100	SCP-A-16-V100	SCP-G-16-V100
18	12,7	1/2	SCP-S-18-V100	SCP-C-18-V100	SCP-A-18-V100	SCP-G-18-V100
20	14,3	9/16	SCP-S-20-V100	SCP-C-20-V100	SCP-A-20-V100	SCP-G-20-V100
22	15,9	5/8	SCP-S-22-V100	SCP-C-22-V100	SCP-A-22-V100	SCP-G-22-V100
26	19,1	3/4	SCP-S-26-V50	SCP-C-26-V50	SCP-A-26-V50	SCP-G-26-V50
30	22,2	7/8	SCP-S-30-V40	SCP-C-30-V40	SCP-A-30-V40	SCP-G-30-V40
33	25,4	1	SCP-S-33-V40	SCP-C-33-V50	SCP-A-33-V40	SCP-G-33-V40
36	26 / 27	1 1/16	SCP-S-36-V30	SCP-C-36-V30	SCP-A-36-V30	SCP-G-36-V30
40	31,8	1 1/4	SCP-S-40-V30	SCP-C-40-V30	SCP-A-40-V30	SCP-G-40-V30
45	34,9	1 3/8	SCP-S-45-V20	SCP-C-45-V20	SCP-A-45-V20	SCP-G-45-V20
50	38,1	1 1/2	SCP-S-50-V20	SCP-C-50-V20	SCP-A-50-V20	SCP-G-50-V20
60	50,8	2	SCP-S-60-V15	SCP-C-60-V15	SCP-A-60-V15	SCP-G-60-V15

Please note: For optimum cleaning, it is recommended that projectiles are used once and then discarded and disposed of in an appropriate way.

Safety note: A mesh collection bag should be secured to the pipe, tube or hose exit to avoid possible injury to personnel by the projectile exiting at high velocity.

Always wear protective safety glasses, ear protection and a dust mask when operating this system.

Manual Tube Bender
Typ TUB-MA

Product Description

When used with a commercially available vice, STAUFF manual tube benders, type TUB-MA, enable common hydraulic tubes to be bent manually.

They are suitable for steel and stainless steel tubes with diameters of 6, 8, 10, 12, 14, 15, 16, 18 and 22 mm with a defined minimum wall thickness.

In addition to the metric version, a model for handling inch-gauge tubes with diameters of between 1/4 and 7/8 inches is also available.

The eight bending rollers – six in the imperial version – ensure maximum wear.

A scale lasered onto the bending rollers enhances the accuracy of the required bending angle with superior precision.

The manual tube bender is supplied with all the necessary components and multilingual instructions for use as a complete kit in a high-quality steel case.

Product Features

- Small bending radii allow for compact assemblies
- Optimised bending contour, which enables tube bends free of flattening and constriction
- hard wearing steel bending rolls
- ideal for versatile site use, possibly for installation work on site

Technical Data

- Dimensions (W x D x H):
  640 mm x 165 mm x 70 mm
- Weight (incl. Case):
  Metric Version 13,8 kg
  Imperial Version 12,1 kg

Ordering Codes

- Manual Tube Bender Set in Steelcase (metric Version) **TUB-MA-M622-LV-KIT**
- Manual Tube Bender Set in Steelcase (imperal Version) **TUB-MA-I4140D-LV-KIT**

Spare Parts / Accessories

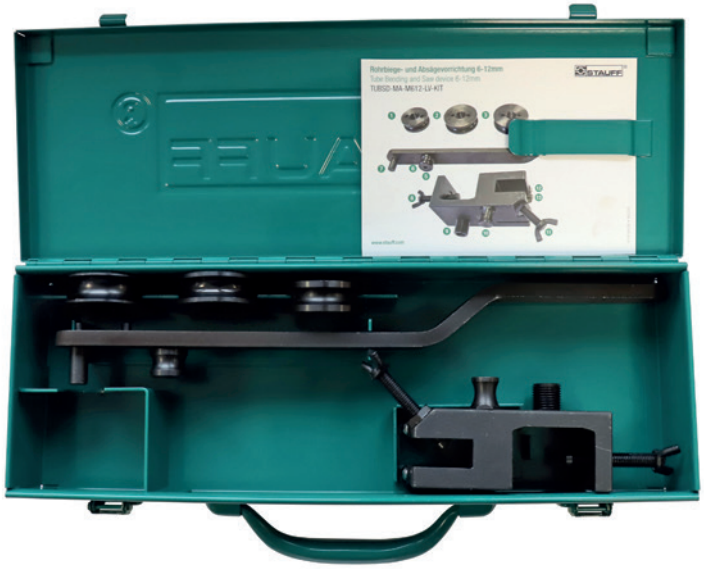
Description	Ordering Codes
Bending Lever	TUB-MA-S-Bending-Lever
Baseplate	TUB-MA-S-Baseplate
Guide Roller	TUB-MA-S-Guide-Roller-W32
Hold Roll	TUB-MA-S-Hold-Roll-W101
Guide Roller Mount	TUB-MA-S-Guide-Roller-Mount
Bolt	TUB-MA-S-Bolt-M12x32
Pivot Pin	TUB-MA-S-Pivot-Pin
Bending Lever Support	TUB-MA-S-Bending-Lever-Support-W32
Bending Roller 6/8 mm	TUB-T-BE-M6/8-MIOD-W32
Bending Roller 10 mm	TUB-T-BE-M10-MIOD-W32
Bending Roller 12 mm	TUB-T-BE-M12-M622-W32
Bending Roller 14/15 mm	TUB-T-BE-M14/15-M622-W32
Bending Roller 16 mm	TUB-T-BE-M16-MIOD-W32
Bending Roller 18 mm	TUB-T-BE-M18-M622-W101
Bending Roller 20 mm	TUB-T-BE-M20-M622-W101
Bending Roller 22 mm	TUB-T-BE-M22-MIOD-W101
Bending Roller 1/2"	TUB-T-BE-08OD-I4140D-W32
Bending Roller 3/4"	TUB-T-BE-12OD-I4140D-W101

Parts assignment: www.stauff.com/en/category/025000/025022/025025/025021B

Outer Diameter	Metric	Inch	Radius	Minimum Wall Thickness
6/8 mm (1/4"/ 5/16")	●	●	33 mm / 1.30 in	1,5 mm / .06 in
10 mm (3/8")				
12 mm	●			1,5 mm / .06 in
1/2"		●		
14 mm	●		40 mm / 1.57 in	2,0 mm / .08 in
15 mm	●			1,5 mm / .06 in
16 mm (5/8")	●	●		
18 mm	●		48 mm / 1.89 in	1,5 mm / .06.in
3/4"		●		2,0 mm / .08 in
20 mm	●			
22 mm (7/8")	●	●		

R

Tube Bending and Saw Device Type TUBSD-MA



Product Description

This sturdy steel case is designed for short-term use on the go, providing all components required for bending and sawing off hydraulic tubes made of steel or stainless steel. The case contains a combined manual tube bending and sawing device which can be attached with a standard vice or directly to a workbench top with a thickness of up to 35 mm.
The contour of the holding fixture ensures that cuts are made at a 90° angle.

Three low-wear bending rollers made of steel allow processing of steel or stainless steel tubes with an outer diameter of 6, 8, 10 or 12 mm. The optimised bending contour of the rollers prevents deformation of the tube even for smaller bending radii. A bending lever is also included in the set.

A standard hacksaw is used for sawing off the tube.

The case also has space for the STAUFF universal internal and external tube reamer for tube diameters from 6 to 35 mm. The reamer is not included in the set, but can be purchased separately, as can all components of this convenient repair set in a robust steel case.

Ordering Code

- Tube Bending and Saw Device in Steelcase **TUBSD-MA-M612-LV-KIT**

Spare Parts / Accessories

Description	Ordering Codes
Bending roll 6/8mm (Radius 19/20mm)	TUBSD-T-BE-M6/8-W101
Bending roll 10mm (Radius 25mm)	TUBSD-T-BE-M10-W101
Bending roll 12mm (Radius 26mm)	TUBSD-T-BE-M12-W101
Bending-Lever-compl	TUBSD-S-Bending-Lever-compl-W101
Baseplate-compl	TUBSD-S-Baseplate-compl-W101
Hold-Roll	TUBSD-S-Hold-Roll-W101
Bending-Roll-Mount	TUBSD-S-Bending-Roll-Mount-W101
Round-Head-Rivet Kit 4 pcs.	Kit-TUBSD-S-Round-Head-Rivet-W5
SAW-Guide Kit 2 pcs.	Kit-TUBSD-S-SAW-Guide-W101
Pivot-Pin	TUBSD-S-Pivot-Pin-W101
Guide-Roller-Mount	TUBSD-S-Guide-Roller-Mount-W101
Guide-Roller	TUBSD-S-Guide-Roller-W101
Butterfly lock bolt	TUBSD-S-Butterfly lock bolt W101

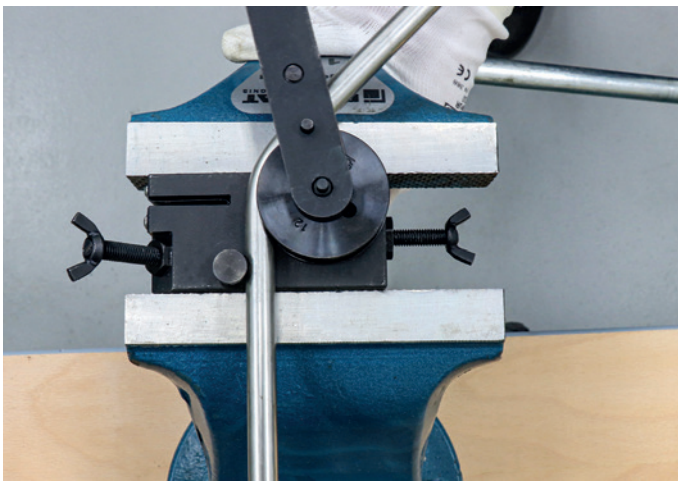
Parts assignment: www.stauff.com/en/category/025000/025022/025026/025022D

Product Features

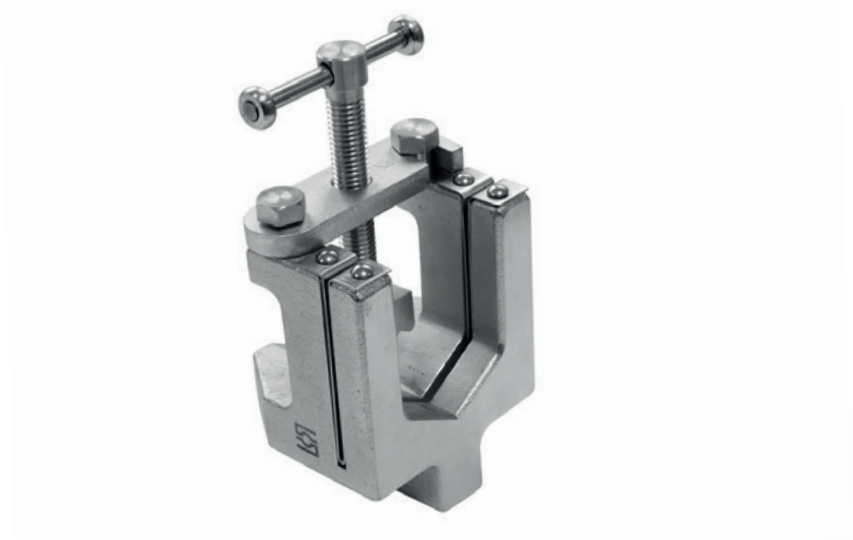
- Bending and sawing with one device
- Wear-resistant steel bending rollers
- Small bending radii for compact installations
- Optimised bending contour: The tube diameter is not deformed during the bending process
- Saw blade guiding ensures 90° cuts
- Can be used with or without a vice
- Ideal for flexible mobile use, e.g. for installation work at a construction site

Technical Data

- Dimensions (W x D x H): 355 mm x 125 mm x 56 mm
- Weight (incl. Case): 3,4kg



Tube Saw Devise
Type TUSD-MA



Product Description

This device can be used to cut steel and stainless steel tubes with an outer diameter between 6 and 42 mm at a precise 90° angle. It can either be used with a vice or simply clamped onto the tube for cutting.

A standard hacksaw is used for sawing off the tube.

Product Features

- 90° cut on tubes up to 42 mm
- Tube diameter is not deformed during the clamping process
- Robust, durable design
- No vice required, device can also simply be clamped onto the tube
- The saw blade guide can easily be replaced separately when it is worn
- Ideal for flexible mobile use, e.g. for installation work at a construction site

Technical Data

- Dimensions (W x D x H): 80 mm x 70 mm x 140 mm
- Weight: 1,6 kg

Ordering Code

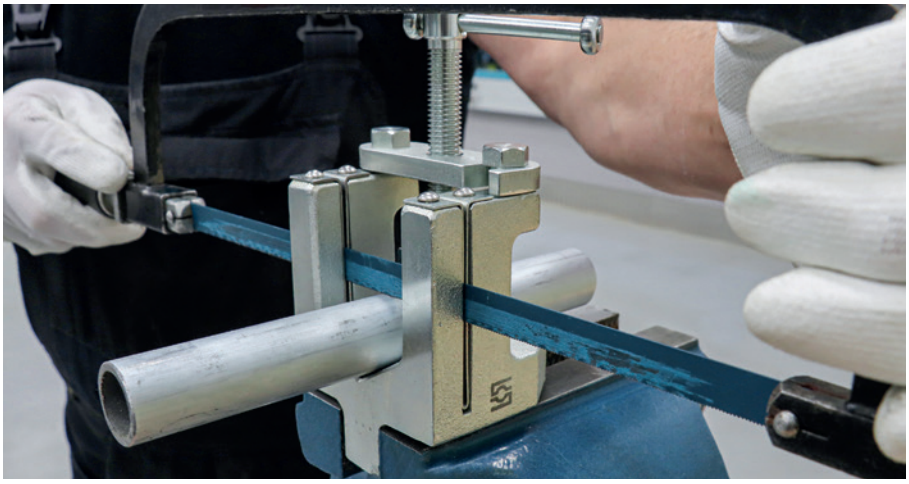
- Tube Saw Devise **TUSD-MA-M642**

Spare Parts / Accessories

Description	Ordering Codes
Round-Head-Rivet Kit 4 pcs.	Kit-SD-MA-S-Round-Head-Rivet-W5
SAW-Guide Kit 2 pcs.	Kit-SD-MA-S-Saw-Guide-W101
Barcked Bolt Kit 2 pcs.	Kit-SD-MA-S-Bolt-W32
Bracked-compl.	SD-MA-S-Bracked-compl.-W32

Parts assignment: www.stauff.com/en/category/025000/025022/025027/025022E

R



Tube Reamer
Type TUD-MA

Product Description

The STAUFF universal internal and external tube reamer for tube diameters from 6 to 35 mm features high-quality sharpened cutting edges made of hardened special steel and ensures a flowing, “chatter-free” work process. Also available for tubes with an outer diameter from 10 to 54 mm.

Particularly convenient: An adapter for using the device with an electric drill at low speed is available for both sizes.

Product Features

- Easy and quick burr removal on steel and stainless steel tubes
- High-quality sharpened cutting edges made of hardened special steel
- Chatter-free working

Ordering Codes

Description	Ordering Codes
Tube reamer 6-35mm	TUD-MA-0635
Adapter for Tube reamer 6-35mm	TUD-ADA1-0635
Tube reamer 10-54mm	TUD-MA-1054
Adapter for Tube reamer 10-54mm	TUD-ADA2-1054

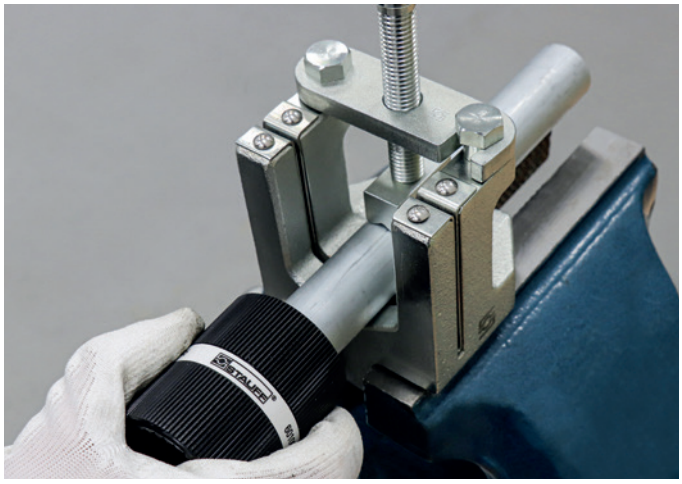
Technical Data

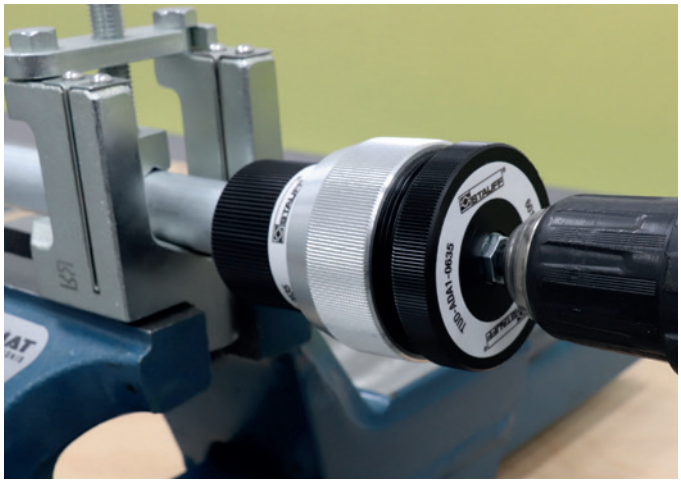
- Dimensions TUD-MA-0635 (Ø x H): 48 mm x 60 mm
- Weight: 0,2 kg

