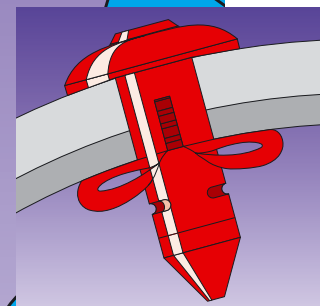
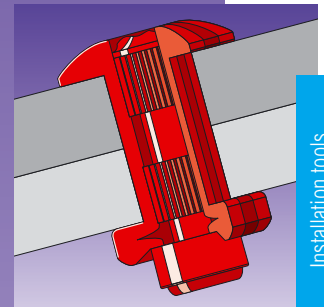
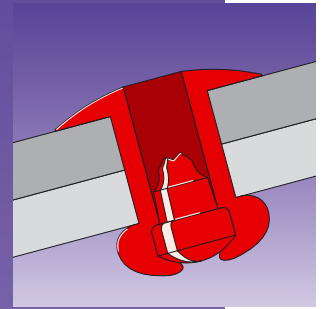
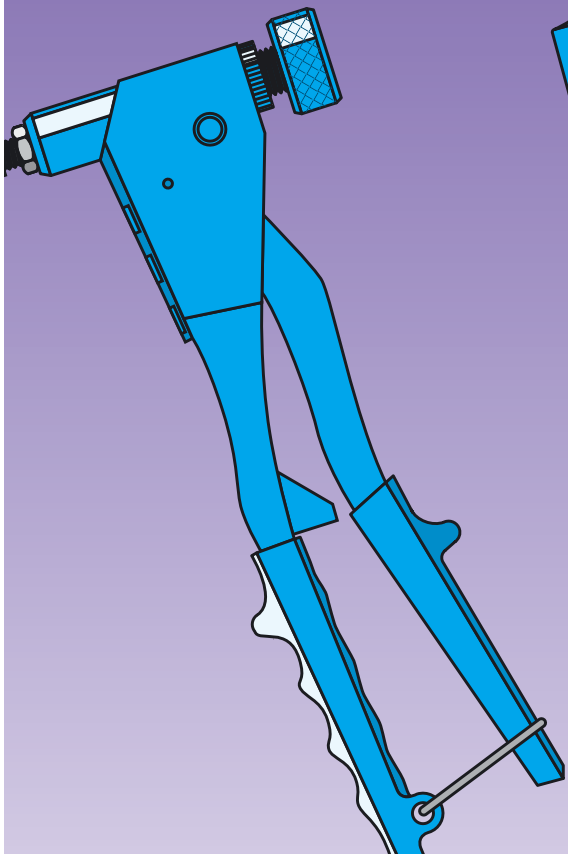
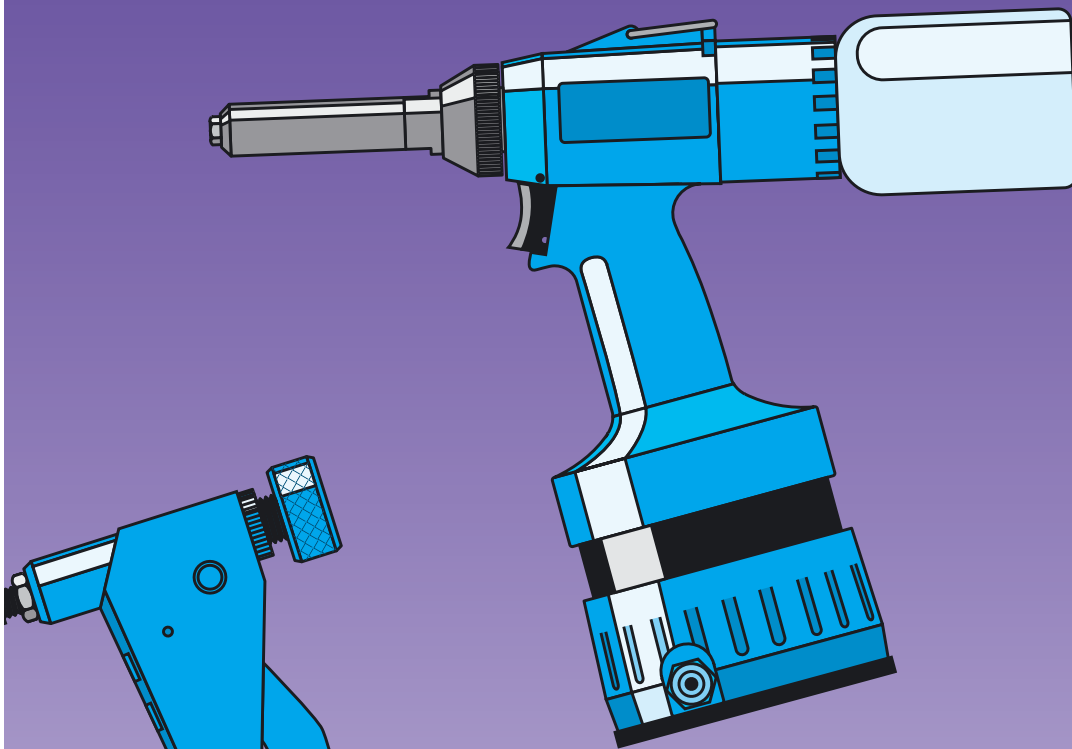


■ Installation Tools for blind rivets



Installation tools

Installation Tools for blind rivets

Overview for standard and closed end blind rivets

Installation tools for various rivet diameters/materials

Tool		2.4	2.8/3.0/3.2	2.8/3.0/3.2	4.0	4.0	4.8/5.0	4.8/5.0	6.0	6.4
Model	Part No.		Al/Cu	St/NiCu/VA	Al/Cu	St/NiCu/VA	Al/Cu	St/NiCu/VA		(8.0)
TIOS® 4	431 265	○	○●	○●	○	○	–	–	–	–
MS 5	431 605	–	○●	○●	○●	○●	○●	○●	–	–
MS 6 M	431 360	–	–	–	○●	○●	○●	○●	○●	○●
PowerLink 30	326 060	○	○●	○●	○●	○●	○●	–	–	–
POPSet PS 25	326 070	–	○●	○●	○●	○●	○●	○●	○●	○●
TIOS® 220	431 450 250	○	○●	○●	○●	○●	○●	○●	–	–
Alignment head for TIOS 220	431 838	–	–	–	○●	–	–	–	–	–
MS 40 A	431 299	–	–	–	○●	○●	○●	○●	○●	○●
MS 60	431 500	–	–	–	○●	○●	○●	○●	○●	○●
MS 60 SV	431 500 300	–	–	–	○●	○●	○●	○●	○●	○●
PRG 510 A Plus	326 781	–	○	○●	○	–	–	–	–	–
ProSet™ 1600 MCS	329 380	○●	○●	○●	○●	○	–	–	–	–
ProSet™ 2500 MCS	329 395	–	○●	○●	○●	○●	○●	○●	–	–
ProSet™ 3400	329 450	○●	○●	○●	○●	○●	○●	○●	○●	○●
MCS 5250 AXIAL	329 933	–	–	○●	–	○●	–	○●	–	–
A1 long alignment head	329 203	–	○●	○●	○●	○●	○●	○●	–	–
Angled head PRH 830	326 186	–	–	○●	○	–	–	–	–	–
Angled head PRH 840	329 243	–	○●	○●	○●	○●	○●	○●	–	–
MCS 5800	329 950	○	○●	○●	○●	○●	○●	○●	–	–
PowerBird	431 950	–	–	–	–	–	○●	○●	○●	○●
MHT-RH	322 182	–	–	–	○	○●	○●	○●	–	–
MHT-LH	322 222	–	–	–	○	○●	○●	○●	–	–
Riveting tool HHT 60	431 630	–	–	–	–	–	–	○●	–	–

- Standard blind rivet
 ● Closed end blind rivet

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets

Overview for high-strength blind rivets

Tool		TIBULB				SUPER TIBULB	HUCK- LOK	M-LOCK			MAGNA- BULB®			BOM®						MULTIGRIP			POWER		
Modell	Part No.	4.8	6.4	7.8	7.8VA	6.5	6.4	4.8	6.4	9.8	4.8	6.4	8.0	5.0	6.5	8.0	9.6	12.7	16.0	3.2	4.0	4.8	3.2	4.0	4.8
TIOS® 220	431 450	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	● ¹⁴
MS 40 A	431 299	●	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	● ¹⁴
MS 60	431 500	●	●	—	—	●	●	●	●	—	●	●	—	—	—	—	—	—	—	—	●	●	—	●	● ¹⁵
MS 75	385 060	● ¹	● ²	● ³	—	● ⁴	● ²	● ¹	● ²	—	● ¹	● ²	—	● ⁶	—	—	—	—	—	—	—	—	—	—	—
Adjustment tool 255	375 190	—	—	—	● ¹³	—	—	—	—	● ⁷	—	—	● ¹³	—	● ⁸	—	—	—	—	—	—	—	—	—	—
Adjustment tool 256	375 490	—	—	—	—	—	—	—	—	● ⁷	—	—	● ¹³	—	● ⁸	—	—	—	—	—	—	—	—	—	—
Adjustment tool 2480	370 445	—	—	—	—	—	● ²	● ¹	● ²	—	● ¹	● ²	—	● ⁶	—	—	—	—	—	—	—	—	—	—	—
Adjustment tool 2503	370 800	—	—	—	—	—	—	—	—	● ⁷	—	—	● ¹³	—	● ⁸	● ⁹	● ¹⁰	—	—	—	—	—	—	—	—
Adjustment tool 2620 PT	370 550	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	● ¹¹	—	—	—	—	—	—	—
Adjustment tool 2628	370 222	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	● ¹²	—	—	—	—	—	—

¹+ Pulling head 371 805

²+ Pulling head 371 815

³+ Pulling head 385 150

⁴+ Pulling head 371 705

⁵+ Pulling head 371 731 or 371 732

⁶+ Pulling head 372 780

⁷+ Pulling head 371 904

⁸+ Pulling head 372 550

⁹+ Pulling head 372 705

¹⁰+ Pulling head 372 995

¹¹+ Pulling head 372 450

¹²+ Pulling head 372 760

¹³+ Pulling head 385 159

¹⁴+ Nose 431 306

¹⁵+ Nose 431 506

Please order pulling heads and noses separately.

● suitable

— not possible

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets mechanical

Hand-held riveting tongs TIOS® 4

with 3 nosepiece-sizes

Area of application

These hand-held riveting tongs can be used, depending on which nosepiece is fitted, for the setting of blind rivets measuring $\varnothing$ 2.4 to 4.0 mm and made of aluminium, steel, copper and NiCu, and also for $\varnothing$ 3.2 mm closed end blind rivets made of aluminium and copper.

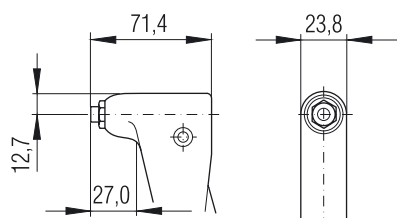
Material

Housing cast in special lightweight metal with cast-in steel insert for attachment of the nosepiece. Handle and internal components made of high-grade steel.

Technical data

Weight: 0.4 kg

Part No. 431 265



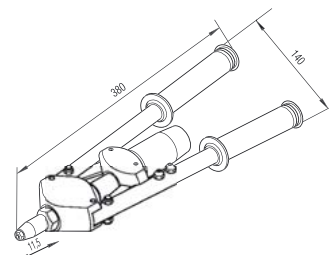
Hand tool for blind rivets MS 5

For blind rivets of all materials in sizes from 3.0 to 5.0 mm diameter.

- For safety and convenience spent mandrels are collected in a removeable container.

Technical data

Maximum stroke: 11.5 mm
Weight: 1.6 kg
Height: 45 mm
Length: 380 mm
Width: 140 mm



Part No. 431 605

Rivet-ø [mm]	Starter set ¹		Spare parts Part No.	
	Nose [piece]	Jaws [set]	Nose [piece]	Jaws [set]
3.0/3.2	1	1	431 303	431 401
4.0	1		431 304	431 401
4.8/5.0	1		431 452	431 401

¹ supplied with tool

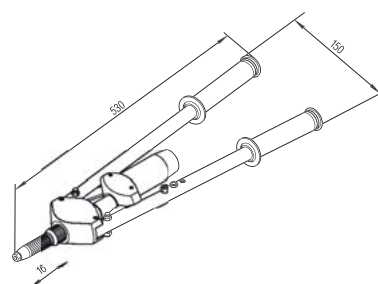
Hand tool for blind rivets MS 6 M

For blind rivets. M-LOCK and MAGNA BULB blind rivets of all materials in sizes to 6.4 mm diameter.

