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.

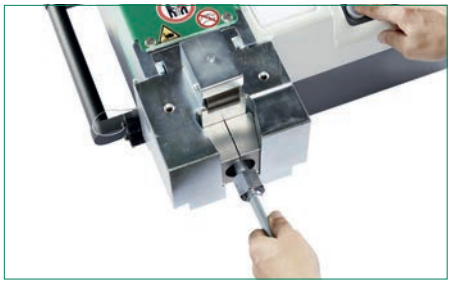
The adjustable return stoke of the cylinder helps the operator to further optimise the total cycle times.

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 ools 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

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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 / 2.56 in 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 / 13.12 ft)
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 (50% 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
  25.98 in x 20.28 in x 10.43 in
  with lateral handle bars (detachable)
- Distance from the tube axis to the interfering edge of the machine housing:
  65 mm / 2.56 in
- Clearance height: 30 mm / 1.18 in (height of the machine feet)
- Weight (basic machine): 66 kg / 145 lbs
  (incl. operating fluid, excl. assembly tools)
- Weight (tooling heads): SPR-PRC-TH-C-A: 6,0 kg / 13 lbs
  SPR-PRC-TH-C-M: 5,5 kg / 12 lbs
  SPR-PRC-TH-F-M: 19,5 kg / 43 lbs

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 / 13.12 ft

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 / .78 US Gallon
- Max working pressure: 200 bar / 2901 PSI

Operating Conditions

- Storage temperature: -10°C … +70°C / +14°F … +158°F
- Ambient temperature: +10°C … +50°C / +50°F … +122°F
- 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.

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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

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Assembly Tool Magazine
Type SPR-TM



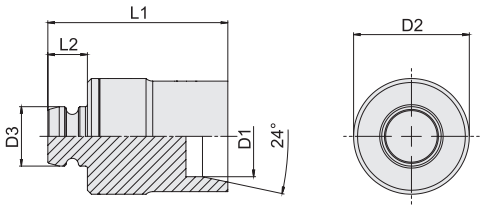
- Provides safe and convenient storage for up to 10 assembly studs (type FI-MFK) as well as up to 10 support plates (types FI-GP and FI-GP-PRC) for the machine-assisted cutting ring assembly
- Assembly studs and support plates are not included in the scope of delivery for this item and have to be ordered 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 / 16.40 ft)

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





Series	Tube OD (mm/in)	Dimensions (mm/in)				Weight (kg/lbs) ca.	Ordering Codes
	D1	D2	D3	L1	L2	per 100	
LL	4	30	14,8	50	10	12,98	FI-MFK-04LL-W100
	.16	1.18	.58	1.97	.39	28.55	
	6	30	14,8	50	10	13,28	FI-MFK-06LL-W100
	.24	1.18	.58	1.97	.39	29.22	
	8	30	14,8	50	10	13,68	FI-MFK-08LL-W100
	.31	1.18	.58	1.97	.39	30.10	
L	6	30	14,8	50	10	13,57	FI-MFK-06L-W100
	.24	1.18	.58	1.97	.39	29.85	
	8	30	14,8	50	10	14,01	FI-MFK-08L-W100
	.31	1.18	.58	1.97	.39	30.82	
	10	30	14,8	50	10	14,63	FI-MFK-10L-W100
	.39	1.18	.58	1.97	.39	32.18	
	12	30	14,8	50	10	16,09	FI-MFK-12L-W100
	.47	1.18	.58	1.97	.39	35.39	
	15	30	14,8	50	10	16,63	FI-MFK-15L-W100
	.59	1.18	.58	1.97	.39	36.58	
	18	30	14,8	50	10	18,23	FI-MFK-18L-W100
	.71	1.18	.58	1.97	.39	40.10	
	22	30	14,8	49	10	19,13	FI-MFK-22L-W100
	.87	1.18	.58	1.93	.39	42.08	
	28	33,8	14,8	48	10	24,43	FI-MFK-28L-W100
	1.10	1.33	.58	1.89	.39	53.74	
	35	42,8	14,8	45	10	32,72	FI-MFK-35L-W100
	1.38	1.69	.58	1.77	.39	71.99	
	42	49,8	14,8	44	10	41,17	FI-MFK-42L-W100
	1.65	1.96	.58	1.73	.39	90.58	
S	6	30	14,8	50	10	14,14	FI-MFK-06S-W100
	.24	1.18	.58	1.97	.39	31.11	
	8	30	14,8	50	10	14,68	FI-MFK-08S-W100
	.31	1.18	.58	1.97	.39	32.29	
	10	30	14,8	50	10	15,23	FI-MFK-10S-W100
	.39	1.18	.58	1.97	.39	33.51	
	12	30	14,8	50	10	15,89	FI-MFK-12S-W100
	.47	1.18	.58	1.97	.39	34.95	
	14	30	14,8	49	10	15,98	FI-MFK-14S-W100
	.55	1.18	.58	1.93	.39	35.15	
	16	30	14,8	49	10	16,65	FI-MFK-16S-W100
	.63	1.18	.58	1.93	.39	36.64	
	20	30	14,8	45	10	16,43	FI-MFK-20S-W100
	.79	1.18	.58	1.77	.39	36.15	
	25	33,8	14,8	42	10	19,02	FI-MFK-25S-W100
	.98	1.33	.58	1.65	.39	41.84	
	30	39,8	14,8	40	10	22,88	FI-MFK-30S-W100
	1.18	1.57	.58	1.57	.39	50.34	
	38	49,8	14,8	36	10	26,41	FI-MFK-38S-W100
	1.50	1.96	.58	1.42	.39	58.10	