- Dimensions TUD-MA-1054 (Ø x H): 70 mm x 90 mm
- Weight: 0,6 kg

- Dimensions TUD-ADA1-0635 (Ø x H): 65 mm x 85 mm ink. Welle
- Weight: 0,2 kg

- Dimensions TUD-ADA2-1054 (Ø x H): 91 mm x 92 mm inkl. Welle
- Weight: 0,4 kg



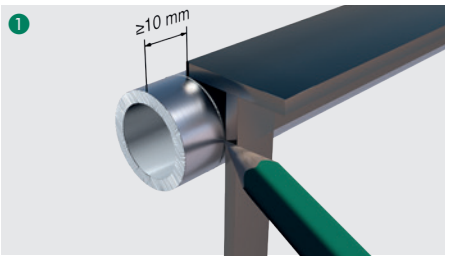


Assembly Instructions for STAUFF Connect 24° Tube Fittings with Double Edge Cutting Ring (Type FI-DS)	296-303
100% Assembly with the Manual Final Assembly Stud (Type FI-FK) and Assembly with the Fitting Body	296
Pre-Assembly with the Manual Pre-Assembly Stud (Type FI-FK) and Assembly with the Fitting Body	298
Direct Assembly with the Fitting Body	300
Machine-Assisted 100% Assembly with a STAUFF Press Assembly Machine and Assembly with the Fitting Body	302
Machine-Assisted Pre-Assembly with a STAUFF Press Assembly Machine and Assembly with the Fitting Body	303
Assembly Instructions for STAUFF Connect 24° Tube Fittings with Soft-Sealing Cutting Ring (Type FI-WDDS)	304-309
Pre-Assembly with the Manual Final Assembly Stud (Type FI-FK) and Assembly with the Fitting Body	304
Direct Assembly with the Fitting Body	306
Machine-Assisted Pre-Assembly with a STAUFF Press Assembly Machine and Assembly with the Fitting Body	308
Assembly Instructions for Support Sleeves	310
Assembly Instructions for STAUFF Form EVO Tube Fittings	312
Assembly Instructions for STAUFF Connect 37° Flared Tube Fittings	316
Assembly Instructions for 24° Weld Cones with O-Ring	320
Assembly Instructions for Tube Fittings with 24° Taper and O-Ring	322
Assembly Instructions for Tube Fittings with Standpipe	322
Assembly Instructions for Tube Fittings with Male Threaded Stud	323
Assembly Instructions for Banjo Fittings	326
Assembly Instructions for Adjustable Fitting with Locknut (WEE, VEE, TEE, LEE)	327

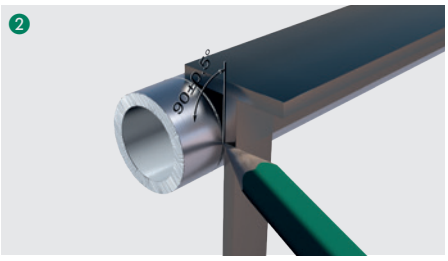
Assembly Instructions for STAUFF Connect 24° Tube Fittings with Double Edge Cutting Ring (Type FI-DS)

100% Assembly with the Manual Final Assembly Stud (Type FI-FK) and Assembly with the Fitting Body

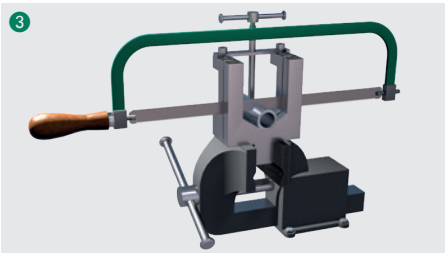
1. Tube Preparation

1


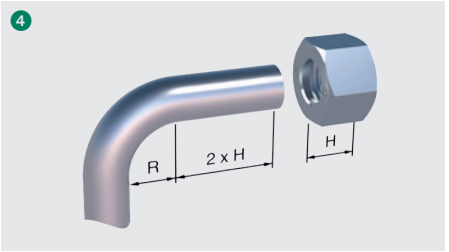
Saw off tube in right angle and at least 10 mm from the cut made by the tube manufacturer / supplier in order to avoid failures caused during shipment.

2


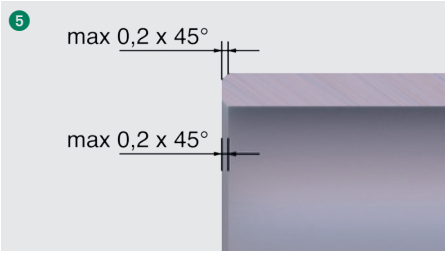
A maximum angular deviation / tolerance of ±0,5° relative to the tube axis is permissible.

3


Only use proper tube sawing machinery or equipment. Do not use tube cutters or grinders as this may result in unwanted angled cuts and cause severe burring.

4


For tube bends, the length of the straight section of the tube end to the start of the bending radius has to be twice the height of the union nut.

5


Slightly deburr inside and outside of the tube end (max 0,2 x 45°). The assembly area of the tube has to be free of contamination, chips and paint.

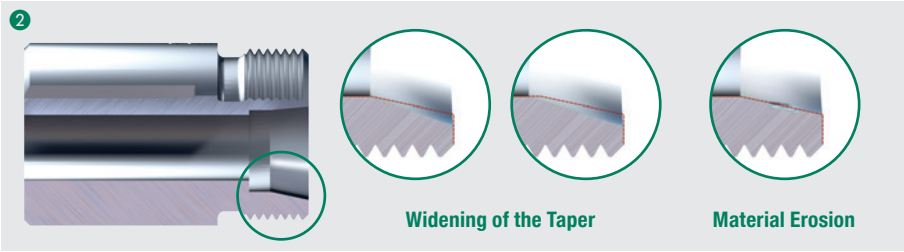
6

Please note: Improperly prepared and contaminated tubes will affect the service life of the connection and may result in leakage.

2. Assembly Preparation

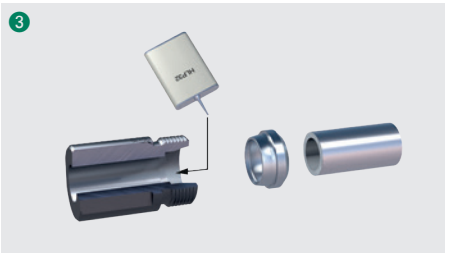
1

Please note: Hardened final assembly studs are wear-resistant, thus allowing for consistent assembly results with a maximum degree of accuracy, reliability and process stability.

2


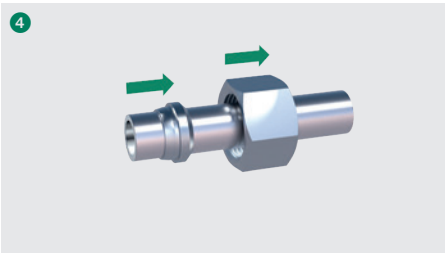
However, they have to be checked for dimensional accuracy regularly. Assembly studs that are damaged and/or dimensionally not accurate must be replaced under any circumstances!

Typical damages include widening of the 24° angle or the entire taper, as well as material erosion.

3


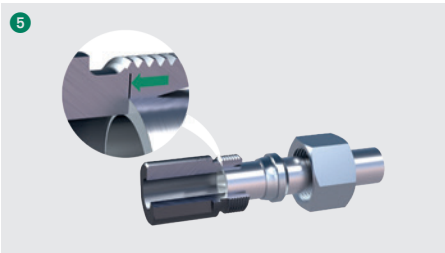
Lightly lubricate the 24° taper of the final assembly stud (e.g. using mineral-oil based hydraulic fluid HLP32). Do not use lubricating grease!

Immediately proceed with the assembly in order to avoid exposure to contamination.

4


Consecutively put the union nut first and then the cutting ring onto the tube end.

Pay attention to the correct alignment of the cutting ring: The cutting edges have to face to the tube end.

5


Carefully insert the tube end into the 24° taper of the final assembly stud and push it firmly against the inner stop.

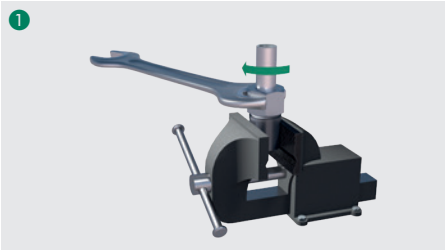
The tube must be held in this position during the entire assembly process in order to avoid faulty assembly.

S

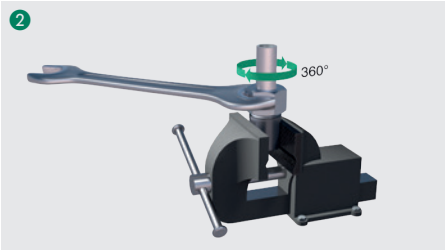
Assembly Instructions for STAUFF Connect 24° Tube Fittings with Double Edge Cutting Ring (Type FI-DS)

100% Assembly with the Manual Final Assembly Stud (Type FI-FK) and Assembly with the Fitting Body

3. Assembly in the Assembly Stud

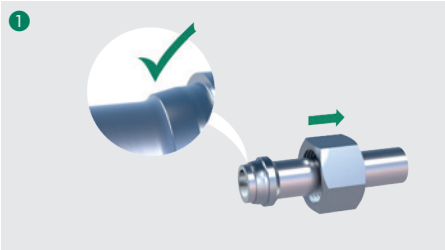


Tighten the union nut until the noticeable increase in force (pressure point). The cutting ring now grips the tube, which can no longer be rotated.



Use a suitable spanner to tighten the union nut another full turn (360°) beyond the pressure point. In doing so, the cutting ring will uniformly cut into the tube.

4. Inspection

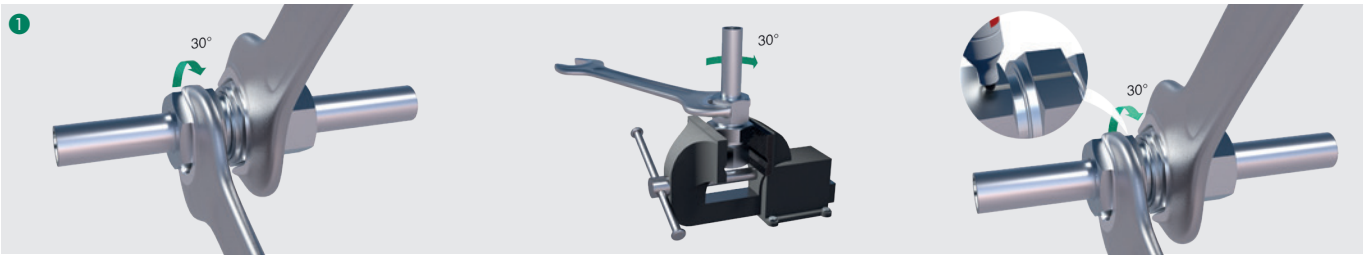


Fully untighten the union nut for a visual inspection after the assembly. The material accumulation must be clearly visible in front of the cutting edge and should almost completely cover the cutting edge.

In this position, it is still permissible for the cutting ring to turn on the tube, but not to be displaced in axial direction of the tube.

Please note: If not enough tube material has been raised in front of the cutting edge or if the cutting ring is still capable of being displaced in axial direction, the assembly procedure must be repeated by using more force, and the result must be re-checked.

5. Final-Assembly with the Fitting Body



Carefully insert the assembled tube end into the 24° taper of the fitting body.

Use a suitable spanner to tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/12 a turn (30°) beyond this point.

Always use a second spanner to hold the fitting body during the entire assembly procedure.

In case of unfavourable mounting conditions or larger tube dimensions, use a bench vice for the assembly.

A marking line applied on the union nut and the fitting body makes it easier to indicate the sufficient tightening angle.

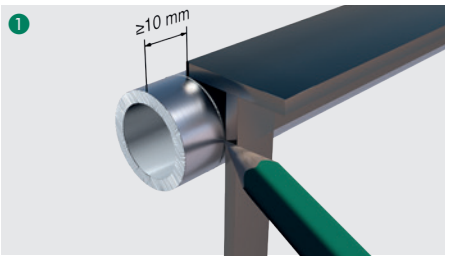
6. Repeated Assembly

For repeated assemblies, please use a suitable spanner to tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/12 a turn (30°) beyond this point.

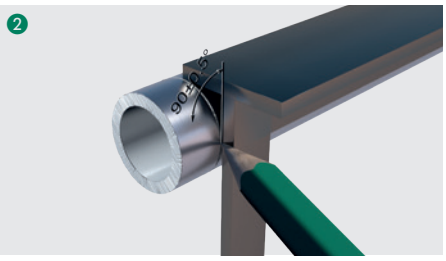
Assembly Instructions for STAUFF Connect 24° Tube Fittings with Double Edge Cutting Ring (Type FI-DS)

Assembly with the Manual Pre-Assembly Stud (Type FI-FK) and Assembly with the Fitting Body

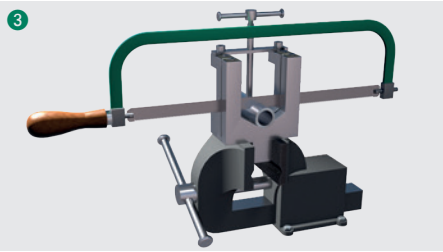
1. Tube Preparation

1


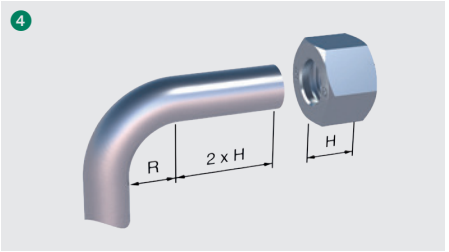
Saw off tube in right angle and at least 10 mm from the cut made by the tube manufacturer / supplier in order to avoid failures caused during shipment.

2


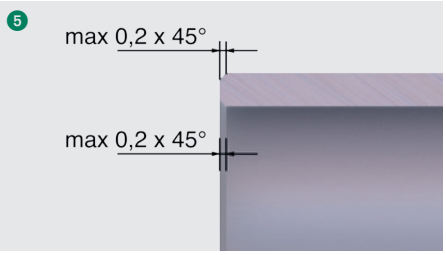
A maximum angular deviation / tolerance of ±0,5° relative to the tube axis is permissible.

3


Only use proper tube sawing machinery or equipment. Do not use tube cutters or grinders as this may result in unwanted angled cuts and cause severe burring.

4


For tube bends, the length of the straight section of the tube end to the start of the bending radius has to be twice the height of the union nut.

5


Slightly deburr inside and outside of the tube end (max 0,2 x 45°). The assembly area of the tube has to be free of contamination, chips and paint.

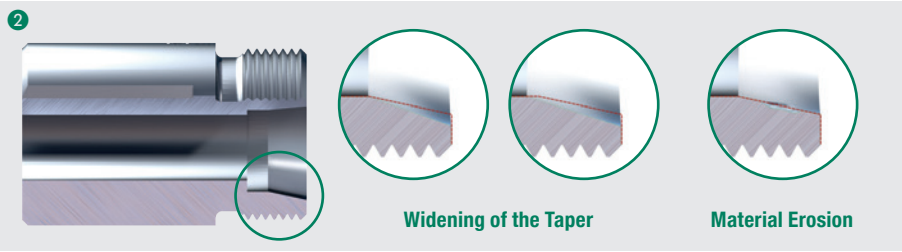
6

Please note: Improperly prepared and contaminated tubes will affect the service life of the connection and may result in leakage.

2. Assembly Preparation

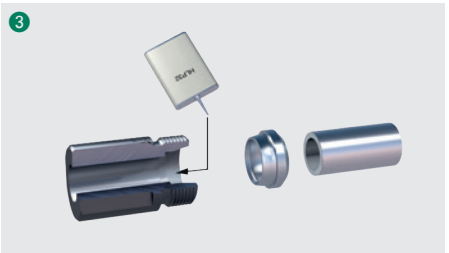
1

Please note: Hardened pre-assembly studs are wear-resistant, thus allowing for consistent assembly results with a maximum degree of accuracy, reliability and process stability.

2


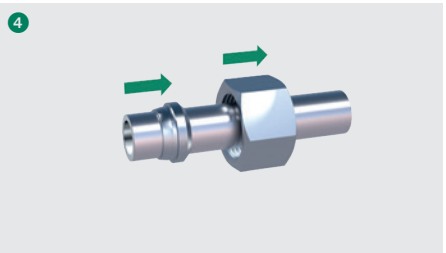
However, they have to be checked for dimensional accuracy regularly. Assembly studs that are damaged and/or dimensionally not accurate must be replaced under any circumstances!

Typical damages include widening of the 24° angle or the entire taper, as well as material erosion.

3


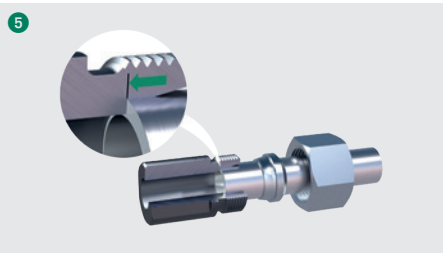
Lightly lubricate the 24° taper of the pre-assembly stud (e.g. using mineral-oil based hydraulic fluid HLP32). Do not use lubricating grease!

Immediately proceed with the assembly in order to avoid exposure to contamination.

4


Consecutively put the union nut first and then the cutting ring onto the tube end.

Pay attention to the correct alignment of the cutting ring: The cutting edges have to face to the tube end.

5


Carefully insert the tube end into the 24° taper of the pre-assembly stud and push it firmly against the inner stop.

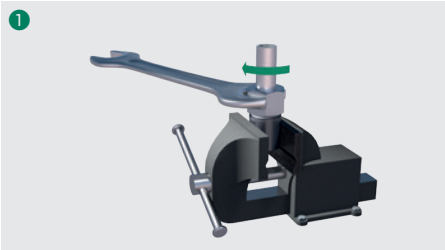
The tube must be held in this position during the entire assembly process in order to avoid faulty assembly.

S

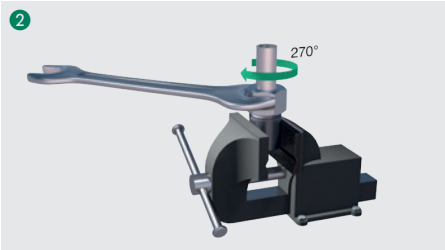
Assembly Instructions for STAUFF Connect 24° Tube Fittings with Double Edge Cutting Ring (Type FI-DS)

Assembly with the Manual Pre-Assembly Stud (Type FI-FK) and Assembly with the Fitting Body

3. Pre-Assembly in the Assembly Stud

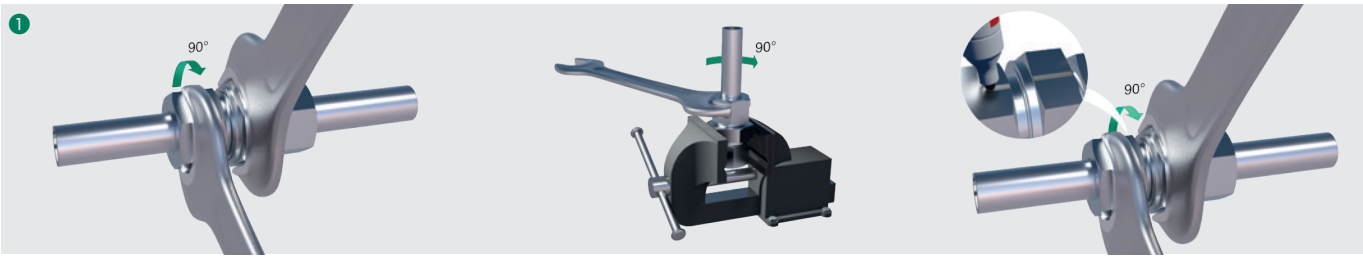


Tighten the union nut until the noticeable increase in force (pressure point). The cutting ring now grips the tube, which can no longer be rotated.



Use a suitable spanner to tighten the union nut another 3/4 a turn (270°) beyond the pressure point. In doing so, the cutting ring will uniformly cut into the tube.

4. Final-Assembly with the Fitting Body



Carefully insert the assembled tube end into the 24° taper of the fitting body.