- For safety and convenience spent mandrels are collected in a removeable container.
- Ergonomically-designed

Technical data

Maximum stroke: 16 mm
Weight: 2.0 kg
Height: 45 mm
Length: 530 mm
Width: 150 mm



Part No. 431 360

Rivet-ø [mm]	Starter set ¹		Spare parts Part No.	
	Nose [piece]	Jaws [set]	Nose [piece]	Jaws [set]
4.0	1	1	431 304	431 333
4.8/5.0	1		431 305	431 333
6.0	1		431 306	431 333
6.4/8.0	1		431 307	431 333

¹ supplied with tool

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets mechanical

Hand tool for blind rivets POPSet™ PS 25

For blind rivets of all materials in sizes from 3.0 to 6.4 diameter.

Technical data

Length open: 900 mm

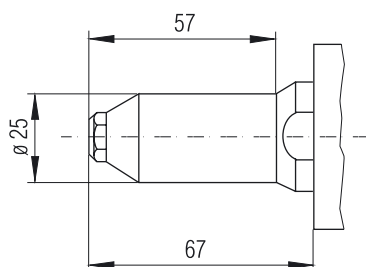
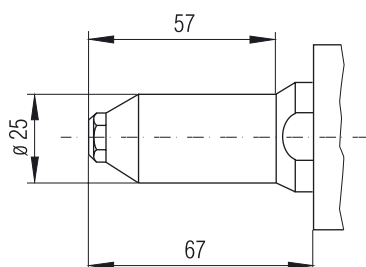
Length closed: 320 mm

Weight: 1.9 kg

Part No. 326 070 000



POPSet™ is a registered trademark of EMHART. USA



Battery-operated blind-riveting tool MCS 5800

- Good price-to-performance ratio
- Ergonomic design
- Large range of application
- Short working times
- Spent mandrels drop out via the front of the nosepiece or fall into the collection container at the back
- Replacement nosepieces and spanner are stored in the tool body
- Compact, impact-resistant housing

Technical data

Operating capacity:	For blind rivets of all materials in sizes from 2.4 to 5.0 diameter.
Maximum stroke:	20 mm
Tractive effort:	8.5 kN
Drive unit:	12-volt quick-replacement battery
Quick-charging unit:	60-minute charging time
Weight:	2.2 kg

Part No. 329 950

Battery-operated blind-riveting tool PowerBird

- Good price-to-performance ratio
- Ergonomic design
- Large range of application
- Short working times
- Spent mandrels drop out via the front of the nosepiece or fall into the collection container at the back
- Replacement nosepieces and spanner are stored in the tool body
- Compact, impact-resistant housing

Technische Daten

Operating capacity:	For blind rivets of all materials in sizes from 4.8 to 6.4 diameter
Maximum stroke:	20 mm
Tractive effort:	13 kN
Drive unit:	12-volt quick-replacement battery
Quick-charging unit:	60-minute charging time
Weight:	2.2 kg (with battery)

Part No. 431 950

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets

electric overview

Battery-operated tools

Blind rivets	Tool	Blind rivet Material	Rivets per battery charge [piece]	Nosepiece	Part No. gripping nosepiece	Jaws
2.4	MSC 5800	Aluminium	1900	431 903	431 964	431 909
2.8/3.0/3.2	MSC 5800	Aluminium	1300	431 904	431 956	431 909
2.8/3.0/3.2	MSC 5800	Steel	1100	431 904	431 956	431 909
4.0	MSC 5800	Stainless steel	1000	431 904	431 956	431 909
4.0	MSC 5800	Aluminium	1000	431 905	431 957	431 909
4.0	MSC 5800	Steel	900	431 905	431 957	431 909
4.0	MSC 5800	Stainless steel	800	431 906	431 958	431 909
4.8/5.0	MSC 5800	Aluminium	700	431 906	431 958	431 909
4.8/5.0	MSC 5800	Steel	500	431 907	431 965	431 909
4.8/5.0	MSC 5800	Stainless steel	400	431 908	431 966	431 909
4.8/5.0	PowerBird	Steel	500	431 907	431 965	431 953
4.8/5.0	PowerBird	Stainless steel	400	431 908	431 966	431 953
6.0	PowerBird	Aluminium	400	431 908	—	431 953
6.0	PowerBird	Steel	220	431 906	—	431 953
6.4/8.0	PowerBird	Aluminium	300	431 971	—	431 953
6.4/8.2	PowerBird	Steel	180	431 971	—	431 953

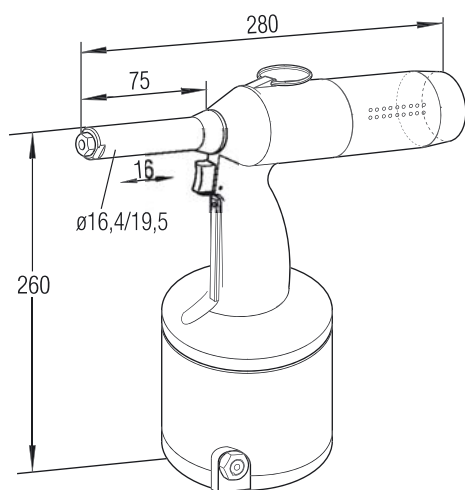
We reserve the right to amend specifications at any time.

Installation Tools for blind rivets hydropneumatic



Special accessories

Special nose caps and nose pieces are available on request.



Note

The nose cap of Ø 16.4 mm is suitable for the insertion of standard steel blind rivets measuring up to Ø 4.0 mm, and for aluminium rivets of up to Ø 5.0 mm in size.

Rivet installation tool TIOS® 220

hydropneumatic

For installation of rivets of all materials from 2.4 to 5.0 mm diameter to tractive effort 13 kN maximum.

- Air automatically shut off when not in use - minimising air consumption and operating costs.
- Excellent noise suppression.
- Spent mandrels collected in clear container with silencer.
- Non slip base.
- Base cover prevents damage to workpiece.
- Extra nose pieces stored in base.
- Ergonomic handle is comfortable to hold.
- Low weight.
- Safety feature prevents spent mandrels being ejected when collection container removed.
- Safety dump valve prevents damage from excessive air pressure.
- Air intake can be moved to suit left handed operator.

Noise emissions

The noise emission level at the workplace is $L_{PAI} < 70$ dB (A) in accordance with ISO 10843 and EN ISO 3744

Technical data

Maximum operating pressure:	7 bar
Air connection size:	DN 6
Tractive effort:	13 kN at 6 bar
Maximum stroke:	16 mm
Weight:	1.6 kg
Air consumption per operation:	2 litres approx.
Height:	260 mm
Width:	280 mm
Nose cap diameter:	19.5 mm / 16.4 mm on request
Nose cap length:	75 mm

Part No. 431 450 250

Starter set and accessories

Oil syringe. Angled air adaptor.

Rivet-Ø [mm]	Starter set ¹		Spare parts Part No.	
	Nose [piece]	Jaws [set]	Nose [piece]	Jaws [set]
3.0 / 3.2	1	1	431 303	431 455
4.0	1		431 304	431 455
4.8 / 5.0	1		431 305	431 455

¹ supplied with tool

More accessories off page 338.

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets hydropneumatic

Rivet installation tool MS 40 A

hydropneumatic

For installation of rivets of all materials to 6.4 mm diameter.

High-strength blind rivets up to $\varnothing$ 4.8 mm.

- The pneumatic spent mandrel extractor holds the inserted blind rivet securely in the nosepiece.
- Reliable operation even when the head of the unit is held vertically
- Light pressure on the trigger causes the blind rivet to be inserted in the hole.
- The spent mandrel is sucked out automatically to drop into the collection container

Technical data

Maximum operating pressure:	7 bar
Tractive effort:	approx. 14.7 kN at 6 bar
Maximum stroke:	14 mm
Weight:	approx. 1.7 kg
Air consumption per operation:	3.5 l
Height:	275 mm
Width:	300 mm
Nose cap diameter:	22 mm
Nose cap length:	55 mm

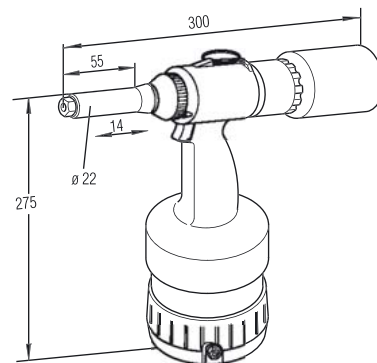
Part No. 431 299

Rivet- $\varnothing$ [mm]	Starter set ¹		Spare parts Part No.	
	Nose [piece]	Jaws [set]	Nose [piece]	Jaws [set]
4.0	1	1	431 304	431 333
4.8/5.0	1		431 305	431 333
6.0	1		431 306	431 333
6.4	1		431 309	431 333

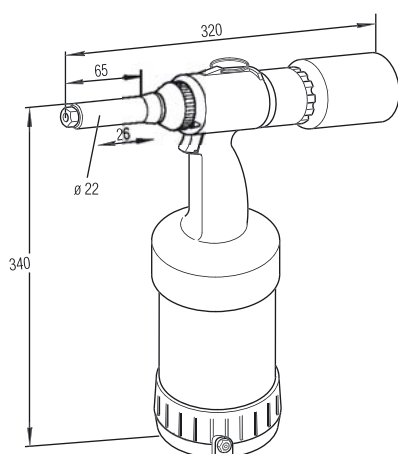
¹ supplied with tool

More accessories off page 338.

We reserve the right to amend specifications at any time.



Installation Tools for blind rivets hydropneumatic



Rivet installation tool MS 60

hydropneumatic

For standard and closed end blind rivets measuring up to $\varnothing$ 6.4 mm; 8.0 Al; M-LOCK and MAGNA BULB blind rivets, plus $\varnothing$ 6.5 mm folding-type blind rivets made of any material.

- The pneumatic spent mandrel extractor holds the inserted blind rivet securely in the nosepiece.
- Reliable operation even when the head of the unit is held vertically
- Light pressure on the trigger causes the blind rivet to be inserted in the hole.
- The spent mandrel is sucked out automatically to drop into the collection container

Technical data

Maximum operating pressure:	7 bar
Tractive effort:	approx. 18.2 kN at 6 bar
Maximum stroke:	26 mm
Weight:	approx. 2.6 kg
Air consumption per operation:	4.8 l
Height:	340 mm
Width:	320 mm
Nose cap diameter:	22 mm
Nose cap length:	55 mm

Part No. 431 500

Rivet- $\varnothing$ [mm]	Starter set ¹		Spare parts Part No.	
	Nose [piece]	Jaws [set]	Nose [piece]	Jaws [set]
4.0	1	1	431 504	326 583
5.0	1		431 505	326 583
6.0	1		431 506	326 583
6.4	1		431 507	326 583

¹ supplied with tool

More accessories off page 338.

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets
hydropneumatic

Rivet installation tool MS 60 HV
hydropneumatic

Riveting tool with special reinforced components designed to ensure a long service life when used mainly with high-strength blind rivets.

Technical data
see MS 60

Part No. 431 500 002

Niet-ø [mm]	Starter set ¹		Spare parts Part No.	
	Nose [piece]	Jaws [set]	Nose [piece]	Jaws [set]
6.4	1	1	431 502	431 561

¹ supplied with tool



More accessories off page 338.

We reserve the right to amend specifications at any time.



Rivet installation tool ProSet™ 1600 MCS

Hydropneumatic blind-riveting tool for the insertion of standard blind rivets measuring up to $\varnothing$ 4.0 mm (except blind rivets made of stainless steel) and closed end blind rivets of up to $\varnothing$ 4.0 mm (except closed end blind rivets made of steel and stainless steel) with a maximum insertion force of up to 4.85 kN.