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

Accessories



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



Series	Tube OD ($^{mm}/_{in}$)	Ordering Codes
L	6	FI-GP-06L/S-PRC-MA-W1
	.24	
	8	FI-GP-08L/S-PRC-MA-W1
	.31	
	10	FI-GP-10L/S-PRC-MA-W1
	.39	
	12	FI-GP-12L/S-PRC-MA-W1
	.47	
	15	FI-GP-15L-PRC-MA-W1
	.59	
	18	FI-GP-18L-PRC-MA-W1
	.71	
	22	FI-GP-22L-PRC-MA-W1
	.87	
	28	FI-GP-28L-PRC-MA-W1
	1.10	
	35	FI-GP-35L-PRC-MA-W1
	1.38	
	42	FI-GP-42L-PRC-MA-W1
	1.65	
S	6	FI-GP-06L/S-PRC-MA-W1
	.24	
	8	FI-GP-08L/S-PRC-MA-W1
	.31	
	10	FI-GP-10L/S-PRC-MA-W1
	.39	
	12	FI-GP-12L/S-PRC-MA-W1
	.47	
	14	FI-GP-14S-PRC-MA-W1
	.55	
	16	FI-GP-16S-PRC-MA-W1
	.63	
	20	FI-GP-20S-PRC-MA-W1
	.79	
	25	FI-GP-25S-PRC-MA-W1
	.98	
	30	FI-GP-30S-PRC-MA-W1
	1.18	
	38	FI-GP-38S-PRC-MA-W1
	1.50	

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

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



37° Flaring of Metric Tube Ends

Series	Tube OD (mm/in)	Ordering Codes	
		DIN 3949	SAE J514 / ISO 8434-2
L	6	FI-KB-06L/S-PRC-MF-W1	FI-KB-06-PRC-F-W1
	.24		
	8	FI-KB-08L/S-PRC-MF-W1	FI-KB-08/5/16-PRC-F-W1
	.31		
	10	FI-KB-10L/S-PRC-MF-W1	FI-KB-10-PRC-F-W1
	.39		
	12	FI-KB-12L/S-PRC-MF-W1	FI-KB-12-PRC-F-W1
	.47		
	15	FI-KB-15L-PRC-MF/F-W1	
	.59		
	18	FI-KB-18L-PRC-MF/F-W1	
	.71		
	22	FI-KB-22L-PRC-MF/F-W1	
	.87		
	28	FI-KB-28L-PRC-MF-W1	FI-KB-28-PRC-F-W1
	1.10		
	35	FI-KB-35L-PRC-MF-W1	FI-KB-35-PRC-F-W1
	1.38		
	42	FI-KB-42L-PRC-MF-W1	FI-KB-42-PRC-F-W1
	1.65		
S	6	FI-KB-06L/S-PRC-MF-W1	FI-KB-06-PRC-F-W1
	.24		
	8	FI-KB-08L/S-PRC-MF-W1	FI-KB-08/5/16-PRC-F-W1
	.31		
	10	FI-KB-10L/S-PRC-MF-W1	FI-KB-10-PRC-F-W1
	.39		
	12	FI-KB-12L/S-PRC-MF-W1	FI-KB-12-PRC-F-W1
	.47		
	14	FI-KB-14S-PRC-MF/F-W1	
	.55		
	16	FI-KB-16S-PRC-MF-W1	FI-KB-16-PRC-F-W1
	.63		
	20	FI-KB-20S-PRC-MF-W1	FI-KB-20-PRC-F-W1
	.79		
	25	FI-KB-25S-PRC-MF-W1	FI-KB-25-PRC-F-W1
	.98		
	30	FI-KB-30S-PRC-MF/F-W1	
	1.18		
	30 x 5	FI-KB-30SX5-PRC-MF-W1	
	1.18 x .20		
	38	FI-KB-38S-PRC-MF-W1	FI-KB-38-1-1/2-PRC-F-W1
	1.50		
	38 x 5	FI-KB-38SX5-PRC-MF-W1	
	1.50 x .20		

37° Flaring of Imperial Tube Ends

Tube OD (mm/in)	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

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

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