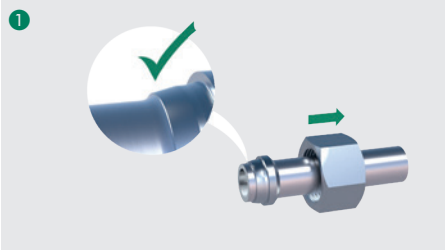
Use a suitable spanner to tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/4 a turn (90°) beyond this point.

Always use a second spanner to hold the fitting body during the entire assembly procedure.

In case of unfavourable mounting conditions or larger tube dimensions, use a bench vice for the assembly.

A marking line applied on the union nut and the fitting body makes it easier to indicate the sufficient tightening angle.

5. Inspection



Fully untighten the union nut for a visual inspection after the assembly. The material accumulation must be clearly visible in front of the cutting edge and should cover the cutting edge approx. 80%.

In this position, it is still permissible for the cutting ring to turn on the tube, but not to be displaced in axial direction of the tube.

Please note: If not enough tube material has been raised in front of the cutting edge or if the cutting ring is still capable of being displaced in axial direction, the assembly procedure must be repeated by using more force, and the result must be re-checked.

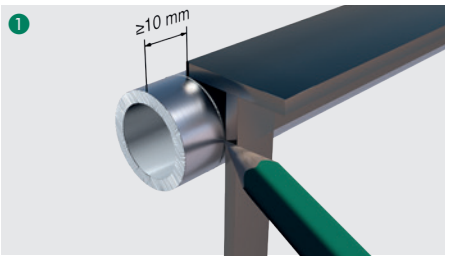
6. Repeated Assembly

For repeated assemblies, please use a suitable spanner to tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/12 a turn (30°) beyond this point.

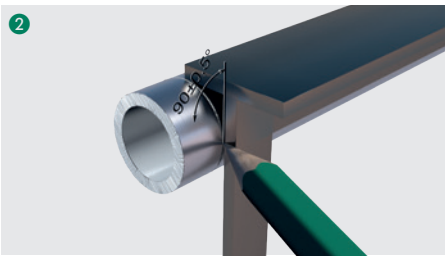
Assembly Instructions for STAUFF Connect 24° Tube Fittings with Double Edge Cutting Ring (Type FI-DS)

Direct Assembly with the Fitting Body

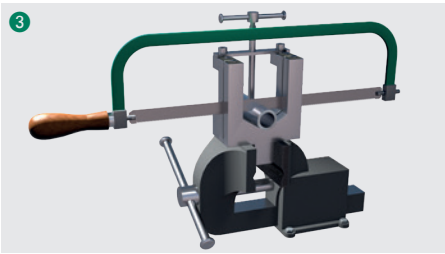
1. Tube Preparation



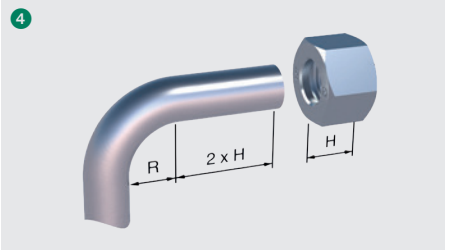
Saw off tube in right angle and at least 10 mm from the cut made by the tube manufacturer / supplier in order to avoid failures caused during shipment.



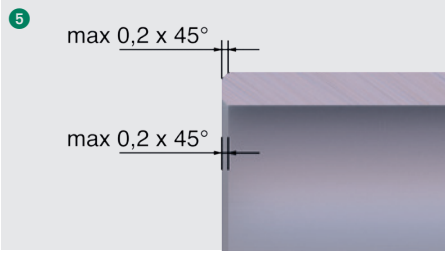
A maximum angular deviation / tolerance of ±0,5° relative to the tube axis is permissible.



Only use proper tube sawing machinery or equipment. Do not use tube cutters or grinders as this may result in unwanted angled cuts and cause severe burring.



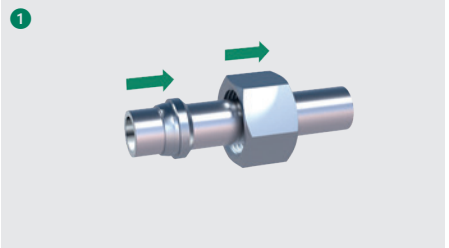
For tube bends, the length of the straight section of the tube end to the start of the bending radius has to be twice the height of the union nut.



Slightly deburr inside and outside of the tube end (max 0,2 x 45°). The assembly area of the tube has to be free of contamination, chips and paint.

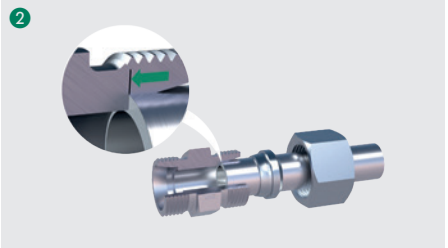
Please note: Improperly prepared and contaminated tubes will affect the service life of the connection and may result in leakage.

2. Assembly Preparation



Consecutively put the union nut first and then the cutting ring onto the tube end.

Pay attention to the correct alignment of the cutting ring: The cutting edges have to face to the tube end.



Carefully insert the tube end into the 24° taper of the fitting body and push it firmly against the inner stop.

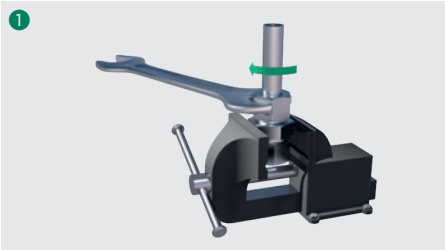
The tube must be held in this position during the entire assembly process in order to avoid faulty assembly.

S

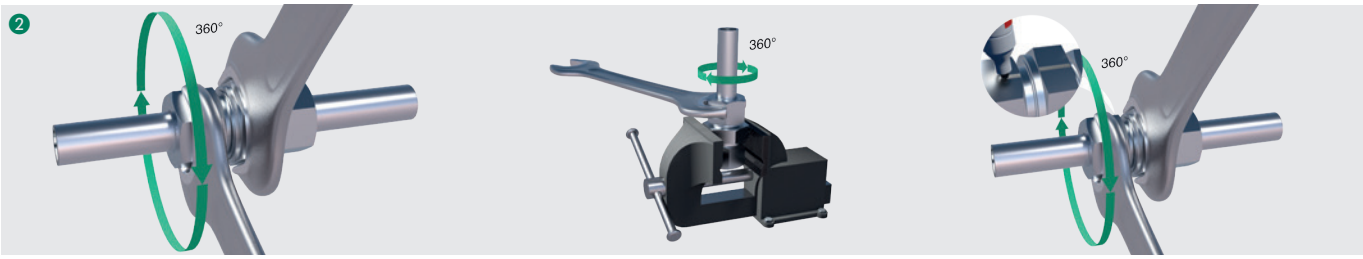
Assembly Instructions for STAUFF Connect 24° Tube Fittings with Double Edge Cutting Ring (Type FI-DS)

Direct Assembly with the Fitting Body

3. Direct Assembly in the Fitting Body



Tighten the union nut until the noticeable increase in force (pressure point). The cutting ring now grips the tube, which can no longer be rotated.



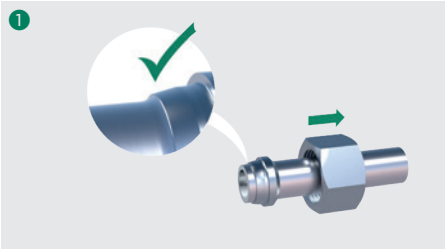
Use a suitable spanner to tighten the union nut another full turn (360°) beyond the pressure point. In doing so, the cutting ring will uniformly cut into the tube.

Always use a second spanner to hold the fitting body during the entire assembly procedure.

In case of unfavourable mounting conditions or larger tube dimensions, use a bench vice for the assembly.

A marking line applied on the union nut and the fitting body makes it easier to indicate the sufficient tightening angle.

4. Inspection



Fully untighten the union nut for a visual inspection after the assembly. The material accumulation must be clearly visible in front of the cutting edge and should almost completely cover the cutting edge.

In this position, it is still permissible for the cutting ring to turn on the tube, but not to be displaced in axial direction of the tube.

Please note: If not enough tube material has been raised in front of the cutting edge or if the cutting ring is still capable of being displaced in axial direction, the assembly procedure must be repeated by using more force, and the result must be re-checked.

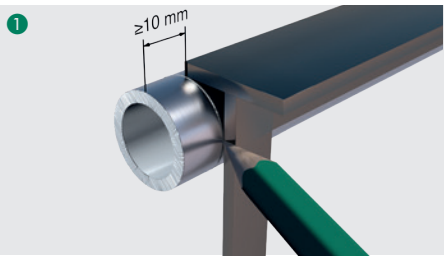
5. Repeated Assembly

For repeated assemblies, please use a suitable spanner to tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/12 a turn (30°) beyond this point.

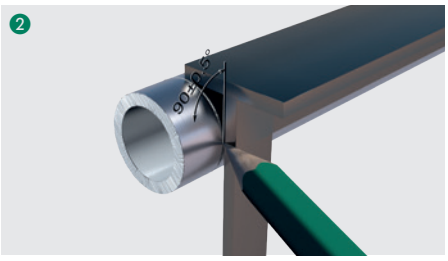
Assembly Instructions for STAUFF Connect 24° Tube Fittings with Double Edge Cutting Ring (Type FI-DS)

Machine-Assisted 100% Assembly with a STAUFF Press Assembly Machine and Assembly with the Fitting Body

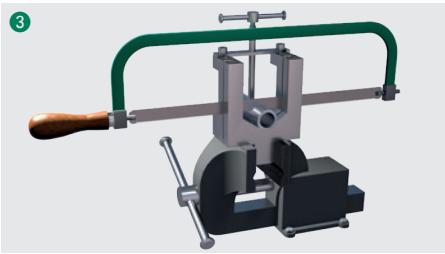
1. Tube Preparation



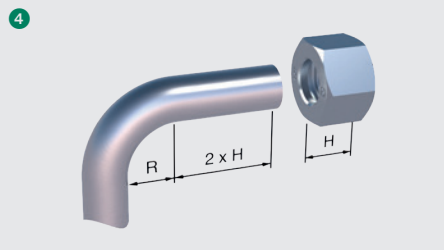
Saw off tube in right angle and at least 10 mm from the cut made by the tube manufacturer / supplier in order to avoid failures caused during shipment.



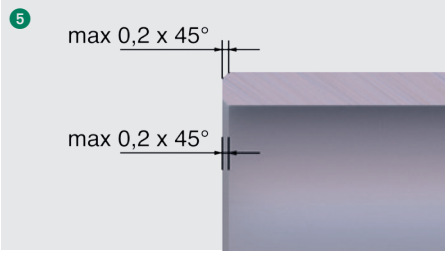
A maximum angular deviation / tolerance of ±0,5° relative to the tube axis is permissible.



Only use proper tube sawing machinery or equipment. Do not use tube cutters or grinders as this may result in unwanted angled cuts and cause severe burring.



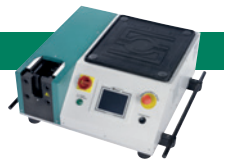
For tube bends, the length of the straight section of the tube end to the start of the bending radius has to be twice the height of the union nut.



Slightly deburr inside and outside of the tube end (max 0,2 x 45°). The assembly area of the tube has to be free of contamination, chips and paint.

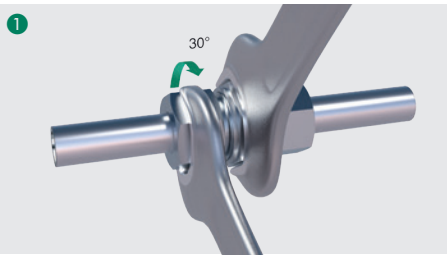
Please note: Improperly prepared and contaminated tubes will affect the service life of the connection and may result in leakage.

2. Assembly Preparation, Machine-Assisted Assembly and Inspection



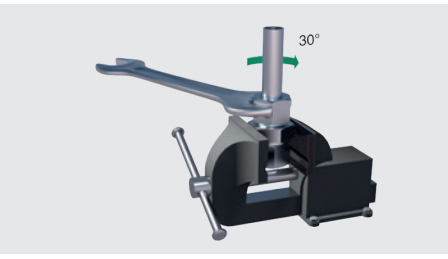
With regards to assembly preparation, the actual assembly as well as the inspection of assembled tube ends, please follow the detailed instructions in the operating manual of the machine.

3. Final-Assembly with the Fitting Body



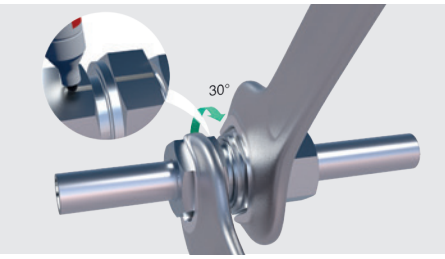
Carefully insert the assembled tube end into the 24° taper of the fitting body.

Use a suitable spanner to tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/12 a turn (30°) beyond this point.



Always use a second spanner to hold the fitting body during the entire assembly procedure.

In case of unfavourable mounting conditions or larger tube dimensions, use a bench vice for the assembly.



A marking line applied on the union nut and the fitting body makes it easier to indicate the sufficient tightening angle.

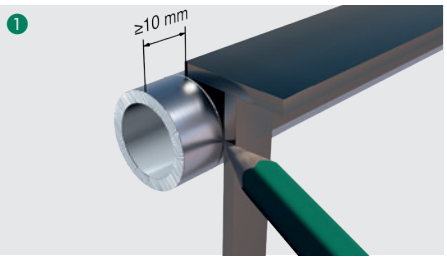
4. Repeated Assembly

For repeated assemblies, please use a suitable spanner to tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/12 a turn (30°) beyond this point.

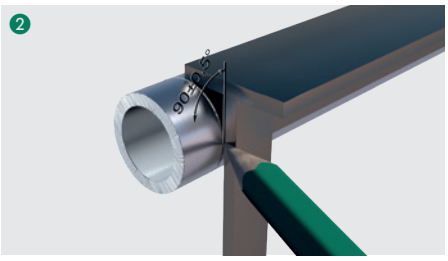
Assembly Instructions for STAUFF Connect 24° Tube Fittings with Double Edge Cutting Ring (Type FI-DS)

Machine-Assisted Pre-Assembly with a STAUFF Press Assembly Machine and Assembly with the Fitting Body

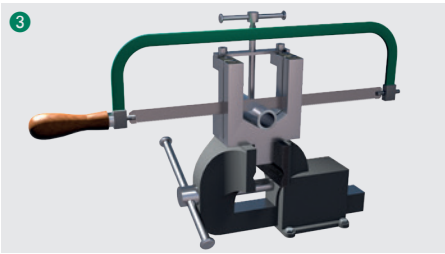
1. Tube Preparation



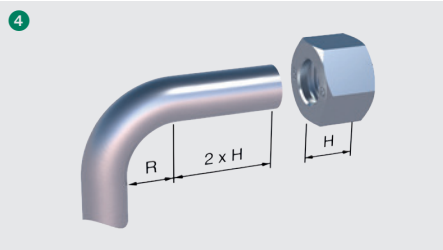
Saw off tube in right angle and at least 10 mm from the cut made by the tube manufacturer / supplier in order to avoid failures caused during shipment.



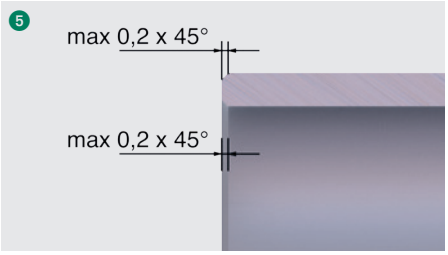
A maximum angular deviation / tolerance of ±0,5° relative to the tube axis is permissible.



Only use proper tube sawing machinery or equipment. Do not use tube cutters or grinders as this may result in unwanted angled cuts and cause severe burring.



For tube bends, the length of the straight section of the tube end to the start of the bending radius has to be twice the height of the union nut.



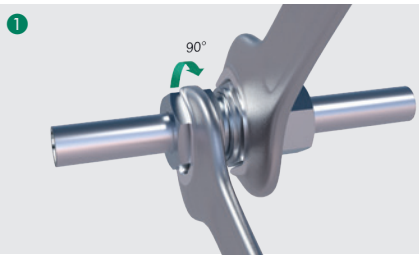
Slightly deburr inside and outside of the tube end (max 0,2 x 45°). The assembly area of the tube has to be free of contamination, chips and paint.

Please note: Improperly prepared and contaminated tubes will affect the service life of the connection and may result in leakage.

2. Assembly Preparation, Machine-Assisted Assembly and Inspection

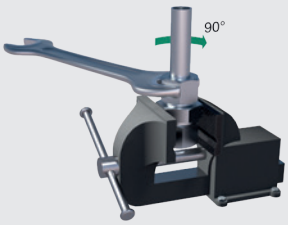
With regards to assembly preparation, the actual assembly as well as the inspection of assembled tube ends, please follow the detailed instructions in the operating manual of the machine.

3. Final-Assembly with the Fitting Body



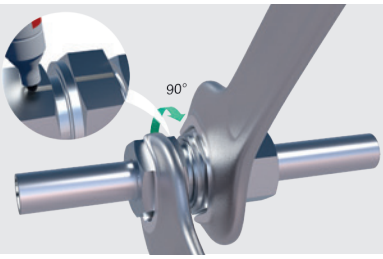
Carefully insert the assembled tube end into the 24° taper of the fitting body.

Use a suitable spanner to tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/4 a turn (90°) beyond this point.



Always use a second spanner to hold the fitting body during the entire assembly procedure.

In case of unfavourable mounting conditions or larger tube dimensions, use a bench vice for the assembly.



A marking line applied on the union nut and the fitting body makes it easier to indicate the sufficient tightening angle.

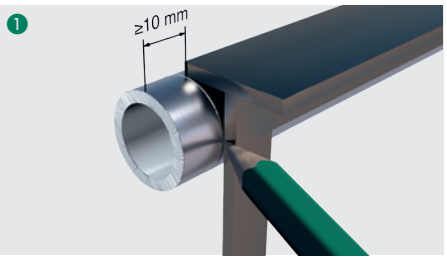
4. Repeated Assembly

For repeated assemblies, please use a suitable spanner to tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/12 a turn (30°) beyond this point.