- Tool-free maintenance (front sleeve)
- Two-part quick-change jaws
- Optimum power-to-weight ratio
- Large insertion stroke of 18 mm
- Compressed air activation/shutoff at the air inlet
- Left-/right-hand swivelling compressed-air connection
- Rivet mandrel collection container with bayonet-type connector

Technical data

Operating pressure:	5.0 to 6.9 bar
Tractive effort:	4.85 kN (6.2 bar)
Stroke:	18 mm
Weight:	1.04 kg
Height:	227 mm
Length:	272 mm
Nose cap diameter:	17.3 mm
Nose cap length:	46.3 mm

Part No. 329 380 000

ProSet™ is a registered trademark of EMHART. USA

- On request:
- Special nose
 - Special nose cap length 127 mm

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets hydropneumatic

Rivet installation tool ProSet™ 2500 MCS

Hydropneumatic blind-riveting tool for the insertion of standard blind rivets measuring between $\varnothing$ 3.0 mm and 5.0 mm (except multi-grip blind rivets made of stainless steel) and closed end blind rivets of between $\varnothing$ 3.0 mm and 5.0 mm with a maximum insertion force of up to 9.4 kN.

- Tool-free maintenance (front sleeve)
- Three-part quick-change jaws
- Optimum power-to-weight ratio
- Large insertion stroke of 18 mm
- Compressed air activation/shutoff at the air inlet
- Left-/right-hand swivelling compressed-air connection
- Rivet mandrel collection container with bayonet-type connector

Technical data

Operating pressure:	5.0 to 6.9 bar
Tractive effort:	9.4 kN (6.2 bar)
Stroke:	18 mm
Weight:	1.31 kg
Height:	260 mm
Length:	304 mm
Nose cap diameter:	20.6 mm
Nose cap length:	54.5 mm

Part No. 329 395 000

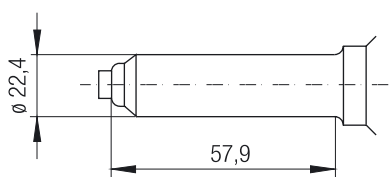
POPSet™ is a registered trademark of EMHART. USA

- On request:
- Special nose
 - Nose cap length 127 mm

Adapter kits for RP models and angled heads are being developed.

We reserve the right to amend specifications at any time.





Rivet installation tool ProSet 3400 MCS

Hydropneumatic blind-riveting tool for the insertion of standard blind rivets measuring between $\varnothing$ 3.0 mm and 6.4 mm (except mutigrip blind rivets made of stainless steel) and closed end blind rivets of between $\varnothing$ 3.0 mm and 6.4 mm with a maximum insertion force of up to 18.5 kN.

- Tool-free maintenance (front sleeve)
- Three-part quick-change jaws
- Optimum power-to-weight ratio
- Large insertion stroke of 18 mm
- Compressed air activation/shutoff at the air inlet
- Left-/right-hand swivelling compressed-air connection
- Rivet mandrel collection container with bayonet-type connector

Technical data

Maximum operating pressure:	5.0 – 6.9 bar
Tractive effort:	18.5 kN (6.2 bar)
Stroke:	approx. 26 mm
Weight:	approx. 2.0 kg
Height:	approx. 316 mm
Length:	approx. 334 mm
Nose cap diameter:	approx. 22.4 mm
Nose cap length:	approx. 57.9 mm

Part No. 329 450

- On request:
- Special nose
 - Special nose cap length 127 mm
 - Adapter kits for RP model
 - Adapter sets for angled heads

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets hydropneumatic

Rivet installation tool MCS 5250 „AXIAL”

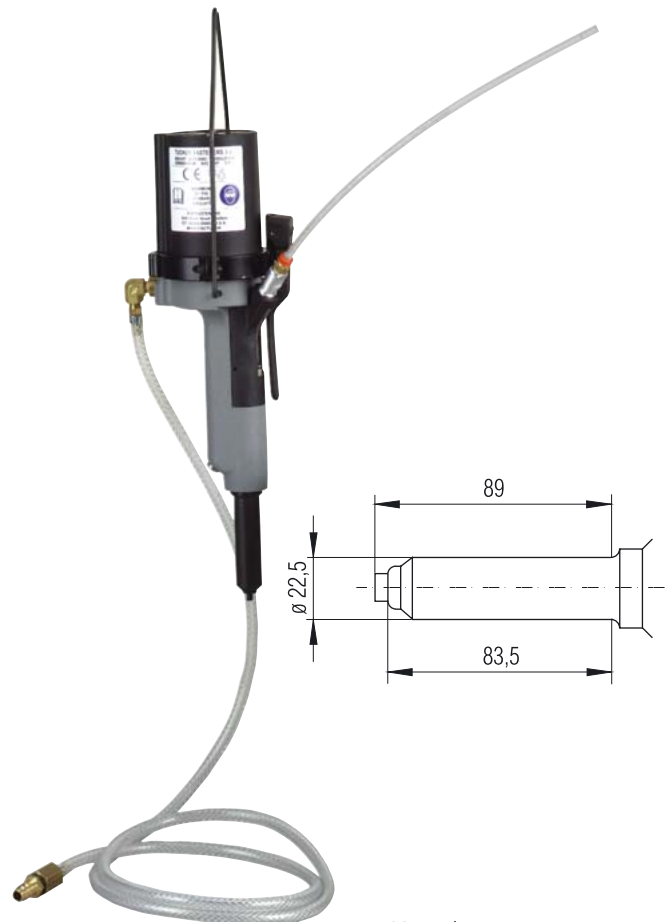
The MCS 5250 is a hydropneumatic riveting tool designed for vertical operation with the rivet mandrel extraction device

- Ergonomic design
- Quieter, faster operation
- Long, thin nose section designed to get into hard-to-access applications

Technical data

Operating range:	For installation of rivets of all materials from 2.4 to 5.0 mm diameter
Maximum operating pressure:	5.8 bar
Air consumption per operation:	approx. 0.5 l
Stroke:	approx. 16.0 mm
Weight:	1.77 kg
Length:	397 mm
Width:	113 mm

Part No. 329 933



Rivet mandrel extraction device MCS 5000

(supplied with unit)

Technical data

Maximum operating pressure:	6.1 bar
Air consumption :	317 l minute
Maximum hose length:	4.5 m
Max. lift:	1.8 m
Weight (empty):	2.2 kg
Weight (full):	20.2 kg
Height:	414 mm
Width:	357 mm
Max. length of rivet mandrel:	50 mm
Capacity:	8.500 waste mandrels

Part No. 329 278

Special nose on request.

Details of additional replacement parts for adaptation to other types and diameter of rivet can be found in the table in the catalogue (see below).

We reserve the right to amend specifications at any time.



Installation Tools for blind rivets Mobile Automated Rivet Installation System

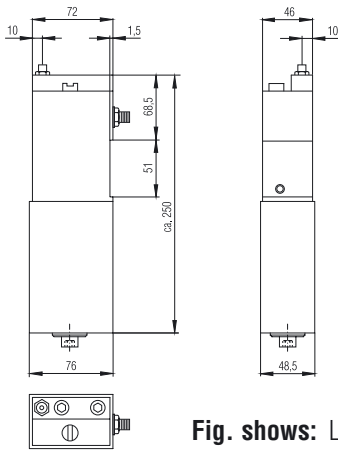


Fig. shows: Left-hand configuration,
right-hand mirror configuration



Rivet setting head MHT hydraulic

The hydraulic setting head is designed for use in multi-configuration systems. The compact design, which is available as a right-hand (RH) or left-hand (LH) riveting unit, permits minimal clearances between riveting points: minimal distance of 20 mm between two tools, with two-way limit clearances of up to 10 mm with respect to edges.

Technical data

Operating range:	Standard blind rivet $\varnothing 2.5 - 5.0$ mm and Closed end blind rivet $\varnothing 3.2 - 5.0$ mm of all materials
Maximum operating pressure:	340 bar
Oil volume per stroke:	15 cm ³
Weight:	ca. 3.7 kg

Type: Right-hand (RH) configuration Part No. 322 182

Type: Left-hand (LH) configuration Part No. 322 222



Rivet setting head HHT-60 hydraulic

The hydraulic setting head is designed for use in multi-configuration systems. The compact design permits relatively small riveting-point distances. Minimum distance 40 mm, with integrated pneumatic waste-mandrel extraction

Technische Daten

Operating capacity:	4.0 – 8.0 mm diameter of all materials
Maximum operating pressure:	340 bar
Oil volume per stroke:	15 cm ³
Weight :	ca. 1.9 kg

Part No. 431 630

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets Workstations

Semi- and fully-automatic Workstations for our blind rivet range

We design and build fully-automatic workstations.

Our range includes riveting, power and control units, along with feed systems and spent mandrel extraction devices. The modular design of our systems allows individual elements to be combined as required.

Our specialists can provide direct, onsite advice and individual solutions to problems.

Just contact us. We meet your needs when it comes to well-designed fastening technology!



Automatic sorting of fasteners



Precision supply of fasteners



Integrated monitoring of process sequences



Riveting workstation with TIOS control

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets

Blind rivet feeders



Blind-rivet feeders RP-4, RP-5 and RP-6

Designed for the automatic supply of blind rivets at the point of transfer. Push the tool nose into transfer position of the feeder until a blind rivet is automatically transferred to the nosepiece of the tool. The vacuum created by the spent mandrel extraction device of the riveting tool holds the blind rivet in the tool. Straightforward single-handed operation increases productivity, as the component being riveted can also be fixed in position or replaced by hand during the installation process. The blind-rivet feeder requires an electrical power supply and source of compressed air. Designed to handle around a thousand blind rivets at a time, it is compact enough to fit on any workbench.



Fill the container with approx. 1.000 blind rivets (see filling mark)



Place six to eight rivets by hand into the slide rail of the feeder



Connect the electrical power lead and compressed-air line. The feeder is now ready for operation

Basic configuration

Feeder	for rivet- $\varnothing$ [mm]	Length of rivet shaft <i>max</i> [mm]	Filling capacity <i>max</i> [piece]	Electrical connection	Operating pressure [bar]	Dimensions L/W/H [mm]	Weight [kg]	Part No.
RP-4	2.8/3.0/3.2	12	1000	220 V/50 – 60 Hz/0.5 A	5 – 7	545/220/335	10.5	322 220
RP-5	4.0	12	800	220 V/50 – 60 Hz/0.5 A	5 – 7	545/220/335	10.5	322 221
RP-6	4.8	12	600	220 V/50 – 60 Hz/0.5 A	5 – 7	545/220/335	10.5	322 223

Transfer adapter - select in accordance with riveting tool being used

Installation tool	Tool holding fixture ($\varnothing$ nose section) [mm]	RP4 for rivet- $\varnothing$ to 3.2 mm Part No.	RP5 for rivet- $\varnothing$ to 4.0 mm Part No.	RP6 for rivet- $\varnothing$ to 4.8 mm Part No.
MCS 510/511	17.5	322 475	322 475	–
TIOS® 220	19.0	322 483 001	322 483 001	322 484 000
TIOS® 220 AD 17	17.0	322 483 002	322 483 002	322 484 001
ProSet™ 1600 MCS	17.3	322 475	322 475	–
ProSet™ 2500 MCS	20.6	322 479	322 479	322 487
ProSet™ 3400 MCS	22.4	322 482	322 482	322 486

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets

Accessories

Offset head

- Designed for TIOS® 220, but also suitable for use with other blind-riveting devices
- Tensile force: up to 10 kN
- With suction extraction of rivet mandrel

Technical data

Nose cap diameter: 19.5 mm
Length complete: approx. 160 mm
Weight: approx. 0.8 kg

Part No. 431 837

On request: Front sleeve and nosepiece in special configurations



Rivet mandrel removal

- 4 m hose length

for installation tool	Part No.
TIOS® 220	431 825
MS 40/60/75	431 826



431 825



431 826

Ring sensor

for detecting the spent mandrel in the riveting tool

- Can be retro-fitted
- Can be fitted with a hose adapter
- Readings via an external counter

for installation tool	Part No.
TIOS® 220	431 355
MS 40/60/75	431 784



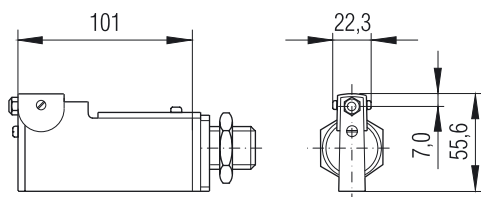
Threaded elbow joint

- Suitable for MS 40, MS 60 and MS 75
- Designed for use in tight spaces; allows the collection container to be attached at an angle

Part No. 431 701

We reserve the right to amend specifications at any time.





Long offset head 1A

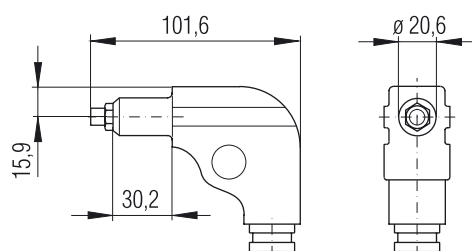
Small-diameter nosepiece for minimum distances with from edges.
Inserts rivets in the 7-mm range of a right-angled section

Technical data

Operating range: For installation of rivets of all materials
from 2.5 – 5.0 mm diameter

Weight: approx. 0.6 kg

Part No. 326 193



Short angled head PRH 840

- Robust 90-degree angled head
- Recommended for use with steel rivets

Technical data

Operating range: For installation of rivets of all materials
from 2.4 – 4.8 mm diameter

Weight: approx. 0.5 kg

Part No. 329 257

The following table lists the available combinations of tools,
adapter sets and tool heads.

We reserve the right to amend specifications at any time.

Installation Tools for blind rivets

Accessories

Special angled head PRH 830

- Very robust 90-degree angled head
- For difficult-to-access applications

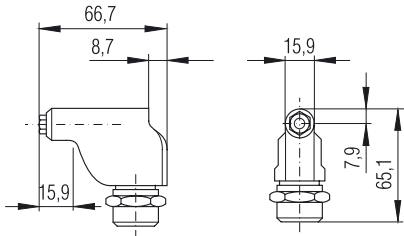
Technical data

Operating range: For installation of rivets of all materials from 2.4 to 3.2 mm diameter and 4.0 mm diameter Al-Leg./Cu and closed end blind rivet 3.2 mm diameter of all materials

Weight: approx. 0.5 kg

Part No. 326 186

The following table lists the available combinations of tools, adapter sets and tool heads.



Adapter sets

The following adapter sets and adapters are required for the fitting of special heads for the riveting tools shown:

Adapter element		Adapter set for blind-riveting tools		
Description	Part No.	ProSet 2100 Part No.	ProSet 2500 Part No.	ProSet 3400 Part No.
A1 Long offset head	326 193	329 809	329 811	—
PRH 830 Special angled head	326 186	329 809	329 811	—
PRH 840 Short angled head	329 257	329 810	329 816	329 980

We reserve the right to amend specifications at any time.

Nosepieces and jaws for standard blind rivets

for the reconfiguring of blind-riveting tools to handle different diameters of rivet

Tool		Part No. for rivet-ø											
		2.4	2.8	3.0	3.2 Al alloy/ Cu	3.2 Steel, Ni/Cu	4.0 Al alloy/ Cu	4.0 Steel, Ni/Cu	4.8 / 5.0 Al alloy/ Cu	4.8 / 5.0 Steel, Ni/Cu	6.0	6.4	8.0
TIOS® 4	Nose	328 303	328 301	328 301	328 301	328 301	328 302	328 302	—	—	—	—	—
	Jaws	326 706	326 706	326 706	326 706	326 706	326 706	326 706	—	—	—	—	—
MS 5	Nose	431 451	401 303	401 303	401 303	401 303	401 304	401 304	431 305	431 305	—	—	—
	Jaws	431 401	431 401	431 401	431 401	431 401	431 401	431 401	431 401	431 401	—	—	—
MS 6 M	Nose	—	—	—	—	—	431 304	431 304	431 305	431 305	431 306	431 309	431 309
	Jaws	—	—	—	—	—	431 333	431 333	431 333	431 333	431 333	431 333	431 333
POPSet PS 25	Nose	—	On request									—	—
	Jaws	—										—	—
TIOS 220	Nose	431 451	431 303	431 303	431 303	431 303	431 304	431 304	431 305	431 305	—	—	—
	Jaws	431 455	431 455	431 455	431 455	431 455	431 455	431 455	431 455	431 455	—	—	—
Offset head for TIOS 220	Nose	—	—	—	—	—	431 304	431 304	431 305	431 305	—	—	—
	Jaws	—	—	—	—	—	431 333	431 333	431 333	431 333	—	—	—
MS 40 A	Nose	—	—	—	—	—	431 304	431 304	431 305	431 305	431 306	431 309	431 309
	Jaws	—	—	—	—	—	431 333	431 333	431 333	431 333	431 333	431 333	431 333
MS 60	Nose	—	—	—	—	—	431 504	431 504	431 505	431 505	431 506	431 507	431 507
	Jaws	—	—	—	—	—	326 583	326 583	326 583	326 583	326 583	326 583	326 583
MS 60 SV	Nose	—	—	—	—	—	431 504	431 504	431 505	431 505	431 506	431 507	431 507
	Jaws	—	—	—	—	—	326 583	326 583	326 583	326 583	326 583	326 583	326 583
PRG 510 A Plus	Nose	328 300	328 301	328 301	328 301	328 301	328 302	—	—	—	—	—	—
	Jaws	328 305	328 305	328 305	328 305	328 305	328 305	—	—	—	—	—	—
ProSet™ 1600 MCS	Nose	328 300	328 301	328 301	328 301	328 301	328 302	328 302	—	—	—	—	—
	Jaws	328 306	328 306	328 306	328 306	328 306	328 306	328 306	—	—	—	—	—
ProSet™ 2500 MSC	Nose	—	328 301	328 301	328 301	328 301	328 302	328 302	328 242	328 242	—	—	—
	Jaws	—	326 583	326 583	326 583	326 583	326 583	326 583	326 583	326 583	—	—	—
ProSet™ 3400 MSC	Nose	—	—	328 301	328 301	328 301	328 302	328 302	328 242	328 242	328 243	328 243	—
	Jaws	—	328 250 001	328 250 001	328 250 001	328 250 001	328 250 001	328 250 001	328 250 001	328 250 001	328 250 001	328 250 001	—
MCS 5200 AXIAL	Nose	328 300	328 301	328 301	328 301	328 301	328 302	328 302	328 246	328 242	—	—	—
	Jaws	328 249	328 249	328 249	328 249	328 249	328 249	328 249	328 249	328 249	—	—	—
Offset head A1	Nose	327 782	327 783	327 783	327 783	327 783	327 784	327 784	327 781	327 785	—	—	—
	Jaws	327 775	327 776	327 776	327 776	327 776	327 776	327 776	327 777	327 777	—	—	—
Angled head PRH830	Nose	327 848	327 849	327 849	327 849	327 849	327 850	—	—	—	—	—	—
	Jaws	327 846	327 846	327 846	327 846	327 846	327 846	—	—	—	—	—	—
Angled head PRH840	Nose	328 300	328 301	328 301	328 301	328 301	328 302	328 302	328 246	—	—	—	—
	Jaws	328 305	328 305	328 305	328 305	328 305	328 305	328 305	328 305	—	—	—	—
MSC 5800	Nose	431 903	431 904	431 904	431 904	431 904	431 905	431 905	431 906	431 907	—	—	—
	Jaws	431 909	431 909	431 909	431 909	431 909	431 909	431 909	431 909	431 909	—	—	—
PowerBird	Nose	—	—	—	—	—	—	—	431 907	431 907	431 908	431 971	431 971
	Jaws	—	—	—	—	—	—	—	431 953	431 953	431 953	431 953	431 953
MHT-/RH /LH	Nose	328 300	328 301	328 301	328 301	328 301	328 302	328 302	328 246	328 242	—	—	—
	Jaws	328 305	328 305	328 305	328 305	328 305	328 305	328 305	328 305	328 305	—	—	—
HHT-60	Nose	—	—	—	—	—	431 504	431 504	431 505	431 505	431 506	431 507	431 507
	Jaws	—	—	—	—	—	326 583	326 583	326 583	326 583	326 583	326 583	326 583

Installation Tools for blind rivets

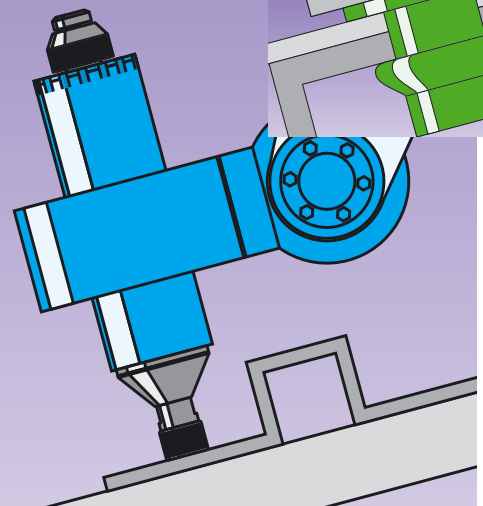
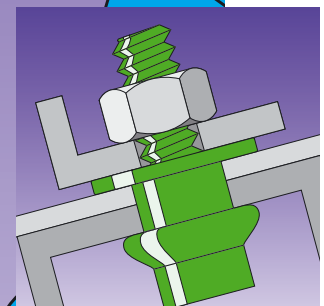
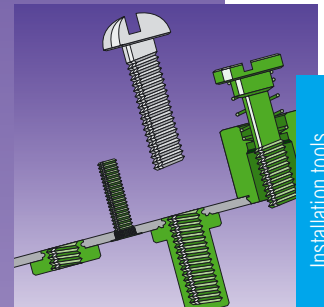
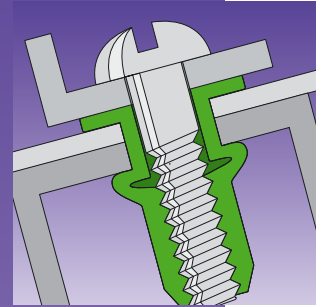
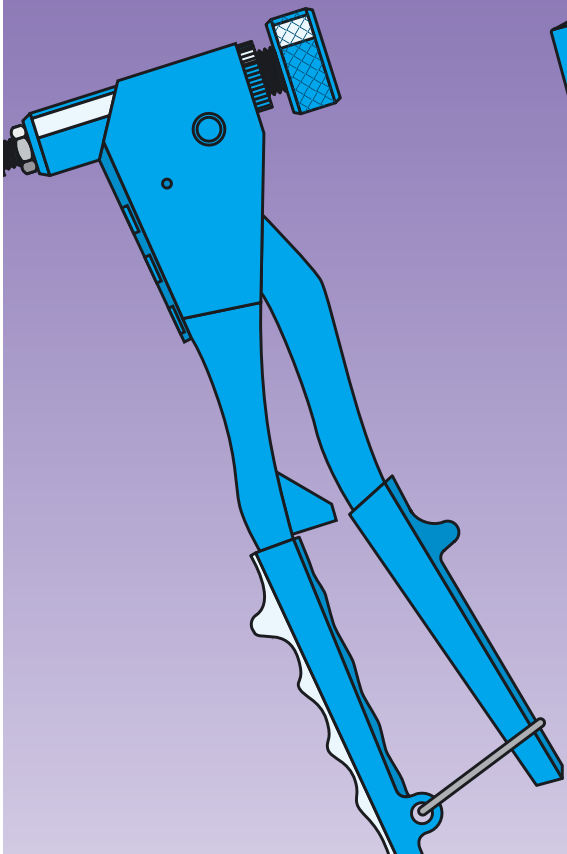
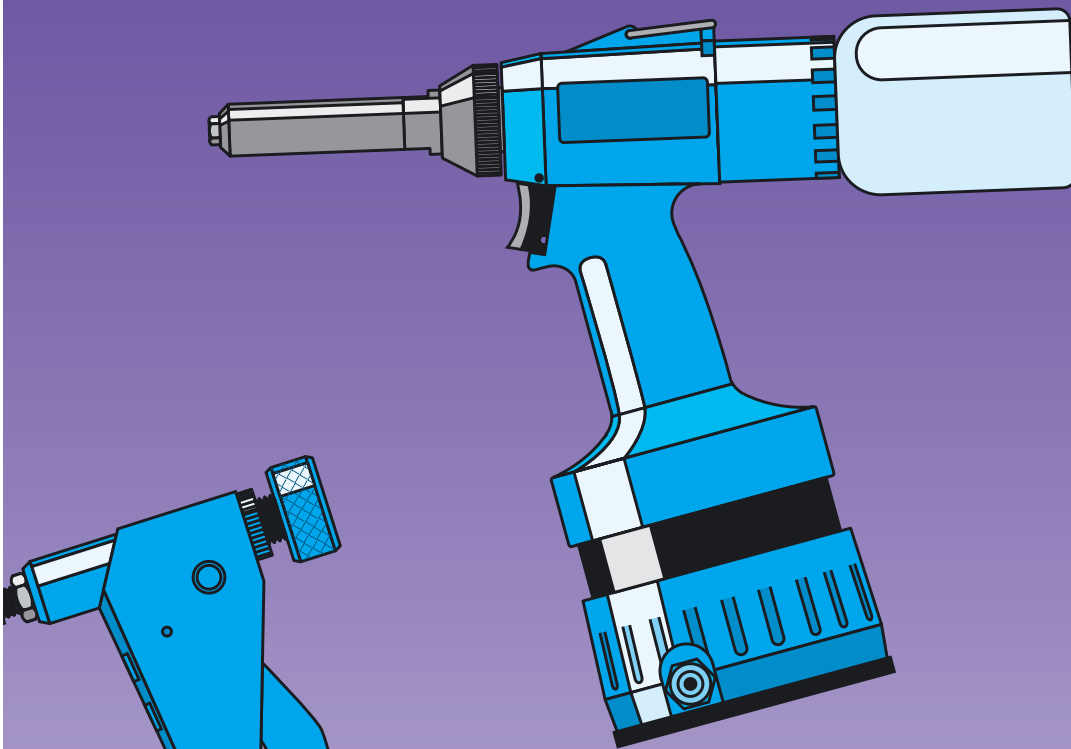
Overview of replacement parts