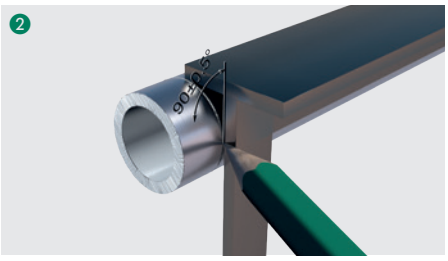
Assembly Instructions for 24° Tube Connectors with Soft-Sealing Cutting Ring (Type FI-WDDS/FI-WDDS-W5)

Pre-Assembly with the Manual Final Assembly Stud Type FI-FK and Assembly in the Fitting Body

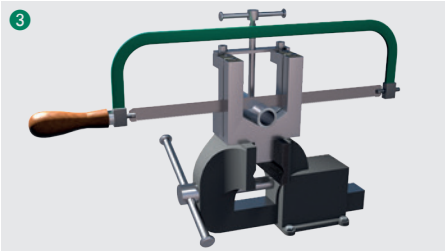
1. Tube Preparation

1


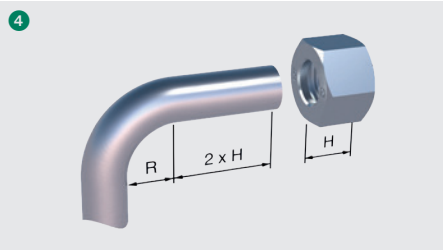
Saw off tube at a right angle (90°) and at least 10 mm from the cut made by the manufacture / supplier.

2


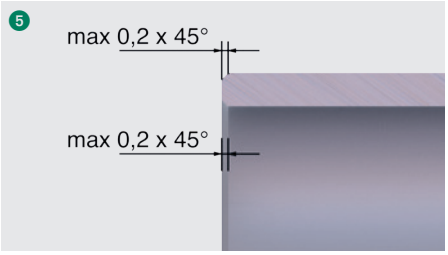
A maximum angular deviation of ±0.5° to the tube axis is permissible.

3


Do not use tube cutters or grinders.

4


The length of the straight sections of the tube of tube bends has to be twice the length of the union nut.

5


Slightly deburr the inside and outside of the tube end (max 0.2 x 45°). The assembly area of the tube has to be free of dirt, chips and paint.

6

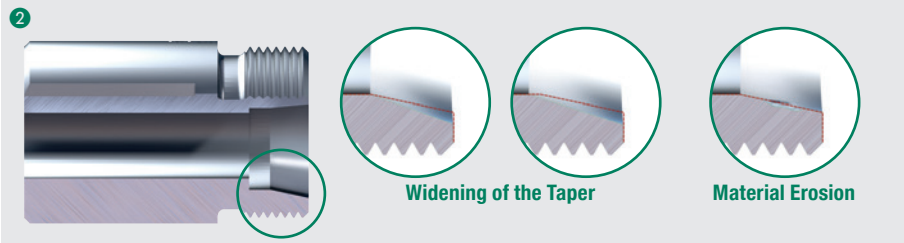
Please note: Improperly prepared and contaminated tubes will affect the service life of the tube connectors and may result in leakage. Poorly deburred tube ends can result in damage to the internal O-ring!

Please note: Assembly of reinforcing sleeves is essential when using thin-walled tubes.
Refer to page 310.

2. Assembly Preparation

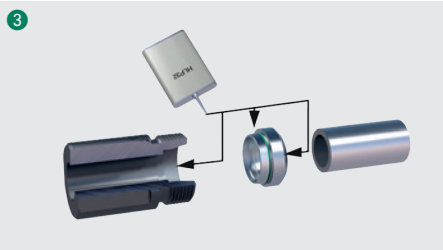
1

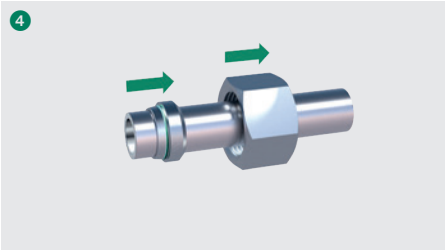
Hardened assembly studs are wear-resistant, thus allowing for consistent assembly results with a maximum degree of accuracy, reliability and process stability.

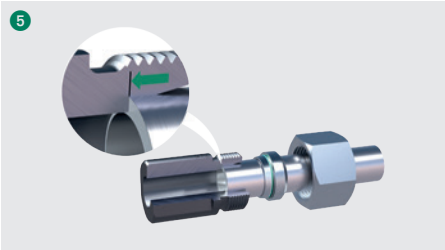
2


Assembly studs must be checked regularly for damage and dimensional accuracy. Replace assembly studs that are damaged and/or dimensionally inaccurate in all cases.

Typical damage includes the partial or complete widening of the 24° taper, as well as material erosion.

3


4


5


Please note when use FI-WDDS-W5 with Stainless Steel Fitting Body: Thread and 45° cone of the union nut and thread of the fitting body grease with special stainless steel fitting grease or use a silver coated union nut.

Lubricate the 24° taper of the assembly stud as well as the two soft-sealing elements of the cutting ring (e.g. using hydraulic oil HLP32). Do not use lubricating grease!

Immediately proceed with assembly to avoid the adhesion of dirt.

Consecutively push the union nut and then the cutting ring onto the tube end.

Pay attention to the correct alignment of the cutting ring: the cutting edges of the cutting ring have to face the tube end.

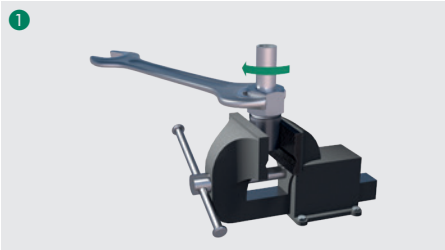
Carefully insert the tube end into the 24° taper of the assembly stud until it is flush with the stop.

The tube must be held in this position during the entire assembly process.

Assembly Instructions for 24° Tube Connectors with Soft-Sealing Cutting Ring (Type FI-WDDS/FI-WDDS-W5)

Pre-Assembly with the Manual Final Assembly Stud Type FI-FK and Assembly in the Fitting Body

3. Pre-Assembly in the Assembly Stud



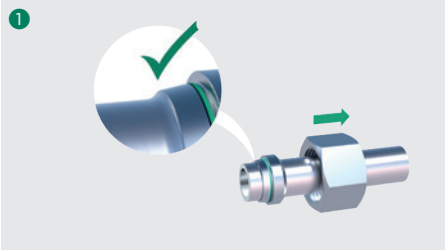
Please note when use FI-WDDS-W5 with Stainless Steel Fitting Body: Thread and 45° cone of the union nut and thread of the fitting body grease with special stainless steel fitting grease or use a silver coated union nut.

Use a suitable spanner.
Tighten the union nut to the point where there is a first increase in force, the pressure point.
The pressure point defines the point at which the cutting ring starts gripping the tube.

The tube can then no longer be rotated in the fitting. Now tighten the union nut to the end of the assembly. The end of the assembly is situated approx. 1 turn (360°) beyond the pressure point.and is signalled by a significant increase in force.

The cutting ring comes into contact with the face side of the fitting body.

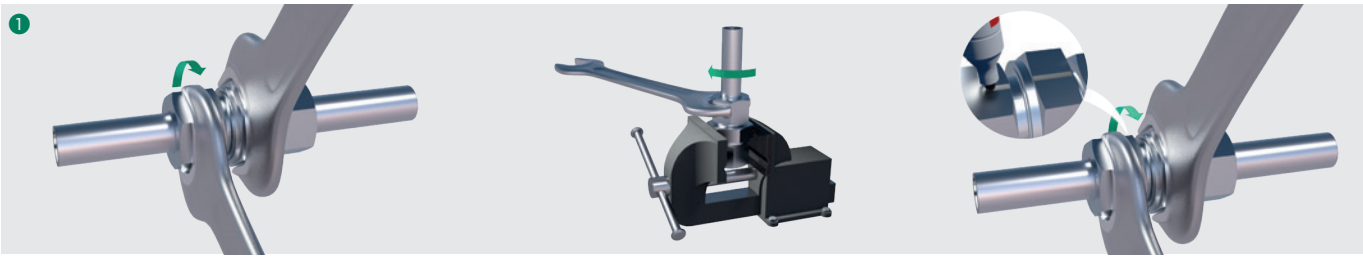
4. Inspection



Fully loosen the union nut to visually inspect the assembly. There must be raised material clearly visible in front of the cutting edge and should cover the cutting edge approx. 80%.

Under certain circumstances, it is still possible at this time to turn the cutting ring on the tube (radial direction). It can no longer be moved in the direction of the tube (axial direction).

5. Final-Assembly with the Fitting Body



Please note when use FI-WDDS-W5 with Stainless Steel Fitting Body: Thread and 45° cone of the union nut and thread of the fitting body grease with special stainless steel fitting grease or use a silver coated union nut.

Lightly lubricate the soft-sealing element located on the 24° taper of the cutting ring (e.g. using hydraulic oil HLP32). Do not use lubricating grease!

Immediately proceed with assembly to avoid the adhesion of dirt.

Carefully insert the assembled tube end into the 24° taper of the fitting body.

Tighten the union nut to the point where there is a first increase in force. Then tighten the union nut to the end of the assembly.

The cutting ring comes into contact with the face side of the fitting body after approx. 90°-120°. The end of the assembly is once again indicated by a significant increase in force.

Use a suitable spanner to hold the fitting body within the tube during the entire assembly process. Use a bench vice for assembly in the event of unfavourable assembly conditions or larger tube dimensions.

A marking line on the union nut and the fitting body makes it easier to note and check the correct tightening angle.

6. Repeated Assembly

Check the soft-sealing element located on the 24° taper of the cutting ring for possible damage.

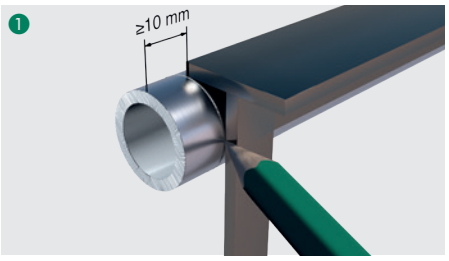
Carefully insert the tube end into the 24° taper of the fitting body.

Then tighten the union nut to the end of the assembly. The cutting ring comes into contact with the face side of the fitting body after approx. 90°-120°. The end of the assembly is once again indicated by a significant increase in force.

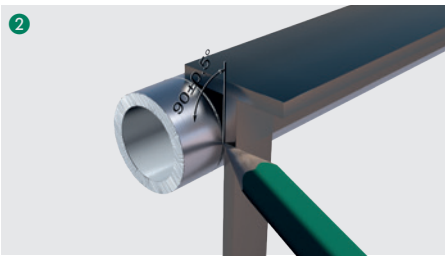
Assembly Instructions for 24° Tube Connectors with Soft-Sealing Cutting Ring (Type FI-WDDS/FI-WDDS-W5)

Direct Assembly in the Fitting Body

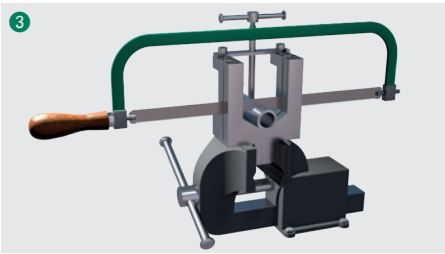
1. Tube Preparation



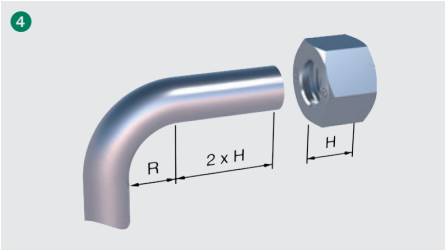
Saw off tube at a right angle (90°) and at least 10 mm from the cut made by the manufacture / supplier.



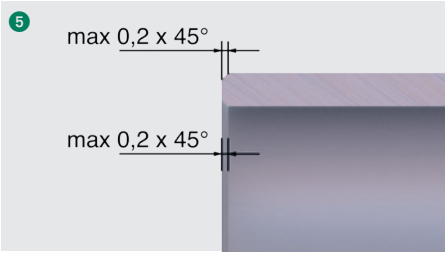
A maximum angular deviation of ±0.5° to the tube axis is permissible.



Do not use tube cutters or grinders.



The length of the straight sections of the tube of tube bends has to be twice the length of the union nut.

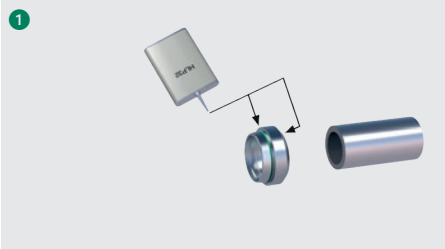


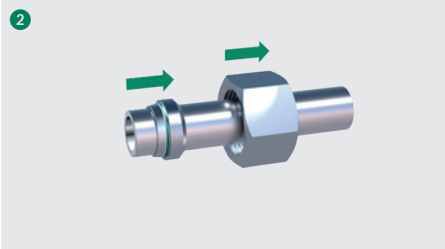
Slightly deburr the inside and outside of the tube end (max 0.2 x 45°). The assembly area of the tube has to be free of dirt, chips and paint.

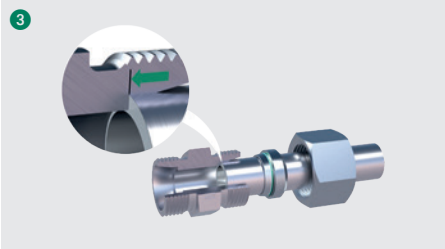
Please note: Improperly prepared and contaminated tubes will affect the service life of the tube connectors and may result in leakage. Poorly deburred tube ends can result in damage to the internal O-ring!

Please note: Assembly of reinforcing sleeves is essential when using thin-walled tubes.
Refer to page 310.

2. Assembly Preparation







Please note when use FI-WDDS-W5 with Stainless Steel Fitting Body: Thread and 45° cone of the union nut and thread of the fitting body grease with special stainless steel fitting grease or use a silver coated union nut.

Lightly lubricate the two soft-sealing elements of the cutting ring (e.g. using hydraulic oil HLP32). Do not use lubricating grease!

Immediately proceed with assembly to avoid the adhesion of dirt.

Consecutively push the union nut and then the cutting ring onto the tube end.

Pay attention to the correct alignment of the cutting ring: the cutting edges of the cutting ring have to face the tube end.

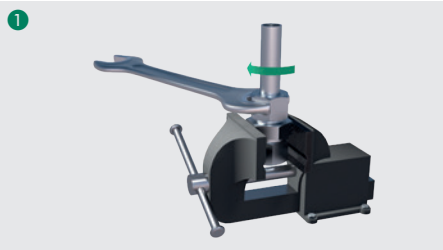
Carefully insert the tube end into the 24° taper of the fitting body until it is flush with the stop.

The tube must be held in this position during the entire assembly process.

Assembly Instructions for 24° Tube Connectors with Soft-Sealing Cutting Ring (Type FI-WDDS/FI-WDDS-W5)

Direct Assembly in the Fitting Body

3. Pre-Assembly in the Fitting Body

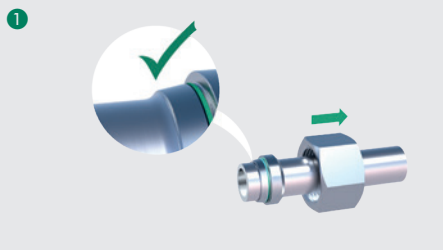


Please note when use FI-WDDS-W5 with Stainless Steel Fitting Body: Thread and 45° cone of the union nut and thread of the fitting body grease with special stainless steel fitting grease or use a silver coated union nut.

Use a suitable spanner. Tighten the union nut to the point where there is a first increase in force, the pressure point. The pressure point defines the point at which the cutting ring starts gripping the tube.

The tube can then no longer be rotated in the fitting. Now tighten the union nut to the end of the assembly. The end of the assembly is situated approx. 1 turn (360°) beyond the pressure point and is signalled by a significant increase in force. The cutting ring comes into contact with the face side of the fitting body.

4. Inspection

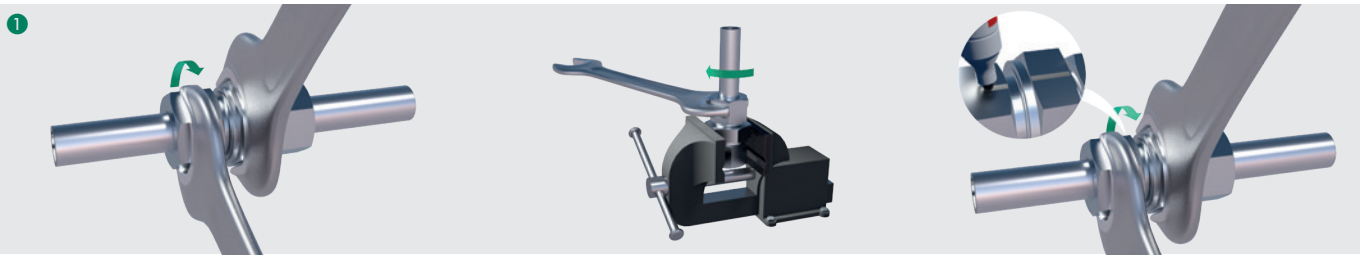


Fully loosen the union nut to visually inspect the assembly. There must be raised material clearly visible in front of the cutting edge and should cover the cutting edge approx. 80%.

.

Under certain circumstances, it is still possible at this time to turn the cutting ring on the tube (radial direction). It can no longer be moved in the direction of the tube (axial direction).

5. Final-Assembly with the Fitting Body



Please note when use FI-WDDS-W5 with Stainless Steel Fitting Body: Thread and 45° cone of the union nut and thread of the fitting body grease with special stainless steel fitting grease or use a silver coated union nut.

Lightly lubricate the soft-sealing element located on the 24° taper of the cutting ring (e.g. using hydraulic oil HLP32). Do not use lubricating grease!

Immediately proceed with assembly to avoid the adhesion of dirt.

Carefully insert the assembled tube end into the 24° taper of the fitting body.

Tighten the union nut to the point where there is a first increase in force. Then tighten the union nut to the end of the assembly.

The cutting ring comes into contact with the face side of the fitting body after approx. 90°-120°. The end of the assembly is once again indicated by a significant increase in force.

Use a suitable spanner to hold the fitting body within the tube during the entire assembly process. Use a bench vice for assembly in the event of unfavourable assembly conditions or larger tube dimensions.

A marking line on the union nut and the fitting body makes it easier to note and check the correct tightening angle.

6. Repeated Assembly

Check the soft-sealing element located on the 24° taper of the cutting ring for possible damage.

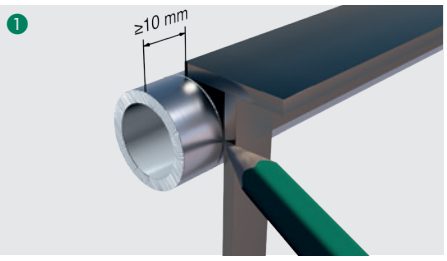
Carefully insert the tube end into the 24° taper of the fitting body.

Then tighten the union nut to the end of the assembly. The cutting ring comes into contact with the face side of the fitting body after approx. 90°-120°. The end of the assembly is once again indicated by a significant increase in force.