Nosepieces and jaws for closed end blind rivets

for the reconfiguring of blind-riveting tools to handle different diameters of rivet

Tool		Part No. for rivet-Ø							
		3.2 Al alloy/ Cu	3.2 Steel, Ni/Cu	4.0 Al alloy/ Cu	4.0 Steel, Ni/Cu	4.8 / 5.0 Al alloy/ Cu	4.8 / 5.0 Steel, Ni/Cu	6.0	6.4
TIOS® 4	Nose	328 301	328 301	328 302	328 302	—	—	—	—
	Jaws	326 706	326 706	326 706	326 706	—	—	—	—
MS 5	Nose	401 303	401 303	401 304	401 304	431 305	431 305	—	—
	Jaws	431 401	431 401	431 401	431 401	431 401	431 401	—	—
MS 6 M	Nose	—	—	431 304	431 304	431 305	431 305	431 306	431 307
	Jaws	—	—	431 333	431 333	431 333	431 333	431 333	431 333
POPSet PS 25	Nose	—	On request						—
	Jaws	—							—
TIOS 220	Nose	431 303	431 303	431 304	431 304	431 305	431 305	—	—
	Jaws	431 455	431 455	431 455	431 455	431 455	431 455	—	—
Offset head for TIOS 220	Nose	—	—	431 304	431 304	431 305	431 305	—	—
	Jaws	—	—	431 333	431 333	431 333	431 333	—	—
MS 40 A	Nose	—	—	431 304	431 304	431 305	431 305	431 306	431 309
	Jaws	—	—	431 333	431 333	431 333	431 333	431 333	431 333
MS 60	Nose	—	—	431 504	431 504	431 505	431 505	431 506	431 507
	Jaws	—	—	326 583	326 583	326 583	326 583	326 583	326 583
MS 60 SV	Nose	—	—	431 504	431 504	431 505	431 505	431 506	431 507
	Jaws	—	—	326 583	326 583	326 583	326 583	326 583	326 583
PRG 510 A Plus	Nose	328 303	328 301	—	—	—	—	—	—
	Jaws	328 305	328 305	—	—	—	—	—	—
ProSet™ 1600 MCS	Nose	328 303	328 303	328 304	—	—	—	—	—
	Jaws	328 306	328 306	328 306	—	—	—	—	—
ProSet™ 2500 MSC	Nose	328 303	328 303	328 304	328 304	328 246	328 246	—	—
	Jaws	326 583	326 583	326 583	326 583	326 583	328 583	—	—
ProSet™ 3400 MSC	Nose	328 303	328 303	328 304	328 304	328 246	328 246	—	—
	Jaws	328 250 001	328 250 001	328 250 001	328 250 001	328 250 001	328 250 001	—	—
MCS 5200 AXIAL	Nose	328 303	328 301	328 304	328 302	328 246	328 242	—	—
	Jaws	328 305	328 305	328 305	328 305	328 305	328 305	—	—
Offset head A1	Nose	327 779	327 783	327 780	327 784	327 781	327 785	—	—
	Jaws	327 775	327 776	327 776	327 776	327 777	327 777	—	—
Angled head PRH830	Nose	327 851	327 849	327 847	—	—	—	—	—
	Jaws	327 846	327 846	327 846	—	—	—	—	—
Angled head PRH840	Nose	328 303	328 301	328 304	328 302	328 246	—	—	—
	Jaws	328 305	328 305	328 305	328 305	328 305	—	—	—
MHT-/RH /LH	Nose	328 303	328 301	328 304	328 302	328 246	328 242	—	—
	Jaws	328 305	328 305	328 305	328 305	328 305	328 305	—	—
HHT-60	Nose	—	—	431 504	431 504	431 505	431 505	431 506	431 507
	Jaws	—	—	326 583	326 583	326 583	326 583	326 583	326 583

■ Installation Tools for threaded inserts



Installation tools for threaded inserts

mechanical

Hand tool R1

Complete with reversible-ratchet ring spanner and Allen key.
The force required to fix the blind rivet nut is created, in the case of the R1 hand tool, by turning the hexagon nut with the reversible-ratchet ring spanner supplied. Two or three turns are sufficient for this purpose.

Technical data

Operating range: Brass and Steel M 4 – M 10
Aluminium M 4 – M 12
Stainless steel M 4 – M 6
Weight: approx. 0.8 kg



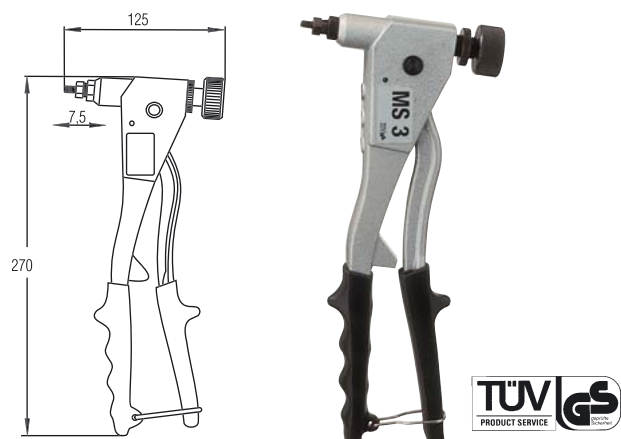
Replacement parts

Thread size	Part No.			Tool complete
	Rivet nut mandrel	Threaded-mandrel holder	One-part threaded mandrel	
M 4	349 047	349 300	–	349 041
M 5	349 057	349 300	–	349 051
M 6	349 320	349 301	–	349 061
M 8	–	–	349 302	349 081
M 10	–	–	349 303	349 101
M 12	–	–	349 322	349 121

Note:

With thread sizes M 8, M 10 and M 12, the threaded mandrel and threaded-mandrel holder are supplied as a single item, and can only be used as a complete unit. In contrast to this, threaded mandrels of sizes M 4, M 5 and M 6 can be separated from the threaded-mandrel holder, and thus supplied individually. The ratchet ring spanner and Allen key are both supplied in two different sizes to allow their use with thread sizes M 4 to M 6 and M 8 to M 12 respectively.

We reserve the right to amend specifications at any time.



Light-duty hand tool MS 3

For installation of blind rivet nuts.

- A simple hand tool for light-duty/low-volume installation of M3 to M5 blind rivet nuts.
- Supplied complete with three size conversion kits.

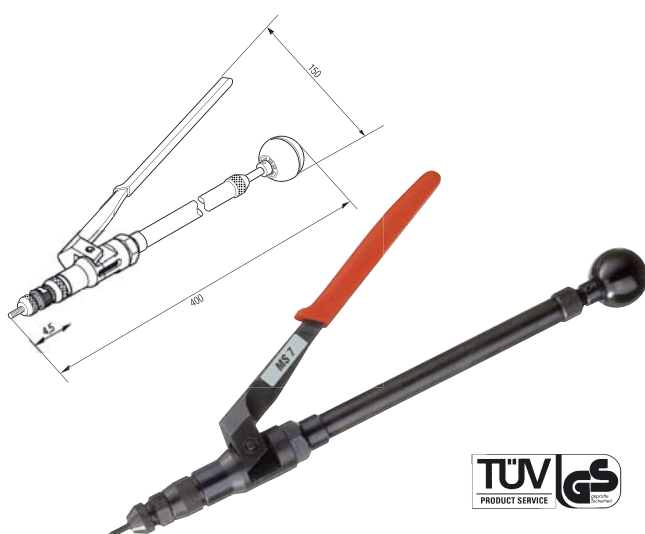
Technical data

Operating range:	Blind rivet nuts M 3 – M 5 (M 6/Al)
Maximum stroke:	7.5 mm
Weight:	approx. 0.7 kg
Length:	270 mm
Width:	125 mm

Part No. 348 130

Thread size	Starter set ¹		Spare parts Part No.	
	Nose [piece]	Rivet nut mandrel [piece]	Nose [piece]	Rivet nut mandrel [piece]
M 3	1	1	348 143	348 133
M 4	1	1	348 144	348 134
M 5	1	1	348 145	348 135
M 6/Al	–	–	348 146	348 136

¹ supplied with tool



Low-volume hand tool MS 7

For installation of blind rivet nuts and blind rivet stud.

- Simple to use
- Supplied complete with M4 to M6 rivet nut conversion kits.

Technical data

Operating range:	Blind rivet nuts M 3–M 5 (M 6/Al) Blind rivet studs M 4–M 5
Maximum stroke:	4.0 mm
Weight:	approx. 1.2 kg
Length:	400 mm
Width:	150 mm

Part No. 348 170

Starter set and spare/replacement parts

Thread Size	Starter set supplied with tool			Spare/replacement parts Part No.		
	Nose [piece]	Rivet nut mandrel [piece]	Rivet stud pulling bolt [piece]	Nose [piece]	Rivet nut mandrel [piece]	Rivet stud pulling bolt [piece]
M 3	1	1	–	348 213	348 203	–
M 4	1	1	0	348 214	348 204	348 224
M 5	1	1	0	348 215	348 205	348 225
M 6/Al	1	1	0	348 216	348 206	348 226

We reserve the right to amend specifications at any time.

Installation tools for threaded inserts
mechanical

Heavy-duty hand tool MS 9

For installation of blind rivet nuts and blind rivet studs.

- With innovative, patented rotating mechanism for simple fine-adjustment and readjustment.

Technical data

Operating range: Blind rivet nuts M 4 – M 10
Blind rivet studs M 4 – M 8

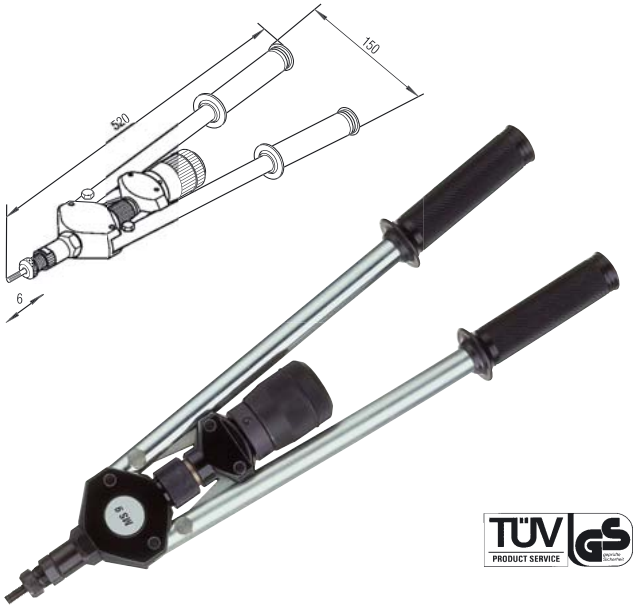
Maximum stroke: 6 mm

Weight: approx. 2.2 kg

Length: 520 mm

Width: 150 mm

Part No. 348 190



Starter set and accessories/replacement parts

Thread size	Starter set supplied with tool			Spare parts/replacement parts Part No.		
	Nose	Rivet nut mandrel	Rivet stud pulling bolt	Nose	Rivet nut mandrel	Rivet stud pulling bolt
	[piece]	[piece]	[piece]	[piece]	[piece]	[piece]
M 4	—	—	—	348 214	348 204	348 224
M 5	1	1	—	348 215	348 205	348 225
M 6	1	1	—	348 216	348 206	348 226
M 8	1	1	—	348 218	348 208	348 228
M 10	—	—	—	348 220	348 210	—

We reserve the right to amend specifications at any time.

Installation tools for threaded inserts electric



FireBird®

Electromechanical, battery-operated setting tool for blind rivet nuts, 12-volt, supplied with steel carrying case. Includes quick-replacement battery, fast-charging device and Allen key.

Technical data

Operating range: Blind rivet nuts to M 10 Al, M 8 steel and M 6 stainless steel
 Tractive effort: 13000 N
 Drive unit: 12 V DC
 Weight: 2.3 kg (with battery)

Part No. 351 000

Accessories and replacement parts

Thread size	Starter set ¹		Spare parts Part No.	
	Nose [piece]	Rivet nut mandrel [piece]	Nose [piece]	Rivet nut mandrel [piece]
M 3	0	0	351 013	351 003
M 4	1	1	351 014	351 004
M 5	1	1	351 015	351 005
M 6	1	1	351 016	351 006
M 8	0	0	351 018	351 008
M 10 / Al	0	0	351 020	351 010

¹ supplied with tool

Fast-charging device 12 V

Technical data

Input voltage: 230 V/50 Hz
 Output voltage: 12 V DC
 Charging time: approx. 1 hour (full charge)
 Weight: 1.4 kg

Part No. 431 913

Quick-replacement battery 12 V

Technical data

Mains voltage: 12 V DC
 Weight: 0.62 kg

Part No. 431 952 000

Thread size	Riveting operations per battery charge	
	Aluminium [piece]	Steel [piece]
M 3	600	550
M 4	520	480
M 5	480	400
M 6	400	300
M 8	340	180
M 10 / Al	300	—

We reserve the right to amend specifications at any time.

Installation tools for threaded inserts hydropneumatic

Rivet nut and rivet stud installation tool MS 50

The hydropneumatic MS50 installs blind rivet nuts and studs efficiently and reliably. Pre-set for M 6 blind-rivet nuts. See table for details of replacement parts.

Technical data

Operating range:	Blind rivet nuts M 3 – M 10 (M12/Al) Blind rivet studs M 4 – M 8
Maximum operating pressure:	7 bar
Tractive effort:	23.5 kN at 6 bar
Maximum stroke:	5.8 mm
Weight:	2.2 kg
Air consumption per operation:	6 l
Height:	250 mm
Width:	270 mm
Nose cap diameter:	22 mm
Nose cap length:	70 mm

Part No. 348 200

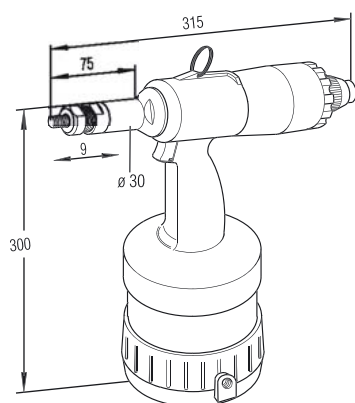


Starter set and spare/replacement parts

Thread Size	Starter set supplied with tool			Spare/replacement parts Part No.		
	Nose	Rivet nut mandrel	Rivet stud pulling bolt	Nose	Rivet nut mandrel	Rivet stud pulling bolt
	[piece]	[piece]	[piece]	[piece]	[piece]	[piece]
M 3	0	0	–	348 213	348 203	–
M 4	1	1	0	348 214	348 204	348 224
M 5	1	1	0	348 215	348 205	348 225
M 6	1	1	1	348 216	348 206	348 226
M 8	1	1	0	348 218	348 208	348 228
M 10	0	0	–	348 220	348 210	–
M 12	0	0	–	348 222	348 212	–

We reserve the right to amend specifications at any time.

Installation tools for threaded inserts hydropneumatic



Rivet nut installation tool MS 100

The MS 100 is unique in its class:

This hydropneumatic riveting tool is designed for the simple and powerful handling of blind-rivet nuts with thread sizes of up to M 16.

- Powerful and compact design
- Low weight for fast, single-handed operation
- All functions are at the operator's fingertips
- Fast replacement of threaded mandrels and nosepieces

Technical data

Operating range:	Blind rivet nuts M 8 – M 16 ²
Operating mode:	hydropneumatic
Maximum operating pressure:	7 bar
Tractive effort:	34 kN at 6 bar
Maximum stroke:	9.0 mm
Weight:	2.9 kg
Air consumption per operation:	7 l
Height:	300 mm
Width:	315 mm
Nose cap diameter:	30 mm
Nose cap length:	75 mm

Part No. 348 300

Starter set and spare parts

Thread Size	Starter set ¹		Spare parts Part No.	
	Nose [piece]	Rivet Nut Mandrel [piece]	Nose [piece]	Rivet Nut Mandrel [piece]
M 8	0	0	348 318	348 308
M 10	1	1	348 320	348 310
M 12	1	1	348 322	348 312
M 14	0	0	348 324	348 314
M 16	0	0	348 326	348 316

¹ supplied with tool

² The handling of M 16 blind-rivet nuts must be checked on an individual basis

We reserve the right to amend specifications at any time.

Installation tools for threaded inserts mechanical

Hexagonal cutting tool TIOS® 69

The TIOS 69 hand tool converts round holes to take hexagonal blind rivet nuts.

The TIOS 69 cuts hexagon holes in all kinds of materials and is ideal for low volume production or repairs. The tool is robust and easy to use.

The tool is supplied without cutters or hex anvils (see Table 2) which must be ordered separately to suit the size of rivet nut to be installed.

Technical data

- Operating range:
- Cuts hex holes for blind rivet nuts M 5 – M 6 (hexagonal)
 - All types of material up to a strength of 600 N/mm² (see Table 1)
 - Material thickness from 1 to 6 mm (see Table 2)
- Length: • 510 mm
- Weight: • 2.1 kg

Part No. 348 195 200

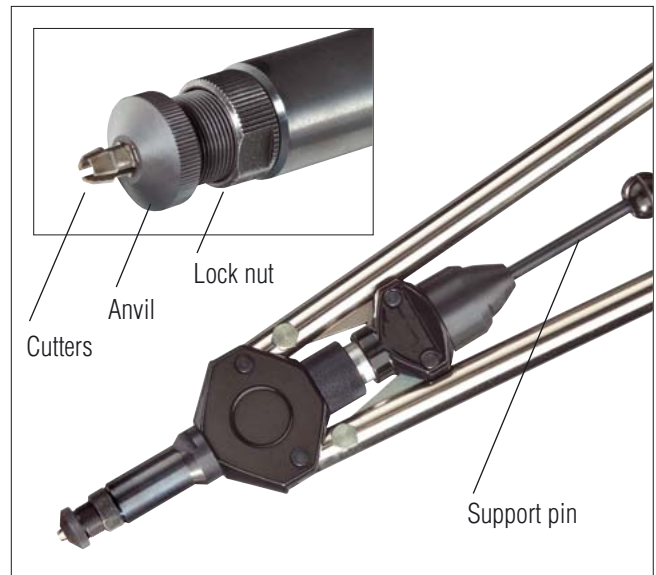


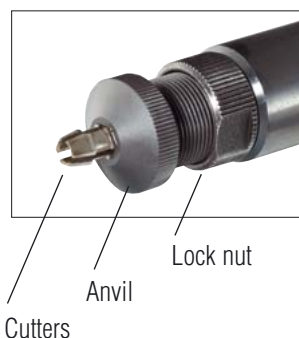
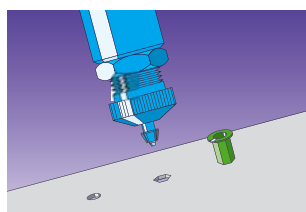
Table 1 – Operation range (material thickness in mm)

Thread	Hole-ø [mm]	Material	Material strength (N/mm ²)					
			100	200	300	400	500	600
M5	7.2 – 7.3	Steel	–	–	2.5	2.1	1.9	1.8
		Brass	–	2.9	2.7	2.4	2.2	–
		Aluminium	3.0	3.0	2.8	2.6	2.4	–
M6	9.3 – 9.4	Steel	–	–	2.9	2.5	2.2	2.0
		Brass	–	3.0	3.0	2.8	2.6	–
		Aluminium	3.0	3.0	3.0	3.0	2.8	–

Table 2 – Hex anvil and cutter part numbers

	M 5	M 6
Hex anvil	349 781 001	349 782 001
Cutters for material 1–6 mm	349 742 000	349 743 000

We reserve the right to amend specifications at any time.



Hexagon cutting tool TIOS® 6100

Hydropneumatic tool for cutting hexagonal holes for hexagonal blind-rivet nuts.

This device stands out due to its high performance, robust design, reliability and simple operation.

The complete process of making the hole is carried out by simply pushing a button. This allows the device to be operated with one hand only.

The tool is supplied without cutters or hex anvils (see Table 2) which must be ordered separately to suit the size of rivet nut to be installed.

Technical data

Operating range:

- Cuts hex holes for blind rivet nuts M 5 – M 8 (hexagonal)
- All types of material up to a strength of 600 N/mm² (see Table 1)
- Material thickness from 1 to 6 mm (see Table 2)

Height: 300 mm
Width: 320 mm
Weight: 2.9 kg
Maximum operating pressure: 6 bar
Tensile force at 6 bar: 24.4 kN
Air consumption per hole: 7.0 l

Part No. 348 450 200

Table 1 – Operation range (material thickness in mm)

Thread	Hole-ø [mm]	Material	Material strength (N/mm ²)					
			100	200	300	400	500	600
M5	7.2 – 7.3	Steel	–	–	4.1	3.5	3.2	2.9
		Brass	–	4.8	4.4	4.0	3.7	–
		Aluminium	5.5	5.0	4.6	4.3	4.0	–
M6	9.3 – 9.4	Steel	–	–	5.0	4.3	3.9	3.5
		Brass	–	5.9	5.3	4.9	4.5	–
		Aluminium	6.0	6.0	5.6	5.2	4.9	–
M8	11.3 – 11.5	Steel	–	–	5.8	5.0	4.5	4.0
		Brass	–	6.0	6.0	5.7	5.3	–
		Aluminium	6.0	6.0	6.0	6.0	5.7	–

Table 2 – Hex anvil and cutter part numbers

	M 5	M 6	M 8
Hex anvil	349 781 001	349 782 001	349 783 001
Cutters for material 1–6 mm	349 742 000	349 743 000	349 751 000

We reserve the right to amend specifications at any time.

Installation tools for threaded inserts Workstations

Semi- and fully-automatic workstations for our blind rivet nut range

- Automatic sorting of fasteners
- Precision fastener feeding
- Integrated monitoring of installation process

We design and build fully-automatic assembly systems.

Our range includes riveting, power and control units, along with feed systems. The modular design of our systems allows individual elements to be combined as required.