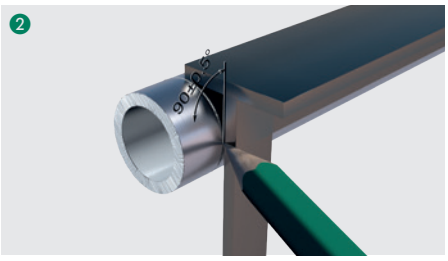
Assembly Instructions for 24° Tube Connectors with Soft-Sealing Cutting Ring (Type FI-WDDS/FI-WDDS-W5)

Machine-Assisted Pre-Assembly with a STAUFF Press Assembly Machine and Assembly with the Fitting Body

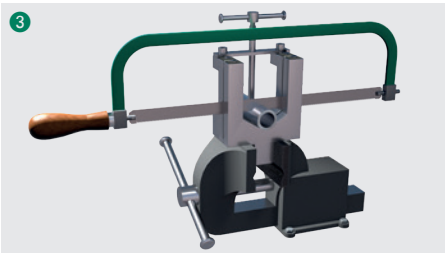
1. Tube Preparation



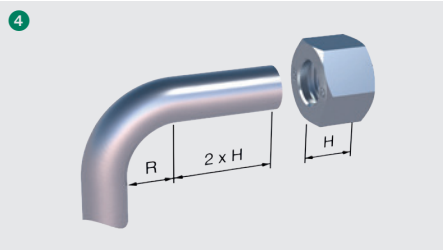
Saw off tube at a right angle (90°) and at least 10 mm from the cut made by the manufacture / supplier.



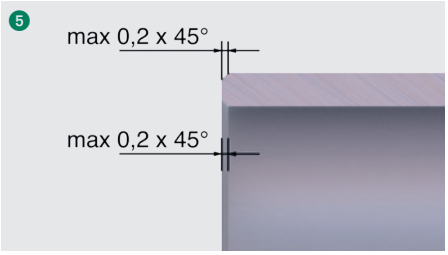
A maximum angular deviation of ±0.5° to the tube axis is permissible.



Do not use tube cutters or grinders.



The length of the straight sections of the tube of tube bends has to be twice the length of the union nut.



Slightly deburr the inside and outside of the tube end (max 0.2 x 45°). The assembly area of the tube has to be free of dirt, chips and paint.

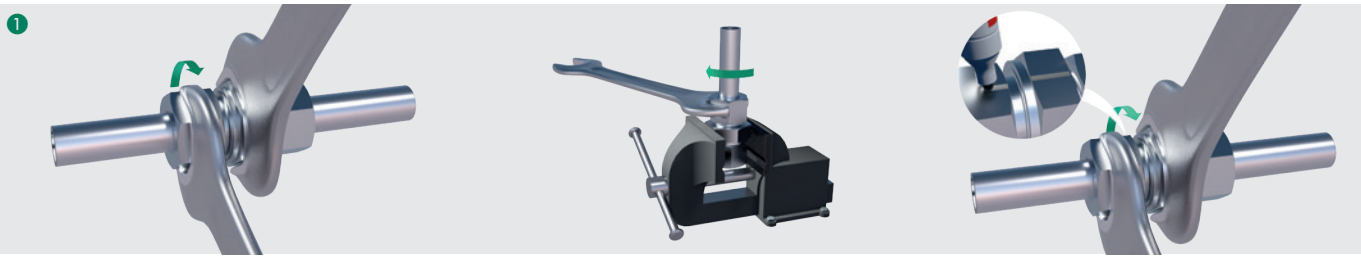
Please note: Improperly prepared and contaminated tubes will affect the service life of the tube connectors and may result in leakage. Poorly deburred tube ends can result in damage to the internal O-ring!

Please note: Assembly of reinforcing sleeves is essential when using thin-walled tubes. Refer to page 310.

2. Assembly Preparation, Machine-Assisted Assembly and Inspection

Please refer to the detailed instructions in the operating manual for the machine with regard to assembly preparation, actual assembly and inspection of the assembled tube ends.

3. Final-Assembly with the Fitting Body



Please note when use FI-WDDS-W5 with Stainless Steel Fitting Body: Thread and 45° cone of the union nut and thread of the fitting body grease with special stainless steel fitting grease or use a silver coated union nut.

Lightly lubricate the soft-sealing element located on the 24° taper of the cutting ring (e.g. using hydraulic oil HLP32). Do not use lubricating grease!

Immediately proceed with assembly to avoid the adhesion of dirt.

Carefully insert the assembled tube end into the 24° taper of the fitting body.

Tighten the union nut to the point where there is a first increase in force. Then tighten the union nut to the end of the assembly.

The cutting ring comes into contact with the face side of the fitting body after approx. 90°-120°. The end of the assembly is once again indicated by a significant increase in force.

Use a suitable spanner to hold the fitting body within the tube during the entire assembly process. Use a bench vice for assembly in the event of unfavourable assembly conditions or larger tube dimensions.

A marking line on the union nut and the fitting body makes it easier to note and check the correct tightening angle.

6. Repeated Assembly

Check the soft-sealing element located on the 24° taper of the cutting ring for possible damage.

Carefully insert the tube end into the 24° taper of the fitting body.

Then tighten the union nut to the end of the assembly. The cutting ring comes into contact with the face side of the fitting body after approx. 90°-120°. The end of the assembly is once again indicated by a significant increase in force.

Please note when use FI-WDDS-W5 with Stainless Steel Fitting Body: Thread and 45° cone of the union nut and thread of the fitting body grease with special stainless steel fitting grease or use a silver coated union nut.

Assembly Instructions for Support Sleeves (Type FI-VH)

Selection Chart for Tubes made of Steel / Stainless Steel

Series	Tube OD mm	Tube Wall Thickness mm 0,5	0,75	1,0	1,5	2,0	2,5	3,0	3,5	4,0
LL	4									
	6	●								
	8	●								
L	6	●	●							
	8	●	●							
	10	●	●							
	12	●	●	○						
	15	●	●	●						
	18	●	●	●	○					
	22	●	●	●	○	○				
	28	●	●	●	○	○				
	35	●	●	●	●	○	○			
	42	●	●	●	●	○	○			
S	6	●	●							
	8	●	●							
	10	●	●							
	12	●	●	○						
	14	●	●	●						
	16	●	●	●	○					
	20	●	●	●	●	○				
	25	●	●	●	●	○				
	30	●	●	●	●	●	○			
	38	●	●	●	●	●	●	○	○	

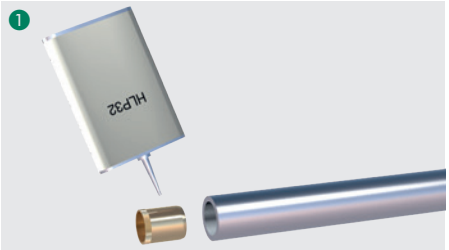
Selection Chart for Tubes made of Non-Ferrous Metals

Series	Tube OD mm	Tube Wall Thickness mm 0,5	0,75	1,0	1,5	2,0	2,5	3,0	3,5	4,0
LL	4									
	6	●	●							
	8	●	●							
L	6	●	●	●						
	8	●	●	●						
	10	●	●	●	○					
	12	●	●	●	●					
	15	●	●	●	●					
	18	●	●	●	●	●				
	22	●	●	●	●	●	●			
	28	●	●	●	●	●	●			
	35	●	●	●	●	●	●	●		
	42	●	●	●	●	●	●	●		
S	6	●	●	●						
	8	●	●	●						
	10	●	●	●						
	12	●	●	●						
	14	●	●	●	●					
	16	●	●	●	●	●				
	20	●	●	●	●	●	●			
	25	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●		
	38	●	●	●	●	●	●	●	●	

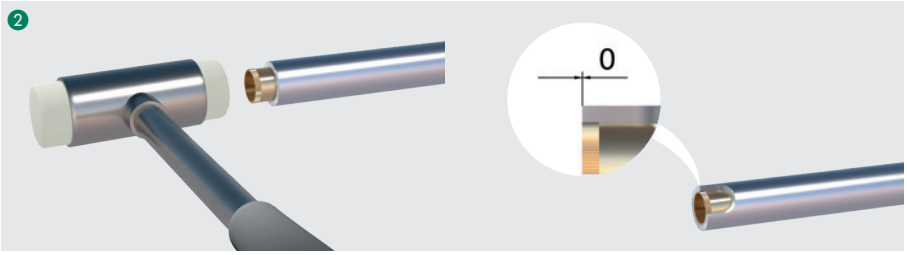
● Generally required ○ Highly recommended, especially for adverse operating conditions (vibrations, risks of self-loosening of fittings etc.)

Support sleeves are generally required for use with tubes made of plastics.

Assembly



Lubricate the outside of the support sleeve (e.g. using mineral-oil based hydraulic fluid HLP32) and insert it into the tube end up to the knurled section.



Use a hammer (plastic or rubber) to fully drive the support sleeve into the tube end, so that the knurled section is pressed against the inner wall of the tube and the sleeve is firmly flush with the tube end.

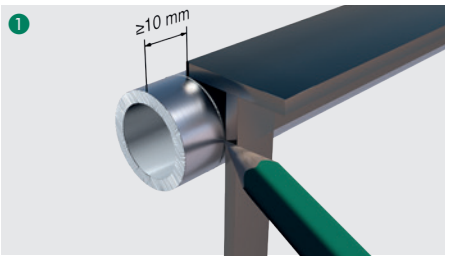
In doing so, the support sleeve is prevented from subsequent turning, sliding and falling out.

S

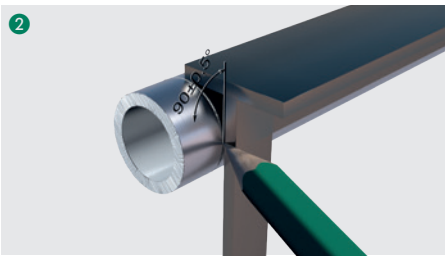
Assembly Instructions for STAUFF Form EVO Tube Fittings

Tube End Forming with a STAUFF Form EVO Machine and Assembly with the Fitting Body

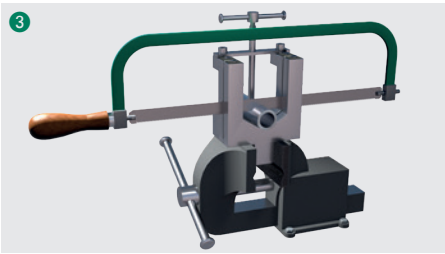
1. Tube Preparation



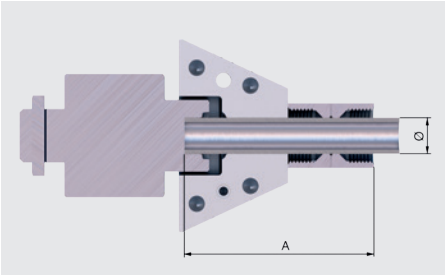
Saw off tube in right angle and at least 10 mm from the cut made by the tube manufacturer / supplier in order to avoid failures caused during shipment.

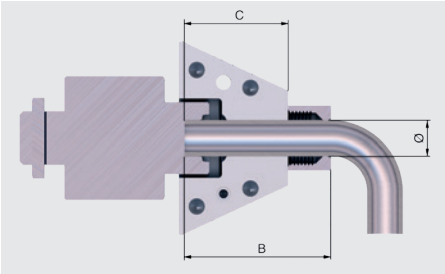


A maximum angular deviation / tolerance of ±0,5° relative to the tube axis is permissible.



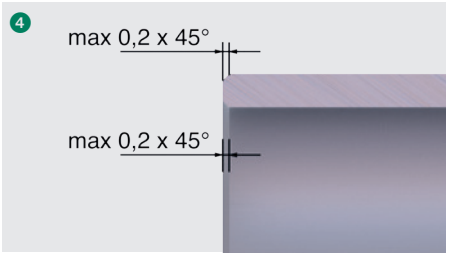
Only use proper tube sawing machinery or equipment. Do not use tube cutters or grinders as this may result in unwanted angled cuts and cause severe burring.





Series	Tube OD mm	Mimimum Length A Straight Tube Ends mm	Mimimum Length B Straight Sections next to Tube Bends mm	Insertion Depth C incl. 10 mm Door thickness mm
L	6	75	52	52
	8	75	52	52
	10	74	52	52
	12	75	54	54
	15	89	66	59
	18	99	74	67
	22	106	82	72
	28	112	87	75
	35	138	106	81
	42	139	106	81
S	6	77	54	54
	8	77	54	52
	10	77	54	52
	12	78	56	54
	16	98	72	61
	20	115	84	70
	25	129	96	79
	30	148	111	82
	38	170	126	94

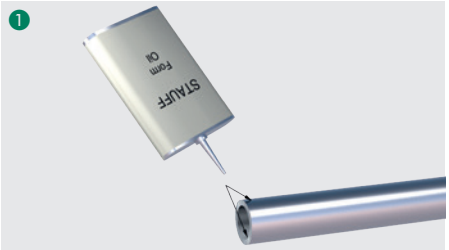
Please note the minimum lengths for straight tube ends (dimension A) as well as for straight tube sections next to tube bends (dimension B) that are listed in the table.



Slightly deburr inside and outside of the tube end (max 0,2 x 45°). The assembly area of the tube has to be free of contamination, chips and paint.

Please note: Improperly prepared and contaminated tubes will affect the service life of the connection and may result in leakage.

2. Preparation and Machine-Assisted Tube Forming



Lightly lubricate the inside and outside of the tube end (e.g. with a thin film of mineral-oil based hydraulic fluid HLP32) before starting the machine-assisted tube forming process. Do not use lubricating grease!

Important: For tube ends made of stainless steel, always and only use original STAUFF Form EVO Oil. The use of any other fluid is not allowed and may result in damage of the assembly tools.

Immediately proceed with the assembly in order to avoid exposure to contamination.

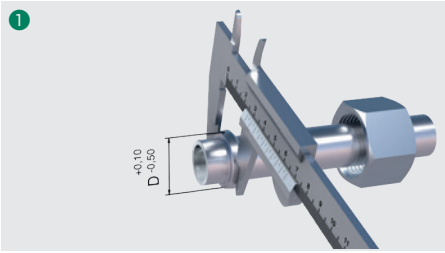
If the lubricant film on the outside of the tube end is too thick, fluid will be trapped between the forming tool and the tube end, thus resulting in inaccurate contours.

With regards to the actual tube forming process, please follow the detailed instructions in the operating manual of the machine.

Assembly Instructions for STAUFF Form EVO Tube Fittings

Tube End Forming with a STAUFF Form EVO Machine and Assembly with the Fitting Body

3. Inspection

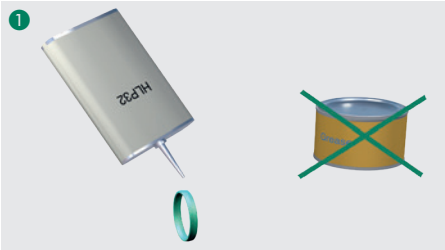


Use a suitable measuring device (caliper gauge) to check control diameter D (Tolerance D +0.1/-0.5) of the formed tube end based on the dimension table on the right.

Note: The function is fulfilled when the control diameter is reached, even if the contour of the forming may differ visually depending on the tube diameter.

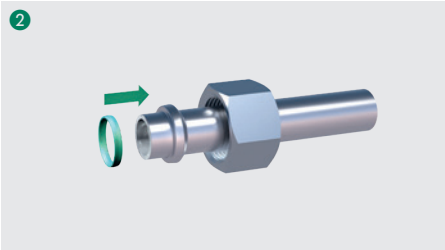
Series	Tube OD mm	Dimensions D mm
L	6	9,5
	8	12,1
	10	14,0
	12	16,1
	15	20,1
	18	23,7
	22	27,1
	28	33,1
	35	42,1
	42	49,4
S	6	9,5
	8	12,1
	10	14,0
	12	16,1
	16	21,7
	20	26,1
	25	31,1
	30	37,1
	38	46,9

4. Assembly with the Fitting Body

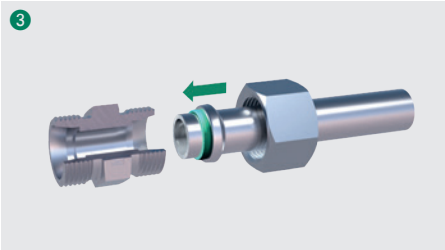


Lightly lubricate the inside and outside of the sealing element of the form ring (e.g. using mineral-oil based hydraulic fluid HLP32). Do not use lubricating grease!

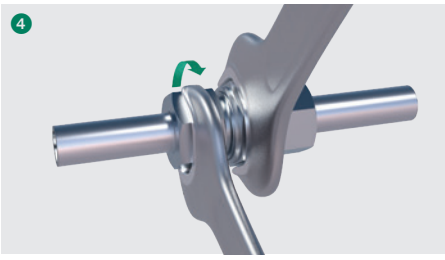
Immediately proceed with the assembly in order to avoid exposure to contamination.



Slide the sealing ring onto the formed tube end (laterally identical profile to avoid assembly errors).

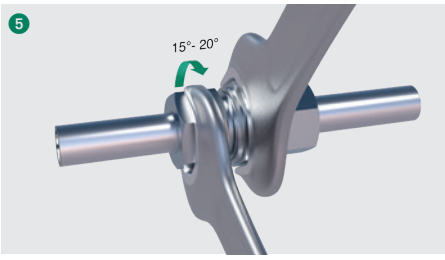


Carefully insert the formed tube end with the assembled sealing into the 24° taper of the fitting body.



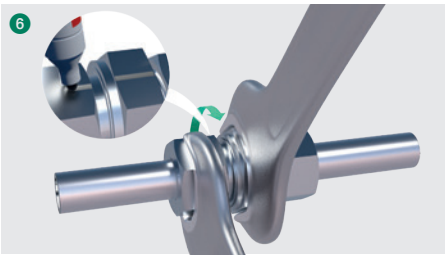
Use a suitable spanner to tighten the nut until there is a noticeable increase in force required (fixed point).

Avoid over-tightening by gripping the spanner close to the union nut.



Finish the assembly by using a suitable spanner to tighten the union nut approximately 15-20° beyond the fixed point. Always use a second spanner to hold the fitting body during the entire assembly procedure.

Alternatively, the assembly can be done via a torque.
Table with torques see point 6.



A marking line applied on the union nut and the fitting body makes it easier to indicate the sufficient tightening angle.

Please note when using stainless steel components: Thread and 45° cone of the union nut and thread of the fitting body grease with special stainless steel fitting grease or use a silver coated union nut.

5. Repeated Assembly

For repeated assemblies, please follow the instructions from point 4 on.

Assembly Instructions for STAUFF Form EVO Tube Fittings

Tube End Forming with a STAUFF Form Machine and Assembly with the Fitting Body

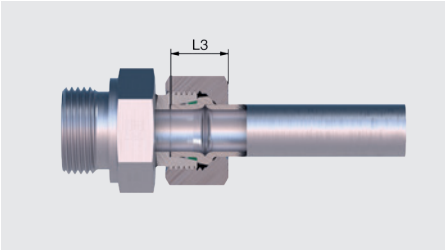
6. Torques for alternative assembly for STAUFF Form EVO Tube Fittings

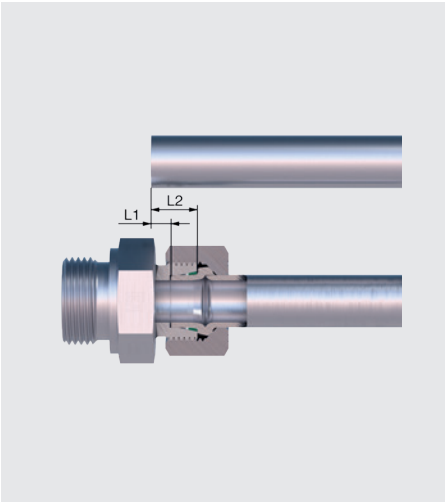
Series	Tube OD mm	Dimensions mm Thread	Turn till increase in force (fix point), than Assembly Angle	Torque N·m
L	6	M 12 x 1,5	15° ... 20°	23
	8	M 14 x 1,5		32
	10	M 16 x 1,5		40
	12	M 18 x 1,5		50
	15	M 22 x 1,5		65
	18	M 26 x 1,5		110
	22	M 30 x 2		120
	28	M 36 x 2		160
	35	M 45 x 2		275
	42	M 52 x 2		410
S	6	M 14 x 1,5		30
	8	M 16 x 1,5		40
	10	M 18 x 1,5		55
	12	M 20 x 1,5		60
	16	M 24 x 1,5		85
	20	M 30 x 2		160
	25	M 36 x 2		200
	30	M 42 x 2		270
	38	M52 x 2		400

Assembly Instructions for STAUFF Form EVO Tube Fittings

Tube End Forming with a STAUFF Form EVO Machine and Assembly with the Fitting Body

Calculation Dimensions



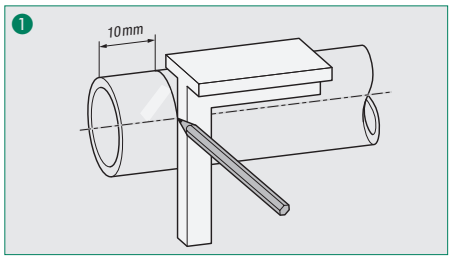


Tube OD mm	Tube Wall Thickness mm	L1 mm	L2 mm	L3 mm
6	1,5	7,3	13,8	14,6 (L+S)
	2,0	7,6	14,1	
8	1,5	7,5	14,0	14,6 (L+S)
	2,0	7,1	13,6	
	2,5	6,6	13,1	
10	1,5	6,0	12,4	14,5 (L) 15,5 (S)
	2,0	6,3	12,7	
	2,5	6,0	12,4	
	3,0	5,7	12,1	
12	1,5	5,2	11,7	14,6 (L) 15,6 (S)
	2,0	5,4	11,9	
	2,5	5,1	11,6	
	3,0	4,9	11,4	
15	1,5	6	12,5	15,6
	2,0	6,4	12,9	
	2,5	6,4	12,9	
16	1,5	6,9	14,8	18,4
	2,0	7,4	15,3	
	2,5	7,0	14,9	
	3,0	7,0	14,9	
	4,0	6,2	14,1	
18	2,0	6,8	13,7	16,4
	2,5	6,5	13,4	
	3,0	6,8	13,7	
	4,0	6,4	13,3	
20	2,0	7,7	17,7	21,6
	2,5	7,8	17,8	
	3,0	7,7	17,7	
	3,5	7,4	17,4	
	4,0	7,3	17,3	
22	2,0	5,5	12,5	17,5
	2,5	5,7	12,7	
	3,0	5,8	12,8	
	3,5	5,9	12,9	
25	2,0	7,1	18,6	24,5
	2,5	7,6	19,1	
	3,0	7,7	19,2	
	3,5	7,7	19,2	
	4,0	7,8	19,3	
	5,0	7,8	19,3	
28	2,0	5,4	12,4	18
	2,5	5,8	12,8	
	3,0	5,7	12,7	
	3,5	5,3	12,3	
	4,0	6,2	13,2	
30	2,5	7,9	20,8	27,2
	3,0	8,0	20,9	
	4,0	8,2	21,1	
	5,0	8,5	21,4	
	6,0	8,2	21,1	
35	2,5	7,7	17,6	22
	3,0	7,8	17,7	
	4,0	8,6	18,5	
	5,0	8,7	18,6	
38	3,0	9,8	25,2	31
	4,0	11,0	26,4	
	5,0	11,3	26,7	
	6,0	11,4	26,8	
42	3,0	8,1	18,5	22,7
	3,5	7,9	18,3	
	4,0	8,6	19,0	

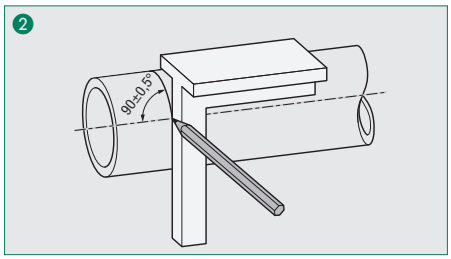
Assembly Instructions for STAUFF Connect 37° Flared Tube Fittings

Tube Flaring with a STAUFF Press Machine and Assembly with the Fitting Body

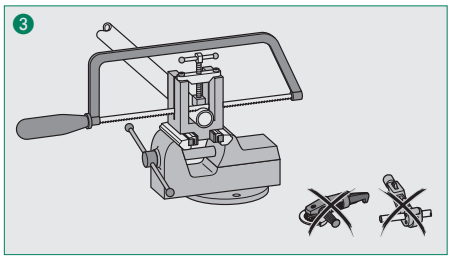
1. Tube Preparation



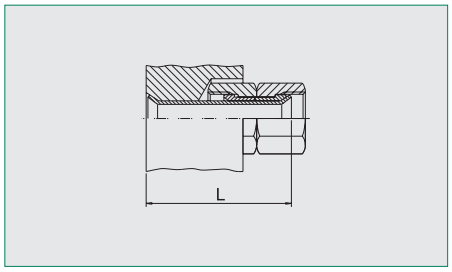
Saw off tube in right angle and at least 10 mm from the cut made by the tube manufacturer / supplier in order to avoid failures caused during shipment.

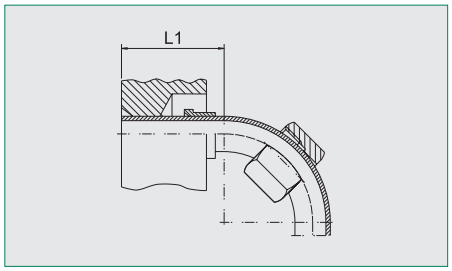


A maximum angular deviation / tolerance of ±0,5° relative to the tube axis is permissible.



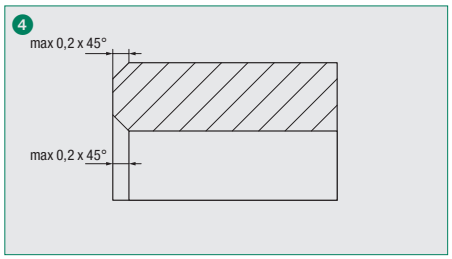
Only use proper tube sawing machinery or equipment. Do not use tube cutters or grinders as this may result in unwanted angled cuts and cause severe burring.





Series	Tube OD mm	Mimimum Length L Straight Tube Sections mm	Mimimum Length L1 Straight Tube Sections next to Tube Bends mm
L	6	59	43
	8	62	44
	10	64	46
	12	67	47
	15	75	50
	18	76	58
	22	81	60
	28	88	60
	35	92	62
	42	130	70
S	6	61	43
	8	64	44
	10	66	46
	12	68	47
	16	79	52
	20	82	58
	25	94	60
	30	96	62
	38	136	70

Please note the minimum lengths for straight tube ends (dimension L) as well as for straight tube sections next to tube bends (dimension L1) that are listed in the table. If installation situations demand that the length of straight tube sections next to tube bends (dimension L1) has to be shorter than indicated in the table, tube bending has to be be carried out after flaring.



Slightly deburr inside and outside of the tube end (max 0,2 x 45°). The assembly area of the tube has to be free of contamination, chips and paint.

Please note: Improperly prepared and contaminated tubes will affect the service life of the connection and may result in leakage.

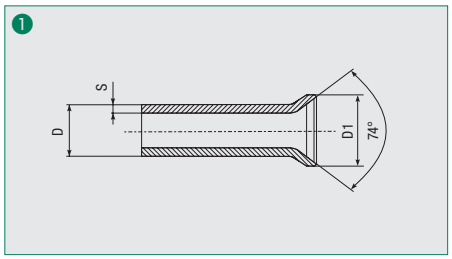
2. Preparation and Machine-Assisted Tube Flaring

With regards to assembly preparation as well as the actual tube flaring process, please follow the detailed instructions in the operating manual of the machine.

Assembly Instructions for STAUFF Connect 37° Flared Tube Fittings

Tube Flaring with a STAUFF Press Machine and Assembly with the Fitting Body

3. Inspection



Check the flared tube end for cracking and impurities after flaring.

Always verify the dimensional accuracy of the flare.

The checking diameter corresponds to the outside diameter D1 of the flared tube end (according to dimension table on the right). The flare must be at right angle to the tube axis and concentric with the tube.

Please note: If the flare is eccentric, too short or not wide enough, perfect function of the tube fitting cannot be guaranteed!

Tube OD D mm	Dimensions S mm	$D1_{min}$ mm	$D1_{max}$ mm
6	1	9,1	10
	1,5		
8	1	11,3	12
	1,5		
	2		
10	1	13,1	14
	1,5		
	2		
12	1	15,3	16
	1,5		
	2		
14	1,5	18,6	19,6
	2		
	2,5		
	3		
15	1,5	19,1	20
	2		
	2,5		
16	1,5	20,6	22
	2		
	2,5		
	3		
18	1,5	23,2	24
	2		
	2,5		
20	2	25,6	26,8
	2,5		
	3		
	3,5		
22	1,5	26,5	27,5
	2		
	2,5		
	3		
25	2	31,1	33
	2,5		
	3		
	4		
28	2	32,7	33,3
	2,5		
	3		
30	2	37	38,7
	2,5		
	3		
	4		
	5		
35	2	41,8	42,7
	2,5		
	3		
	4		
38	2,5	46	47,2
	3		
	4		
	5		
42	2	48,8	49,8
	3		
	4		

4. Assembly with the Fitting Body

Lubricate the o-rings of the 24°/37° flared tube adaptor (e.g. using mineral-oil based hydraulic fluid HLP32) and carefully insert it into the 24° taper of the fitting body.

It is recommended to use a bench vice to press and permanently capture the 24°/37° flared tube adaptor into the 24° taper of the tube fitting – a great help to the tube fitter during re-assembly. In this case, please make sure that all components are suitably protected against damage.

Apply the flared tube end to the 24°/37° flared tube adaptor, which is attached to the fitting body, tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/2 a turn (180°) beyond this point.

Important: Always use a spanner to hold the fitting body during the assembly procedure.

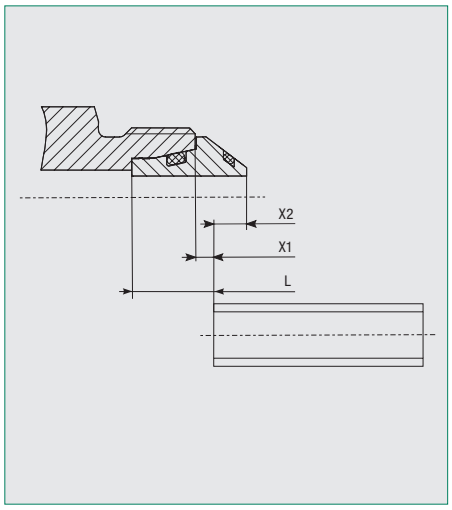
5. Repeated Assembly

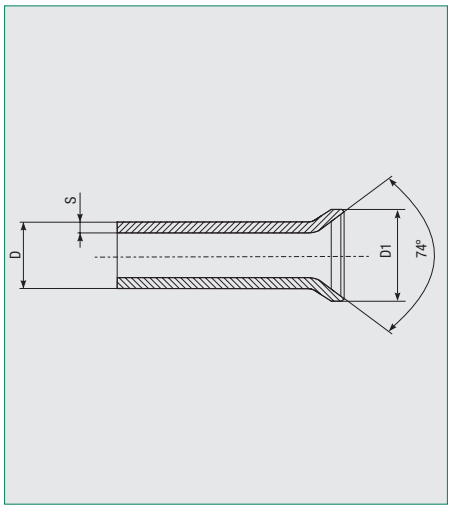
For repeated assembly, the union nut has to be tightened using exactly the same force as for the original assembly.

Assembly Instructions for STAUFF Connect 37° Flared Tube Fittings

Tube Flaring with a STAUFF Press Machine and Assembly with the Fitting Body

Calculation Dimensions





The correct tube length can be determined by measuring the distance between the 24°/37° flared tube adaptors pressed into the fitting bodies. Dimension X2 has then to be added for each of the connections.

The correct tube length can also be determined by measuring the distance between the fitting bodies. Dimension X1 has then to be subtracted for each of the connections.

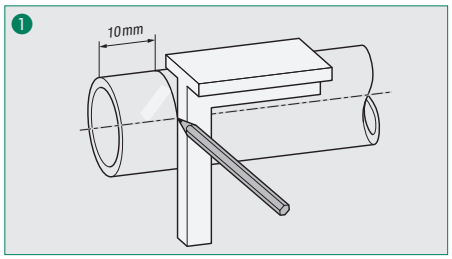
Dimension L corresponds to the difference in tube length compared to cutting ring fittings. When changing over from cutting ring fittings to flared tube fittings, the tube has to be shortened by dimension L.

Always verify the dimensional accuracy of the flare. The checking diameter corresponds to the outside diameter D1 of the flared tube end (according to dimension table on the right). The flare must be at right angle to the tube axis and concentric with the tube. Please note: If the flare is eccentric, too short or not wide enough, perfect function of the tube fitting cannot be guaranteed!

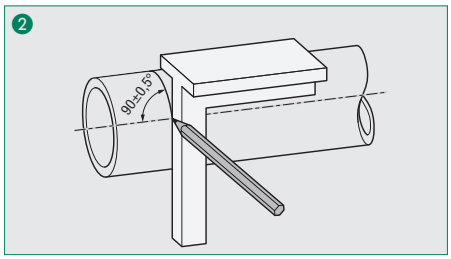
Tube OD	Dimensions					
mm	mm					
D	S	X1	X2	L	D1 min	D1 max
6	1	1	3,5	8	9,1	10
	1,5	2	2,5	9		
8	1	1	4	8	11,3	12
	1,5	2	3	9		
	2	2,5	2,5	9,5		
10	1	1	4,5	8	13,1	14
	1,5	2	3,5	9		
	2	3	2,5	10		
12	1	1	4,5	8	15,3	16
	1,5	2	3,5	9		
	2	3	2,5	10		
14	1,5	0,5	5,5	8,5	18,6	19,6
	2	1	5	9		
	2,5	2	4	10		
	3	3	3	11		
15	1,5	1	4,5	8	19,1	20
	2	2	3,5	9		
	2,5	3	2,5	10		
16	1,5	0	6,5	8,5	20,6	22
	2	1	5,5	9,5		
	2,5	1,5	5	10		
	3	2,5	4	11		
18	1,5	0	5,5	7,5	23,2	24
	2	1	4,5	8,5		
	2,5	1,5	4	9		
20	2	1	7	11,5	25,6	26,8
	2,5	2	6	12,5		
	3	3	5	13,5		
	3,5	4	4	14,5		
22	1,5	1	5,7	8,5	26,5	27,5
	2	2	4,7	9,5		
	2,5	3	3,7	10,5		
	3	3,5	3,2	11		
25	2	1	7	13	31,1	33
	2,5	1,5	6,5	13,5		
	3	2,5	5,5	14,5		
	4	4	4	16		
28	2	1,5	5,7	9	32,7	33,3
	2,5	2,5	4,7	10		
	3	3	4,2	10,5		
30	2	-0,5	9	13	37	38,7
	2,5	0,5	8	14		
	3	1	7,5	14,5		
	4	3	5,5	16,5		
	5	4,5	4	18		
35	2	1,5	6,5	12	41,8	42,7
	2,5	2	6	12,5		
	3	3	5	13,5		
	4	4,5	3,5	15		
38	2,5	0	10	16	46	47,2
	3	0,5	9,5	16,5		
	4	2	8	18		
	5	4	6	20		
42	2	1,5	7	12,5	48,8	49,8
	3	3	6,5	14		
	4	4,5	5	15,5		

Assembly Instructions for 24° Weld Cones with O-Ring

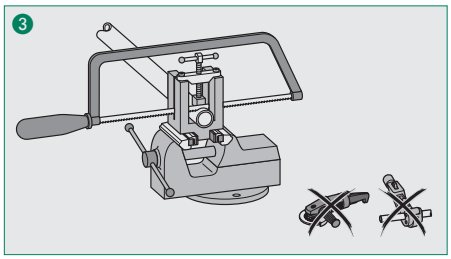
1. Tube Preparation



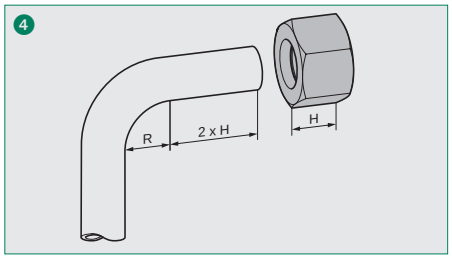
Saw off tube in right angle and at least 10 mm from the cut made by the tube manufacturer / supplier in order to avoid failures caused during shipment.



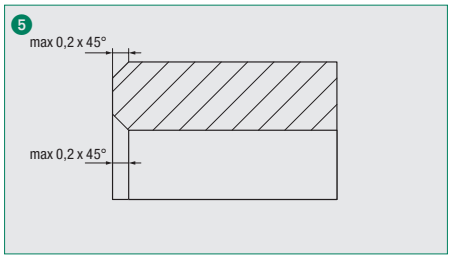
A maximum angular deviation / tolerance of ±0,5° relative to the tube axis is permissible.



Only use proper tube sawing machinery or equipment. Do not use tube cutters or grinders as this may result in unwanted angled cuts and cause severe burring.



For tube bends, the length of the straight section of the tube end to the start of the bending radius has to be twice the height of the union nut.



Slightly deburr inside and outside of the tube end (max 0,2 x 45°). The assembly area of the tube has to be free of contamination, chips and paint.

Please note: Improperly prepared and contaminated tubes will affect the service life of the connection and may result in leakage.

2. Assembly Preparation and Welding

Place the union nut on the weld cone.

Remove the o-ring from the front end of the weld cone before welding (usually supplied separately).

Weld the weld cone and the tube end according to any applicable guidelines for welding.

The user is fully responsible for the quality of the welding work.

Descale the welded area and clean the o-ring groove.

Assemble the o-ring and make sure that it is located in the groove of the weld cone without being twisted.

Lubricate the o-ring of the weld cone (e.g. using mineral-oil based hydraulic fluid HLP32). Do not use lubricating grease!