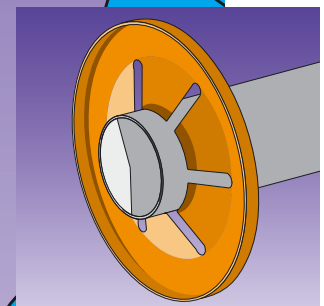
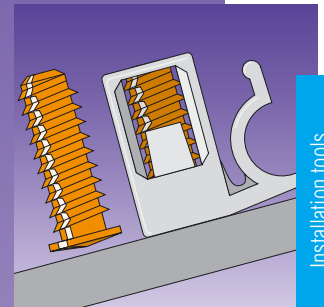
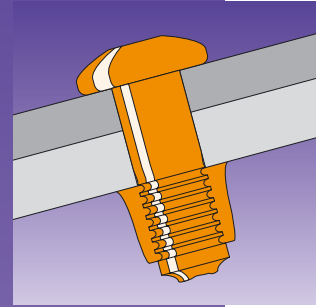
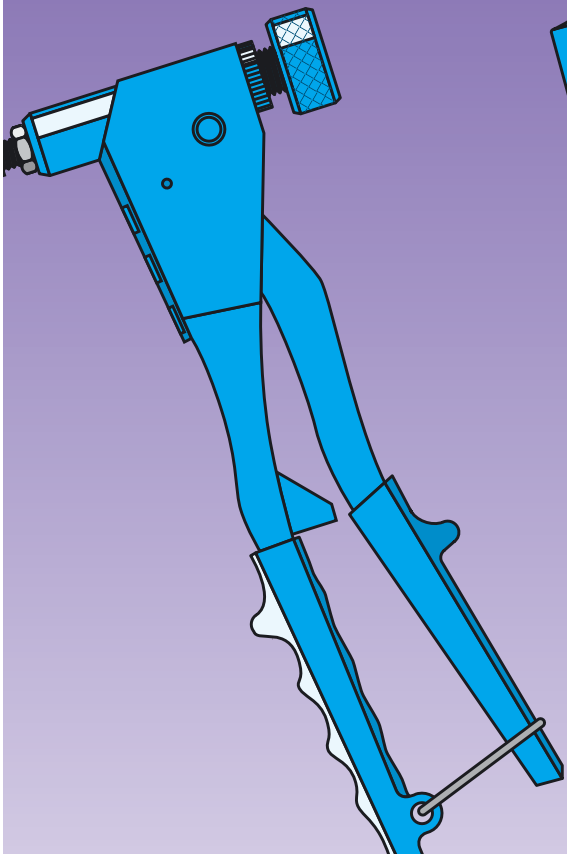
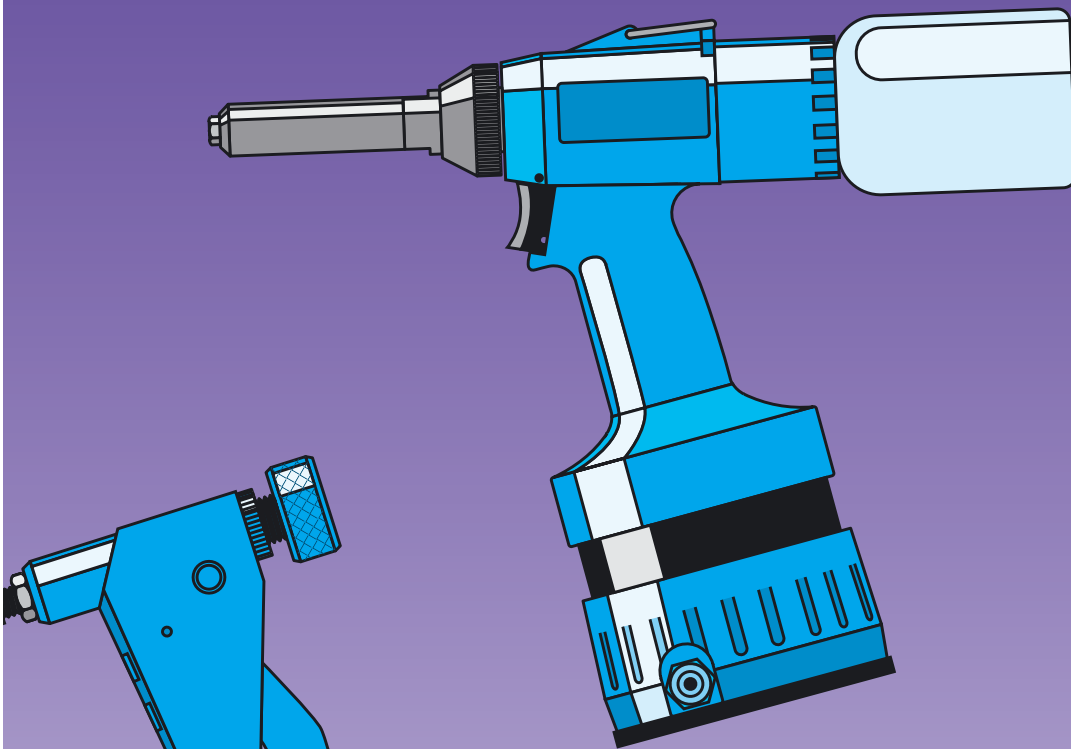
Our specialists can provide direct, on-site advice and individual solutions to problems.

Simply contact us! We meet your needs when it comes to well-designed fastening technology.

We reserve the right to amend specifications at any time.



■ Installation Tools for assembly systems



Installation tools

Installation Tools for lockbolts hydropneumatic

Installation Tool MS 75

Suitable for handling both lockbolts and high-strength blind rivets.

- The hydropneumatic MS 75 tool is highly versatile when used with the corresponding specified pulling head.
- Compact design and ease of operation ensure the efficient handling of lockbolts measuring up to $\varnothing$ 6.5 mm, Maxigrip lockbolts up to $\varnothing$ 6.5 mm in aluminium and steel, M-LOCK/MAGNA BULB® blind rivets up to $\varnothing$ 6.5 mm and $\varnothing$ 5.0 mm BOM® blind rivets.
- The pulling heads required for the MS 75 tool are selected in accordance with the type and diameter of the lockbolt and blind rivet being used. Please order separately as required.

Technical data

Maximum operating pressure:	7 bar
Tractive effort:	22 kN at 6 bar
Stroke:	approx. 15 mm
Weight (without pulling head):	approx. 2.2 kg
Air consumption per operation:	2.8 l
Height:	315 mm
Length (without pulling head):	280 mm

Part No. 385 060



Pulling heads for MS 75

Fasteners	Nominal- $\varnothing$ [mm]	Pulling head	Part No.
for lockbolts			
Standard	5.0	99-3003	371 680
	6.0/6.5	99-3006	371 705
Multigrip	5.0	99-1456	372 985
	6.5	99-1477	371 980
HUCKTAINER PLUS	10	99-3465	371 730¹
for high-strength blind rivets			
M-LOCK / MAGNA-BULB®	5.0	99-3303	371 805
Blind rivet	6.5	99-3305	371 815
BOM® Blind rivet	5.0	99-994	372 780
TIBULB® Blind rivet	7.8 ²	—	385 150

¹ The MS 75 requires a special sleeve (**Part No. 385 081**) which should be ordered separately.
Not suitable for stainless-steel version

Pulling head details are provided on page 359 and 362.

We reserve the right to amend specifications at any time.



Hydropneumatic

Riveting tool ProSet PSL2500CJ-HEX

- Optimum power-to-weight ratio
- Compressed-air activation/shutoff at the point of connection
- Left-/right-hand swivelling compressed air connection
- Spent mandrel container with opening flap

Technical data

Operating pressure:	5.0 at 6.9 bar
Tractive effort:	9.4 kN (6.2 bar)
Stroke:	18 mm
Weight:	1.31 kg
Length:	304 mm
Height:	260 mm



Electrical

Battery-operated blind-riveting tool MCS5800-HEX

- Cable-free operation
- Easy-to-operate
- Up to 500 operations per battery charge
- Integrated spent mandrel container
- Items supplied: Carrying case, battery and charger

Technical data

Operating range:	20 mm
Weight:	2,2 kg
Length:	265 mm
Height:	300 mm
Fast-charger:	60-minute charging time

We reserve the right to amend specifications at any time.

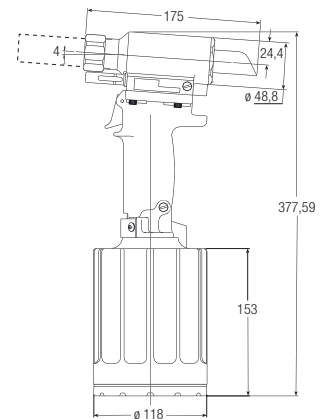
Installation Tools for lockbolts hydropneumatic

Hydropneumatic Installation Tool Model 255 (without pulling head)

Technical data

Stroke:	approx. 16 mm
Maximum operating pressure:	6 – 7 bar
Work:	34.5 kN at 6 bar
Weight:	4.0 kg
Operating range:	
• Lockbolts Standard	
$\varnothing$ 5.0 / 6.0 / 6.5 / 8.0 mm in aluminium and steel	
$\varnothing$ 10.0 mm in aluminium and steel, type 5.8	
• Lockbolts Maxigrip	
$\varnothing$ 5.0 / 6.5 / 8.0 mm in aluminium and steel	
$\varnothing$ 10.0 mm in aluminium	

Part No. 375 190

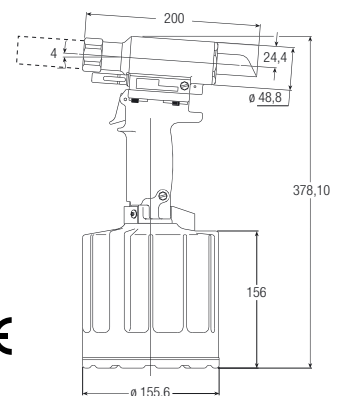


Hydropneumatic Installation Tool Model 256 (without pulling head)

Technical data

Stroke:	approx. 22 mm
Maximum operating pressure:	6 – 7 bar
Work:	44.4 kN at 6 bar
Weight:	5.0 kg
Operating range:	
• Lockbolts Standard	
$\varnothing$ 5.0 / 6.0 / 6.5 / 8.0 / 10.0 mm in aluminium and steel	
• Lockbolts Maxigrip	
$\varnothing$ 5.0 / 6.5 / 8.0 / 10.0 mm in aluminium and steel	

Part No. 375 490



We reserve the right to amend specifications at any time.



Hydraulic Installation Tool Model 2480 (without pulling head)

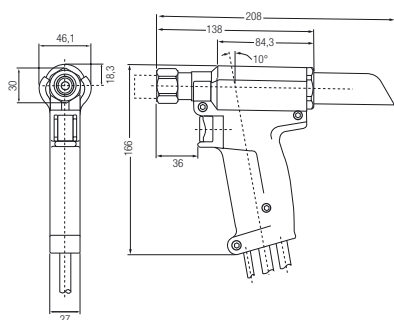
with 3.5 m hose set
(please order other hose lengths separately)

Technical data

Stroke:	approx. 22 mm
Weight:	2.0 kg (without hose set)
Operating range:	- Lockbolts Standard ø 5.0 / 6.0 / 6.5 mm in aluminium and steel - Lockbolts Maxigrip ø 5.0 / 6.5 mm in aluminium and steel

Part No. 370 445

Requires hydraulic power unit: Model HK 432,
please order pulling heads separately.



Hydraulic Installation Tool Model 2503 (without pulling head)

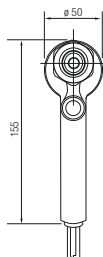
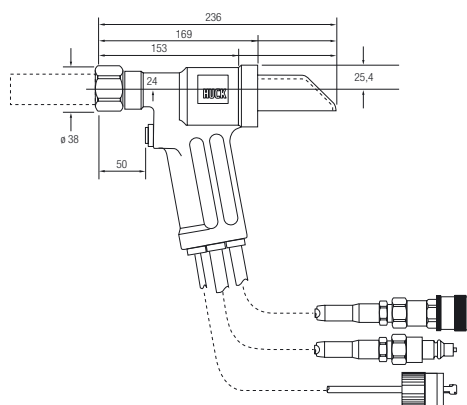
with 3.5 m hose set, 4 mm diameter
(please order other hose lengths separately)

Technical data

Stroke:	approx. 38 mm
Weight:	2.2 kg (without hose set)
Operating range:	- Lockbolts Standard ø 5.0 / 6.0 / 6.5 / 8.0 mm in aluminium and steel ø 10.0 mm in aluminium and steel, quality 5.8 - Lockbolts Maxigrip ø 5.0 / 6.5 / 8.0 mm in aluminium and steel ø 10.0 mm in aluminium

Part No. 370 800

Requires hydraulic power unit: Model HK 432,
please order pulling heads separately.



We reserve the right to amend specifications at any time.