Immediately proceed with the assembly in order to avoid exposure to contamination.

3. Assembly with the Fitting Body

Carefully insert the weld cone into the 24° taper of the fitting body.

Tighten the union nut until the noticeable increase in force.

Then finish the assembly with another approximately 1/3 a turn (120°) beyond this point.

A marking line applied on the union nut and the fitting body makes it easier to indicate the sufficient tightening turns.

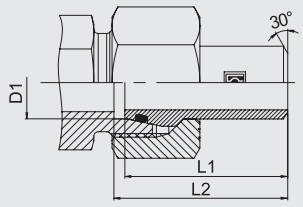
4. Repeated Assembly

For repeated assembly, the union nut has to be tightened using exactly the same force as for the original assembly.

The o-ring has to be checked for possible damages and, if necessary, replaced prior to the re-assembly.

Assembly Instructions for 24° Weld Cones with O-Ring

Calculation Dimensions



Series	Tube OD D1 mm	Dimensions L1 mm	L2 mm
L	6	31	32
	8	31	32
	10	32,5	33,5
	12	32,5	33,5
	15	35	36
	18	36	37
	22	38,5	39,5
	28	41,5	42,5
	35	47	49,5
	42	47	50
S	6	31	32
	8	31	32
	10	32,5	33,5
	12	32,5	33,5
	14	38,5	39,5
	16	39	41
	20	44,5	47
	25	49,5	53,5
	30	52,5	57,5
	38	56,5	64,5

Assembly Instructions for Tube Fittings with 24° Taper and O-Ring

1. Assembly Preparation

Make sure that the o-ring is located in the groove of the taper without being twisted.

Lubricate the o-ring of the taper fitting (e.g. using mineral-oil based hydraulic fluid HLP32). Do not use lubricating grease!

Immediately proceed with the assembly in order to avoid exposure to contamination.

2. Assembly with the Fitting Body

Keep the taper fitting aligned and carefully insert it into the 24° taper of the fitting body.

Tighten the wire-pin nut until the noticeable increase in force, and then finish the assembly with another approximately 1/3 a turn (120°) beyond this point.

A marking line applied on the nut and the fitting body makes it easier to indicate the sufficient tightening turns.

Important: Always use a spanner to hold the fitting body during the assembly procedure.

Series	Tube OD (mm)	Dimensions (mm) Thread	Turn till increase in force, then Assembly Angle	Torque (N·m)
L	6	M 12 x 1,5	120° (1/3 turns)	20
	8	M 14 x 1,5		30
	10	M 16 x 1,5		40
	12	M 18 x 1,5		50
	15	M 22 x 1,5		65
	18	M 26 x 1,5		110
	22	M 30 x 2		120
	28	M 36 x 2		160
	35	M 45 x 2		275
	42	M 52 x 2		410
S	6	M 14 x 1,5		30
	8	M 16 x 1,5		40
	10	M 18 x 1,5		50
	12	M 20 x 1,5		70
	14	M 22 x 1,5		78
	16	M 24 x 1,5		85
	20	M 30 x 2		160
	25	M 36 x 2		200
	30	M 42 x 2		270
	38	M 52 x 2		400

Assembly Instructions for Tube Fittings with Standpipe

1. Assembly Preparation

Standpipe fittings are always supplied with factory-assembled cutting rings and union nuts.

2. Assembly with the Fitting Body

Keep the fitting with standpipe aligned and carefully insert it into the 24° taper of the fitting body.

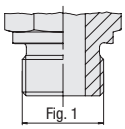
Tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/12 a turn (30°) beyond this point.

A marking line applied on the nut and the fitting body makes it easier to indicate the sufficient tightening turns.

Important: Always use a spanner to hold the fitting body during the assembly procedure.

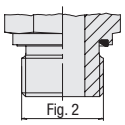
Assembly Instructions for Tube Fittings with Male Threaded Stud Whitworth Parallel Pipe Thread

Tightening Torques



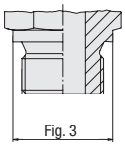
Metallic Sealing Edge

Whitworth Parallel Pipe Thread
DIN 3852-2 (Form B) / ISO 1179-4 (Type B)



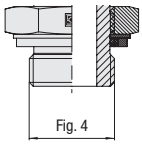
Profile Sealing Ring

Whitworth Parallel Pipe Thread
ISO 1179-2 (Type E)



Sealing Surface for Gaskets

Whitworth Parallel Pipe Thread



O-Ring with Retaining Ring (Adjustable)

Whitworth Parallel Pipe Thread

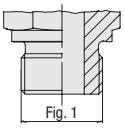
Series	Thread	Male Threaded Studs			Check Valves	Adjustable Male Threaded Stuts	Blanking Screws		
							FI-VSV	FI-VS	
		fig. 1 Metallic Sealing Edge Torque (N·m) ca.	**fig. 2** Profile Sealing Ring Torque (N·m) ca.	**fig. 3** Sealing Surface for Gaskets Torque (N·m) ca.	**fig. 2** Profile Sealing Ring Torque (N·m) ca.	**fig. 4** O-Ring with Retaining Ring Torque (N·m) ca.	**fig. 2** Profile Sealing Ring Torque (N·m) ca.	**fig. 1** Metallic Sealing Edge Torque (N·m) ca.	**fig. 2** Profile Sealing Ring Torque (N·m) ca.
L	G 1/8	25	18	20	18	25	18	25	15
	G 1/4	55	35	50	35	50	33	40	25
	G 3/8	95	70	80	70	80	70	95	50
	G 1/2	185	90	140	90	105	90	130	70
	G 3/4	250	180	190	180	220	180	250	120
	G 1	400	310	330	310	370	250	400	200
	G 1 1/4	670	450	540	450	500	400	600	320
	G 1 1/2	800	540	630	540	600	500	800	400
S	G 1/8	30	25				18	25	15
	G 1/4	80	55	60	55	50	33	40	25
	G 3/8	130	80	100	80	80	70	95	50
	G 1/2	220	115	160	115	105	90	130	70
	G 3/4	350	180	280	180	220	181	250	120
	G 1	700	310	440	310	370	250	400	200
	G 1 1/4	850	450	580	450	500	400	600	320
	G 1 1/2	1000	540	700	540	600	500	800	400
	G 2	1200	750						

Please note: The tightening torques for male threaded studs listed in this catalogue are Approximate values with a tolerance of +10% and always refer to original components of the STAUFF Connect range made of steel with the default Zinc/Nickel coating and a steel mating material.

Please contact STAUFF prior to the assembly for recommended tightening torques for use with any mating materials other than Steel!

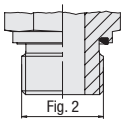
Assembly Instructions for Tube Fittings with Male Threaded Stud Metric Parallel Thread

Tightening Torques



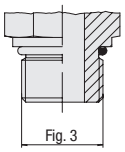
Metallic Sealing Edge

Metric Parallel Thread
DIN 3852-1 (Form B) /
ISO 9974-3 (Type B)



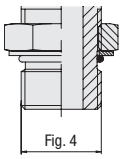
Profile Sealing Ring

Metric Parallel Thread
ISO 9974-2 (Type E)



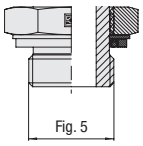
O-Ring

Metric Parallel Thread
ISO 6149-2 /-3



O-Ring without Retaining Ring (Adjustable)

Metric Parallel Thread
ISO 6149-2 /-3



O-Ring with Retaining Ring (Adjustable)

Metric Parallel Thread

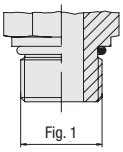
Series	Thread	Male Threaded Studs			Check Valves	Adjustable Male Threaded Stuts		Blanking Screws		
								FI-VSV	FI-VS	
		fig. 1 Metallic Sealing Edge Torque (N·m) ca.	**fig. 2** Profile Sealing Ring Torque (N·m) ca.	**fig. 3** O-Ring Torque (N·m) ca.	**fig. 2** Profile Sealing Ring Torque (N·m) ca.	**fig. 5** O-Ring with Retaining Ring Torque (N·m) ca.	**fig. 4** O-Ring Torque (N·m) ca.	**fig. 2** Profile Sealing Ring Torque (N·m) ca.	**fig. 2** Profile Sealing Ring Torque (N·m) ca.	**fig. 3** O-Ring Torque (N·m) ca.
L	M 8 x 1	14							10	
	M 10 x 1	25	18	15	18	18	15	12	12	15
	M 12 x 1,5	45	25	25	25	35	25	25	23	22
	M 14 x 1,5	70	45	35	45	55	35	45	30	45
	M 16 x 1,5	90	55	40	55	80	40	55	50	55
	M 18 x 1,5	120	70	45	70	105	45	70	65	70
	M 22 x 1,5	170	125	60	125	125	60	125	90	100
	M 26 x 1,5 [2]	230	180		180			180	100	170
	M 27 x 2		180	100		200	100	180	130	180
	M 33 x 2	400	310	160	310	370	160	250	250	215
	M 42 x 2	700	450	210	450	500	210	400	310	330
	M 48 x 2	900	540	260	540	600	260	500	380	420
S	M 12 x 1,5	60	35	35	35	35	35	25	23	22
	M 14 x 1,5	80	55	40	55	55	45	45	30	45
	M 16 x 1,5	130	70	55	70	80	55	55	50	55
	M 18 x 1,5	190	90	70	90	105	70	70	65	70
	M 20 x 1,5	220	125		125			80	80	
	M 22 x 1,5	300	135	100	135	125	100	125	90	100
	M 26 x 1,5		180					180	100	170
	M 27 x 2	420	180	170	180	220	170	180	130	180
	M 33 x 2	600	310	310	310	370	310	250	250	215
	M 42 x 2	700	450	330	450	500	330	400	310	330
	M 48 x 2	950	540	420	540	600	420	500	380	420

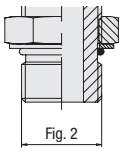
[2] M 27 x 2 according to ISO 6149.
Please note: The tightening torques for male threaded studs listed in this catalogue are Approximate values with a tolerance of +10% and always refer to original components of the STAUFF Connect range made of steel with the default Zinc/Nickel coating and a steel mating material.

Please contact STAUFF prior to the assembly for recommended tightening torques for use with any mating materials other than Steel!

Assembly Instructions for Tube Fittings with Male Threaded Stud UN/UNF-Thread

Tightening Torques





O-Ring without Retaining Ring (Non-Adjustable)

UN/UNF-Thread

O-Ring without Retaining Ring (Adjustable)

UN/UNF-Thread
ISO 11926-2/-3

Series	Thread	Male Threaded Studs **fig. 1** O-Ring Torque N·m ca.	Adjustable Male Threaded Stuts **fig. 2** O-Ring Torque N·m ca.
L	7/16-20 UNF	18	18
	1/2-20 UNF	28	
	9/16-18 UNF	30	34
	3/4-16 UNF	50	55
	7/8-14 UNF	60	80
	1 1/16-12 UN	95	100
	1 5/16-12 UN	150	150
	1 5/8-12 UN	200	290
	1 7/8-12 UN	325	325
S	7/16-20 UNF	20	20
	9/16-18 UNF	35	46
	3/4-16 UNF	70	80
	7/8-14 UNF	100	80
	1 1/16-12 UN	170	185
	1 5/16-12 UN	270	
	1 5/8-12 UN	285	340
	1 7/8-12 UN	415	415

Please note: The tightening torques for male threaded studs listed in this catalogue are Approximate values with a tolerance of +10% and always refer to original components of the STAUFF Connect range made of steel with the default Zinc/Nickel coating and a steel mating material.

Please contact STAUFF prior to the assembly for recommended tightening torques for use with any mating materials other than Steel!

Assembly Instructions for Banjo Fittings

1. Assembly Preparation

Lubricate the o-ring of the banjo bolt (e.g. using mineral-oil based hydraulic fluid HLP32).
Do not use lubricating grease!

Immediately proceed with the assembly in order to avoid exposure to contamination.

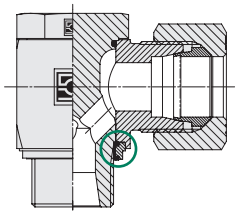
2. Assembly with the Fitting Body

Place the external metallic sealing ring or the retaining ring with captive seal on the opposite side of the banjo fitting into the larger bore and center it through the thread for the banjo bolt. Retaining rings with captive seal are additionally centered through the bore in the fitting body – any clearance between the ring and the fitting body is not allowed.

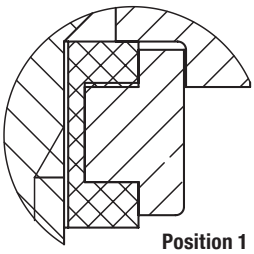
Align the body of the banjo fitting and tighten the banjo bolt with a spanner until the noticeable increase in force (pressure point).

Use a suitable spanner to finish the assembly with either another approximately 1/6 a turn (60°, applicable for retaining rings with captive seal) or 1/4 a turn (90°, applicable for external metallic sealing rings) beyond this point while holding the body of the banjo fitting in position using a second spanner.

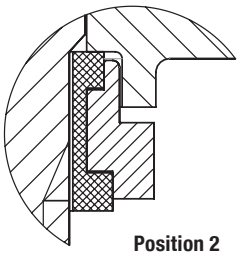
Positioning and Orientation of Retaining Rings with Captive Seal



Applicable for RSWND / RSW / RST



Position 1



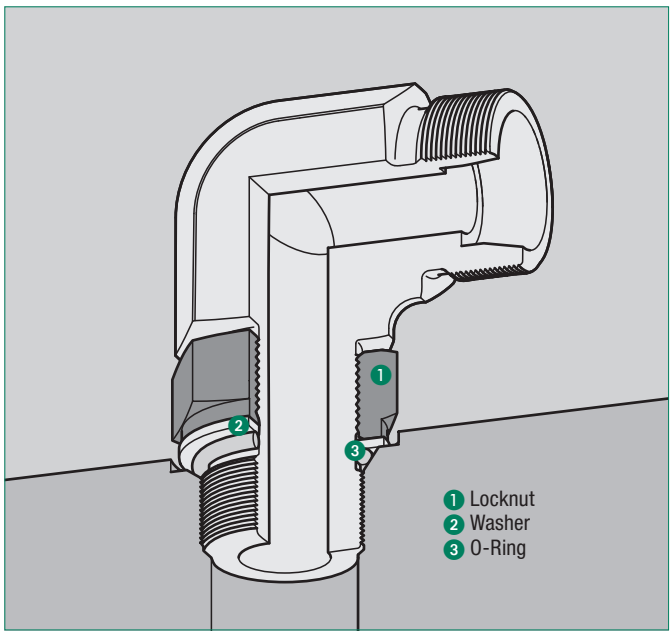
Position 2

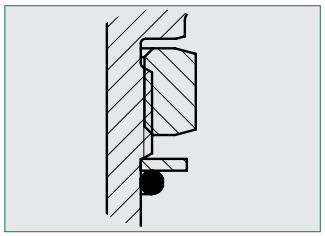
Series	Tube OD mm	Thread	Position
L	6	G 1/8	2
	8	G 1/4	2
	10	G 1/4	2
	12	G 3/8	1
	15	G 1/2	1
	18	G 1/2	1
	22	G 3/4	1
	28	G 1	1
	35	G 1 1/4	1
	42	G 1 1/2	1
S	6	G 1/4	2
	8	G 1/4	2
	10	G 3/8	1
	12	G 3/8	1
	14	G 1/2	1
	16	G 1/2	1
	20	G 3/4	1
	25	G 1	1
	30	G 1 1/4	1
	38	G 1 1/2	1

Series	Tube OD mm	Thread	Position
L	6	M10x1	2
	8	M12x1,5	1
	10	M14x1,5	2
	12	M16x1,5	1
	15	M18x1,5	1
	18	M22x1,5	1
	22	M26x1,5	1
	28	M33x2	1
	35	M42x2	1
	42	M48x2	1
S	6	M12x1,5	1
	8	M14x1,5	2
	10	M16x1,5	1
	12	M18x1,5	1
	14	M20x1,5	1
	16	M22x1,5	1
	20	M27x2	1
	25	M33x2	1
	30	M42x2	1
	38	M48x2	1

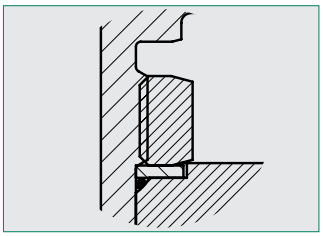
Assembly Instructions for Adjustable Fitting with Locknut (WEE, VEE, TEE, LEE)

For use in Ports to ISO 6149 and SAE UNO



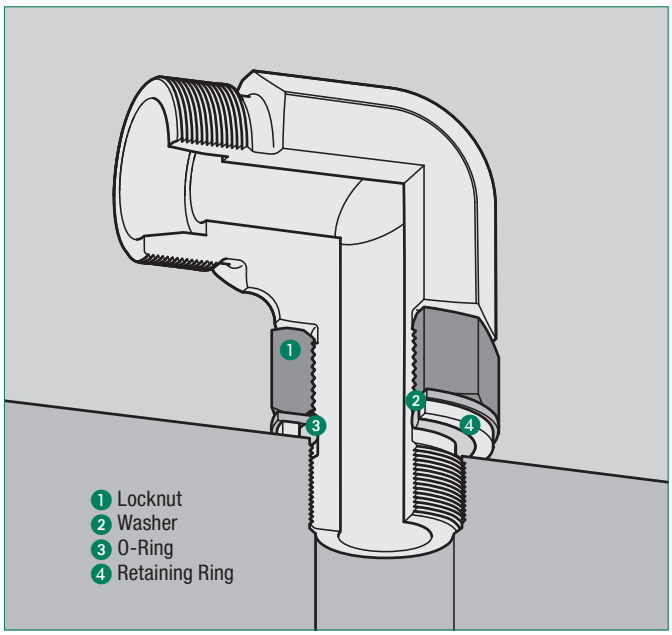


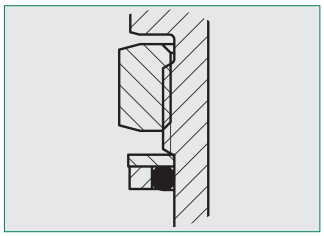
Pre-assembly



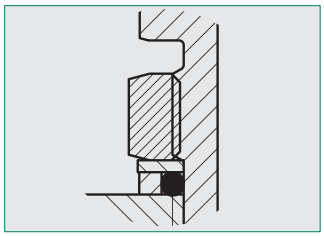
Post-assembly

For use in Ports Form X acc. to DIN 3852-2, ISO 1179-1



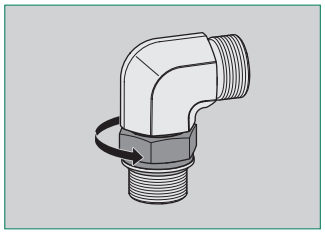


Pre-assembly



Post-assembly

1. Assembly Preparation



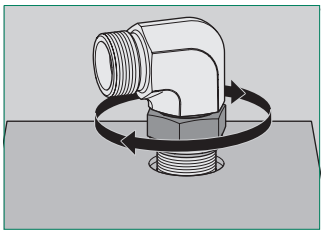
Lubricate the o-ring (e.g. using mineral-oil based hydraulic fluid HLP32).
Do not use lubricating grease!

Immediately proceed with the assembly in order to avoid exposure to contamination.

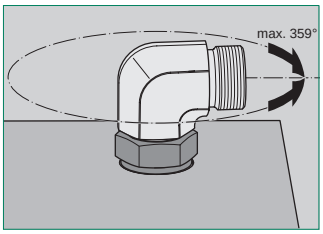
Ensure that the Locknut, O-Ring and Washer are fully raised.

Please Note:
For use in Ports Form X, ensure that the Retaining Ring is placed.

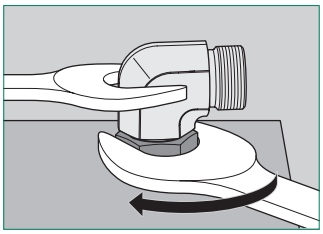
2. Assembly



Fully screw in the fitting body.



Adjust the direction.
Caution: Turn back by no more than one rotation against the direction in which the fitting body was installed!



Tighten the locknut with the defined torque (see p. 171-179) while using a spanner to counter the fitting body in the direction of adjustment.

S

Product-Specific Abbreviations 344

Product-Specific Abbreviations

Abbreviation	Product Category	Product Description	Page
FI-AB	Con necting Parts	37° Flared Tube Fitting Set	37
FI-AS	Weld Fittings	Straight Weld Fitting	114
FI-ASV	Weld Fittings	Straight Weld Fitting for Tubes	120
FI-BA	Connecting Parts	24°/37° Flared Cone Adaptor with O-Rings	34
FI-BH	Connecting Parts	Support Sleeve for 37° Flared Tube Fittings	35
FI-BM	Connecting Parts	Union Nut for 37° Flared Tube Fittings	36
FI-Box-... (FI-KOL-...)	Measuring and Test Equipment	Cone Gauge Kit	283
FI-BUZ	Spare Parts / Accessories	Blanking Plug with Sealing Edge	235
FI-DGWE-...-M-WD	Swivel Fittings	Swivel Elbow	197
FI-DGWE-...-R-WD	Swivel Fittings	Swivel Elbow	196
FI-DIR	Spare Parts / Accessories	Retaining Ring with Captive Seal for Male Studs of Banjo Fittings	245
FI-DKI	Spare Parts / Accessories	Internal Metallic Sealing Ring for Female Studs of Gauge Fittings	246
FI-DKR	Spare Parts / Accessories	External Metallic Sealing Ring for Male Studs of Banjo Fittings	244
FI-DS	Connecting Parts	Double-Edge Cutting Ring	28
FI-EGE-...-M	Standpipe Fittings	Straight Male Stud Standpipe Fitting	157
FI-EGE-...-M-WD	Standpipe Fittings	Straight Male Stud Standpipe Fitting	160
FI-EGE-...-N	Standpipe Fittings	Straight Male Stud Standpipe Fitting	161
FI-EGE-...-R	Standpipe Fittings	Straight Male Stud Standpipe Fitting	156
FI-EGE-...-R-WD	Standpipe Fittings	Straight Male Stud Standpipe Fitting	158
FI-EGED-...-M-WD	Fittings with 24° Taper / O-Ring (DKO)	Straight Male Stud Fitting with 24° Taper / O-Ring	136
FI-EGED-...-N	Fittings with 24° Taper / O-Ring (DKO)	Straight Male Stud Fitting with 24° Taper / O-Ring	137
FI-EGED-...-R-WD	Fittings with 24° Taper / O-Ring (DKO)	Straight Male Stud Fitting with 24° Taper / O-Ring	134
FI-EL	Standpipe Fittings	Adjustable Standpipe Barrel Tee	168
FI-ELD	Fittings with 24° Taper / O-Ring (DKO)	Adjustable Barrel Tee with 24° Taper / O-Ring (DKO)	153
FI-EMA-...-R	Female Stud / Gauge Fittings	Gauge Standpipe Fitting	131
FI-EMAD-...-R	Female Stud / Gauge Fittings	Gauge Fitting with 24° Taper / O-Ring	130
FI-ES	Bulkhead Fittings	Straight Bulkhead Weld Fitting	111
FI-ET	Standpipe Fittings	Adjustable Standpipe Branch Tee	167
FI-ETD	Fittings with 24° Taper / O-Ring (DKO)	Adjustable Branch Tee with 24° Taper / O-Ring (DKO)	152
FI-EVD	Fittings with 24° Taper / O-Ring (DKO)	Adjustable Elbow (45°) with 24° Taper / O-Ring	151
FI-EW	Standpipe Fittings	Adjustable Standpipe Elbow	166
FI-EWD	Fittings with 24° Taper / O-Ring (DKO)	Adjustable Elbow (90°) with 24° Taper / O-Ring	150
FI-FB	Assembly Tools / Devices	Clamping Jaws	275
FI-FD	Connecting Parts	STAUFF Form EVO Sealing Ring	32
FI-FK	Assembly Tools / Devices	Final Assembly Stud for the Manual Cutting Ring Assembly	270
FI-FST	Assembly Tools / Devices	Tube Shapers	274
FI-G	Tube Fittings / Unions	Straight Union	96
FI-G	Tube Fittings / Unions	Straight Reducer	97
FI-GA-...-M	Female Stud / Gauge Fittings	Straight Female Stud Fitting	126
FI-GA-...-N	Female Stud / Gauge Fittings	Straight Female Stud Fitting	127
FI-GA-...-R	Female Stud / Gauge Fittings	Straight Female Stud Fitting	124
FI-GE-...-M	Male Stud Fittings	Straight Male Stud Fitting	44
FI-GE-...-Mk	Male Stud Fittings	Straight Male Stud Fitting	64
FI-GE-...-M-OR	Male Stud Fittings	Straight Male Stud Fitting	57
FI-GE-...-M-WD	Male Stud Fittings	Straight Male Stud Fitting	52
FI-GE-...-N	Male Stud Fittings	Straight Male Stud Fitting	65
FI-GE-...-R	Male Stud Fittings	Straight Male Stud Fitting	40
FI-GE-...-R-DF	Male Stud Fittings	Straight Male Stud Fitting	55
FI-GE-...-Rk	Male Stud Fittings	Straight Male Stud Fitting	60
FI-GE-...-R-WD	Male Stud Fittings	Straight Male Stud Fitting	48
FI-GE-...-U	Male Stud Fittings	Straight Male Stud Fitting	70
FI-GESV	Bulkhead Fittings	Straight Male Stud Bulkhead Fitting	110
FI-GP	Assembly Tools / Devices	Support Plate for Machine-Assisted Assembly	253
FI-GP-PRC	Assembly Tools / Devices	Support Plate for Machine-Assisted Cutting Ring Assembly	260/268
FI-GS	Bulkhead Fittings	Straight Bulkhead Fitting	108
FI-ID	Assembly Tools / Devices	Internal Tube Supports	274
FI-K	Tube Fittings / Unions	Equal Cross	104
FI-KB	Assembly Tools / Devices	Clamping Jaws for 37° Tube Flaring	261
FI-KR	Spare Parts / Accessories	Retaining Ring (Small) for Male Studs of Fittings with Lock Nut	247
FI-LE-...-M	Male Stud Fittings	Male Stud Barrel Tee	89
FI-LE-...-Mk	Male Stud Fittings	Male Stud Barrel Tee	91
FI-LE-...-N	Male Stud Fittings	Male Stud Barrel Tee	92
FI-LE-...-R	Male Stud Fittings	Male Stud Barrel Tee	88
FI-LE-...-Rk	Male Stud Fittings	Male Stud Barrel Tee	90
FI-LEE-...-M-OK	Fittings with Lock Nut	Adjustable Male Stud Barrel Tee with Lock Nut	175
FI-LEE-...-M-OR	Fittings with Lock Nut	Adjustable Male Stud Barrel Tee with Lock Nut	177
FI-LEE-...-R-OK	Fittings with Lock Nut	Adjustable Male Stud Barrel Tee with Lock Nut	173
FI-LEE-...-U	Fittings with Lock Nut	Adjustable Male Stud Barrel Tee with Lock Nut	179
FI-M	Connecting Parts	Union Nut	33
FI-MA-...-R	Female Stud / Gauge Fittings	Gauge Fitting	129
FI-MFK	Assembly Tools / Devices	Cutting Ring Assembly Stud for Machine-Assisted Assembly	252/259
FI-MFK	Assembly Tools / Devices	Cutting Ring Assembly Stud for Machine-Assisted Assembly	267
FI-MVK-PRC-H-M	Assembly Tools / Devices	Cutting Ring Assembly Stud for Machine-Assisted Assembly	264
FI-RED-...-R	Spare Parts / Accessories	Thread Reducer	226
FI-RED-...-R-WD	Spare Parts / Accessories	Thread Reducer	224
FI-REDS	Standpipe Fittings	Straight Standpipe Reducer	162
FI-REDSD	Fittings with 24° Taper / O-Ring (DKO)	Straight Reducer for Tube Ends with 24° Taper / O-Ring	144
FI-REDSD	Fittings with 24° Taper / O-Ring (DKO)	Distance Adaptors with 24° Taper / O-Ring	148
FI-RST-...-M-DK	Banjo Fittings	Banjo Tee (High-Pressure Version)	191

Product-Specific Abbreviations

Abbreviation	Product Category	Product Description	Page
FI-RST-...-M-WD	Banjo Fittings	Banjo Tee (High-Pressure Version)	193
FI-RST-...-R-DK	Banjo Fittings	Banjo Tee (High-Pressure Version)	190
FI-RST-...-R-WD	Banjo Fittings	Banjo Tee (High-Pressure Version)	192
FI-RSW-...-M-DK	Banjo Fittings	Banjo Elbow (High-Pressure Version)	187
FI-RSW-...-M-WD	Banjo Fittings	Banjo Elbow (High-Pressure Version)	189
FI-RSW-...-R-DK	Banjo Fittings	Banjo Elbow (High-Pressure Version)	186
FI-RSW-...-R-WD	Banjo Fittings	Banjo Elbow (High-Pressure Version)	188
FI-RSWND-...-M-DK	Banjo Fittings	Banjo Elbow (Medium-Pressure Version)	183
FI-RSWND-...-M-WD	Banjo Fittings	Banjo Elbow (Medium-Pressure Version)	185
FI-RSWND-...-R-DK	Banjo Fittings	Banjo Elbow (Medium-Pressure Version)	182
FI-RSWND-...-R-WD	Banjo Fittings	Banjo Elbow (Medium-Pressure Version)	184
FI-RV	Hydraulic Valves	Check Valve	200
FI-RVA	Hydraulic Valves	Check Valve	201
FI-RVI-...-R	Hydraulic Valves	Female Stud Check Valve	210
FI-RVIA-...-R	Hydraulic Valves	Female Stud Check Valve	211
FI-RVV-...-M-WD	Hydraulic Valves	Male Stud Check Valve	203
FI-RVV-...-R-WD	Hydraulic Valves	Male Stud Check Valve	202
FI-RVVA-...-M-WD	Hydraulic Valves	Male Stud Check Valve	205
FI-RVVA-...-R-WD	Hydraulic Valves	Male Stud Check Valve	204
FI-RVZ-...-M-WD	Hydraulic Valves	Male Stud Check Valve	207
FI-RVZ-...-R-WD	Hydraulic Valves	Male Stud Check Valve	206
FI-RVZA-...-M-WD	Hydraulic Valves	Male Stud Check Valve	209
FI-RVZA-...-R-WD	Hydraulic Valves	Male Stud Check Valve	208
FI-S	Connecting Parts	Single-Edge Cutting Ring	28
FI-SKM	Spare Parts / Accessories	Hexagon Lock Nut	237
FI-SN	Weld Fittings	24° Weld Cone with O-Ring	116
FI-SNR	Weld Fittings	24° Weld Cone Reducer with O-Ring	118
FI-SNV	Fittings with 24° Taper / O-Ring (DKO)	Straight Male Stud Fitting with 24° Taper / O-Ring	138
FI-SNV	Fittings with 24° Taper / O-Ring (DKO)	Straight Reducer with 24° Taper / O-Ring	140
FI-T	Tube Fittings / Unions	Equal Tee	100
FI-T	Tube Fittings / Unions	Tee Reducer	101
FI-TE-...-M	Male Stud Fittings	Male Stud Branch Tee	83
FI-TE-...-Mk	Male Stud Fittings	Male Stud Branch Tee	85
FI-TE-...-N	Male Stud Fittings	Male Stud Branch Tee	86
FI-TE-...-R	Male Stud Fittings	Male Stud Branch Tee	82
FI-TE-...-Rk	Male Stud Fittings	Male Stud Branch Tee	84
FI-TEE-...-M-OK	Fittings with Lock Nut	Adjustable Male Stud Branch Tee with Lock Nut	175
FI-TEE-...-M-OR	Fittings with Lock Nut	Adjustable Male Stud Branch Tee with Lock Nut	177
FI-TEE-...-R-OK	Fittings with Lock Nut	Adjustable Male Stud Branch Tee with Lock Nut	173
FI-TEE-...-U	Fittings with Lock Nut	Adjustable Male Stud Branch Tee with Lock Nut	179
FI-TIB	Measuring and Test Equipment	Thread Identification Board	282
FI-VD	Spare Parts / Accessories	Blanking Plug with 24° Taper / O-Ring (DKO)	234
FI-VEE-...-M-OK	Fittings with Lock Nut	Adjustable Male Stud Elbow (45°) with Lock Nut	175
FI-VEE-...-M-OR	Fittings with Lock Nut	Adjustable Male Stud Elbow (45°) with Lock Nut	177
FI-VEE-...-R-OK	Fittings with Lock Nut	Adjustable Male Stud Elbow (45°) with Lock Nut	173
FI-VEE-...-U	Fittings with Lock Nut	Adjustable Male Stud Elbow (45°) with Lock Nut	179
FI-VES	Hydraulic Valves	Check Valve Installation Kit	212
FI-VH	Connecting Parts	Support Sleeve	31
FI-VS-...-M-OR	Spare Parts / Accessories	Blanking Screw for Ports	233
FI-VS-...-M-WD	Spare Parts / Accessories	Blanking Screw for Ports	231
FI-VS-...-R	Spare Parts / Accessories	Blanking Screw for Ports	232
FI-VS-...-R-WD	Spare Parts / Accessories	Blanking Screw for Ports	230
FI-VSK	Spare Parts / Accessories	Blanking Plug for Tube Ends	236
FI-VSV-...-M-WD	Spare Parts / Accessories	Blanking Screw for Ports (Heavy Duty)	229
FI-VSV-...-R-WD	Spare Parts / Accessories	Blanking Screw for Ports (Heavy Duty)	228
FI-W	Tube Fittings / Unions	Straight Reducer	99
FI-WAS	Weld Fittings	Elbow Weld Fitting	115
FI-WDDS	Connecting Parts	Soft-Sealing Cutting Ring	29
FI-WDDS-W5	Connecting Parts	Soft-Sealing Cutting Ring (Stainless Steel)	30
FI-WE-...-M	Male Stud Fittings	Male Stud Elbow	75
FI-WE-...-Mk	Male Stud Fittings	Male Stud Elbow	78
FI-WE-...-N	Male Stud Fittings	Male Stud Elbow	80
FI-WE-...-R	Male Stud Fittings	Male Stud Elbow	74
FI-WE-...-Rk	Male Stud Fittings	Male Stud Elbow	76
FI-WEE-...-M-OK	Fittings with Lock Nut	Adjustable Male Stud Elbow (90°) with Lock Nut	174
FI-WEE-...-M-OR	Fittings with Lock Nut	Adjustable Male Stud Elbow (90°) with Lock Nut	176
FI-WEE-...-R-OK	Fittings with Lock Nut	Adjustable Male Stud Elbow (90°) with Lock Nut	172
FI-WEE-...-U	Fittings with Lock Nut	Adjustable Male Stud Elbow (90°) with Lock Nut	178
FI-WS	Bulkhead Fittings	Elbow Bulkhead Fittings	109
FI-WV	Hydraulic Valves	Alternating Valve	213
Oel-Stauff-Form-1L	Assembly Tools / Devices	STAUFF Form EVO Oel	276
O-RING	Spare Parts / Accessories	O-Ring for Male Studs	239
O-RING	Spare Parts / Accessories	O-Ring for 24°/37° Flared Cone Adaptors	240
O-RING	Spare Parts / Accessories	O-Ring for for DKO Taper Fittings / 24° Weld Cones	242
O-RING	Spare Parts / Accessories	O-Ring for Banjo Bolts of Banjo Fittings	243
SFO/PRC-POC-FS	Assembly Tools / Devices	External Foot Control Switch	254/276
SFO-F-A-A-IOT	Assembly Tools / Devices	Tube Forming Machine with Cloud connection	272
SPR-PRC-FS	Assembly Tools / Devices	External Foot Control Switch	258
SPR-PRC-H-M-OS	Assembly Tools / Devices	STAUFF Oil with brush	276

Product-Specific Abbreviations

Abbreviation	Product Category	Product Description	Page
SPR-PRC-H-E-SET	Assembly Tools / Devices	Portable Cutting Ring Assembly Machine with Manual Pressure Setting (Set)	262
SPR-PRC-MA-D-A	Assembly Tools / Devices	Combined Cutting Ring Assembly and 37° Tube Flaring Machine	256
SPR-PRC-MP	Assembly Tools / Devices	Manual Cutting Ring Pre-Assembly Device	266
SPR-PRC-POC-A-A-IOT	Assembly Tools / Devices	Cutting Ring Final Assembly Machine with Cloud connection	250 / 254
SPR-PRC-POC-RTH	Assembly Tools / Devices	Optional tool holder for tubes with small bending radii	254
SPR-PRC-TH-C-M	Assembly Tools / Devices	Tooling Head for Cutting Ring Assembly (based on manual settings)	258
SPR-PRC-TH-C-MA	Assembly Tools / Devices	Tooling Head for Cutting Ring Assembly (based on pre-defined settings)	258
SPR-PRC-TH-F-M	Assembly Tools / Devices	Tooling Head for 37° Tube Flaring (based on manual settings)	258
SPR-TM	Assembly Tools / Devices	Assembly Tool Magazine	254/258
STAUFF CLEAN	Tube Manipulation	Pipe, Tube and Hose Cleaning System	286
TUB-MA	Tube Manipulation	Manual Tube Bender	288
TUBSD-MA	Tube Manipulation	Tube Bending and Saw Device	289
TUD-MA	Tube Manipulation	Tube Reamer	291
TUSD-MA	Tube Manipulation	Tube Saw Devise	290
WDG	Spare Parts / Accessories	Profile Sealing Ring for Male Studs	238
WDG	Spare Parts / Accessories	Profile Sealing Ring for Male Studs	238

STAUFF®