Installation Tools for lockbolts hydraulic

Hydraulic Installation Tool Model 2600 (without pulling head)

with ca. 0.5 m hose set
(please order other hose lengths separately)

Technical data

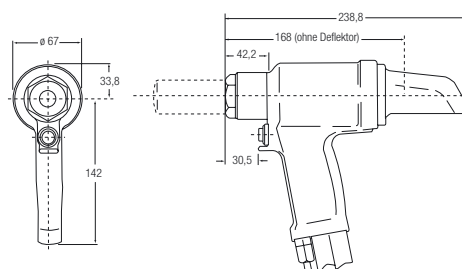
Stroke: approx. 31 mm
Weight: 3.3 kg
Operating range:

- Lockbolts Standard
ø 10.0 mm in aluminium and steel
- Lockbolts Maxigrip
ø 8.0 and 10.0 mm in aluminium and steel

Part No. 370 820

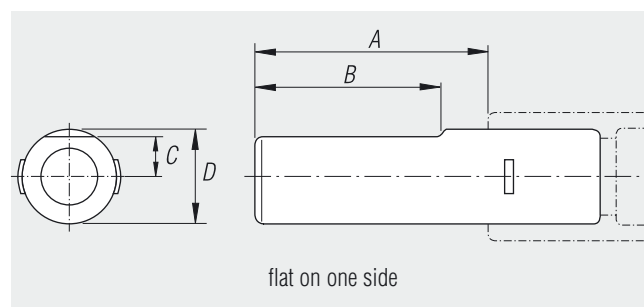
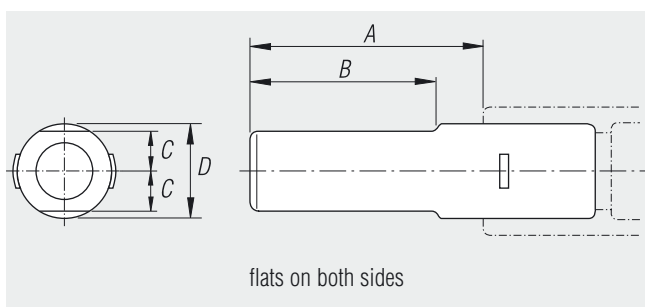
Requires hydraulic power unit: Model HK 432,
please order pulling heads separately.

We reserve the right to amend specifications at any time.





Pulling Heads for Lockbolts Standard and Maxigrip



Pulling Heads for Lockbolts - Nominal Diameter

For nominal pin-Ø [mm]	For tool Model	Dimensions				Flats	Pulling Head Type	Part No.
		A [mm]	B [mm]	C [mm]	D [mm]			
5.0	MS 75	51.0	—	—	19.0	—	99-3003	371 680
6.0/6.5	MS 75/2480	51.0	—	—	19.3	—	99-3006	371 705
	256/2503	58.0	43.5	9.7	19.3	one side	99-2564	375 845
8.0	255/256/2503	71.0	53.0	12.0	27.0	one side	99-99-245	375 885
10.0	255/256/2503	70.0	53.0	12.0	27.0	one side	99-100-245	375 945
	2600	75.0	54.0	12.7	27.0	two sides	99-2663	371 785

Pulling Heads for Lockbolts - Maxigrip

For nominal pin-Ø [mm]	For tool Model	Dimensions				Flats	Pulling Head Type	Part No.
		A [mm]	B [mm]	C [mm]	D [mm]			
5.0	MS 75/2480	49.0	40.0	9.0	19.0	two sides	99-1456 ¹	372 985
6.5	2400/MS 70/75	54.0	40.0	9.3	19.7	two sides	99-1477 ¹	371 980
	255/256/2503	91.0	46.0	9.0	20.0	two sides	99-1290	371 960
8.0	255/256/2503	71.0	53.0	12.0	30.0	two sides	99-1439	371 965
	2600	72.0	51.0	12.7	30.0	two sides	99-3217	371 750
10.0	255/256/2503/2580	73.0	53.0	13.0	30.0	two sides	99-1440	371 970
	2600	82.0	71.0	16.0	33.0	two sides	99-3220	371 760

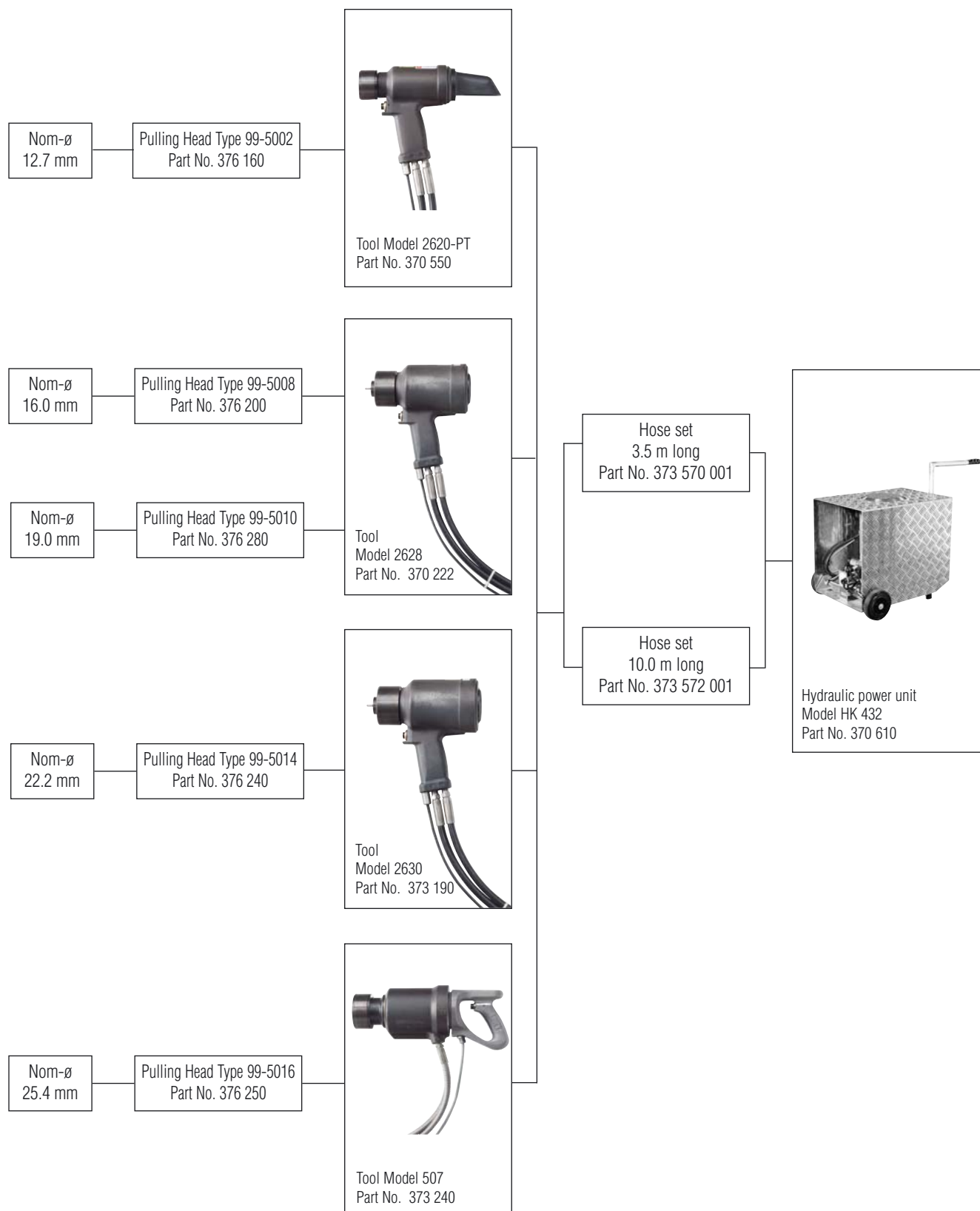
¹ These pulling heads can only be fitted to tool models 255/256 and 2503 using an adapter model 102 463, part no. **375 870**

Longer pulling heads on request.

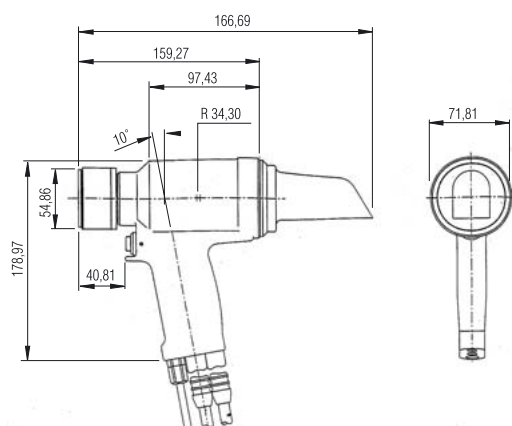
We reserve the right to amend specifications at any time.

Installation Tools for HV lockbolts

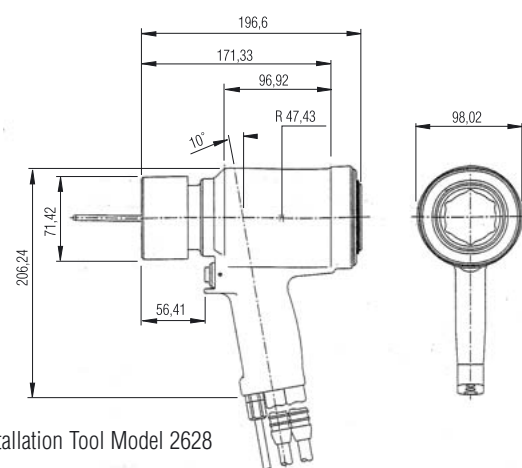
Hydraulic Installation Tools



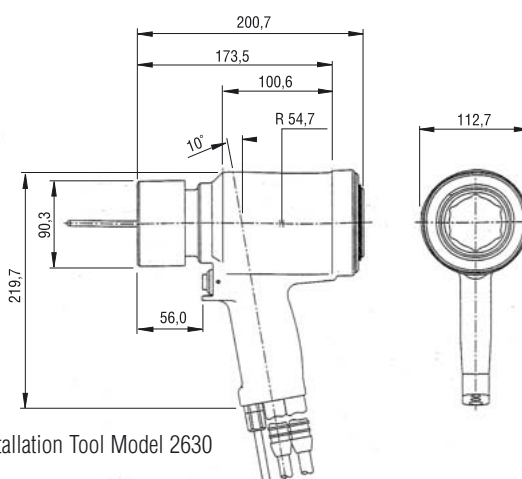
We reserve the right to amend specifications at any time.



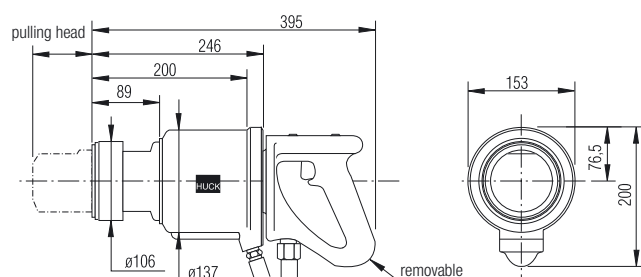
Installation Tool Model 2620-PT



Installation Tool Model 2628



Installation Tool Model 2630



Installation Tool Model 507

Installation Tool Model 2620-PT

(without pulling head)

Technical data

Range:	ø 12.7 mm
Required oil pressure:	78.93 kN at 448 bar
Weight with pulling head:	6.0 kg
Stroke:	36.5 mm

Part No. 370 550

Installation Tool Model 2628

(without pulling head)

Technical data

Range:	ø 16.0 and 19.0 mm
Required oil pressure:	177.3 kN at 448 bar
Weight with pulling head:	10.0 kg
Stroke:	46 mm

Part No. 370 222

Installation Tool Model 2630

(without pulling head)

Technical data

Range:	ø 22.2 mm
Required oil pressure:	261 kN at 448 bar
Weight with pulling head:	15 kg
Stroke:	48.4 mm

Part No. 373 190

Installation Tool Model 507

(without pulling head)

Technical data

Range:	ø 25.4 mm
Required oil pressure:	336.73 kN at 393 bar
Weight with pulling head:	23 kg
Stroke:	63.5 mm

Part No. 373 240

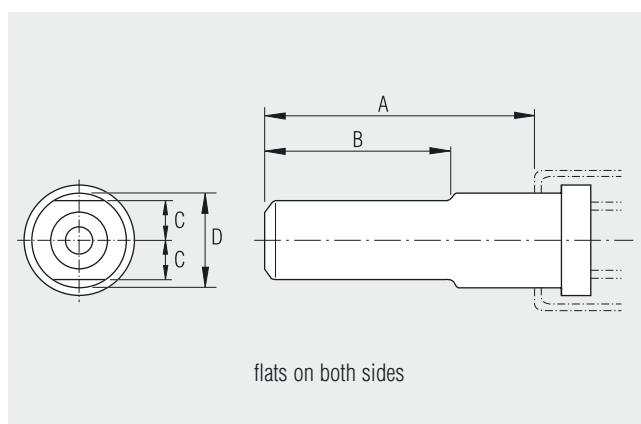
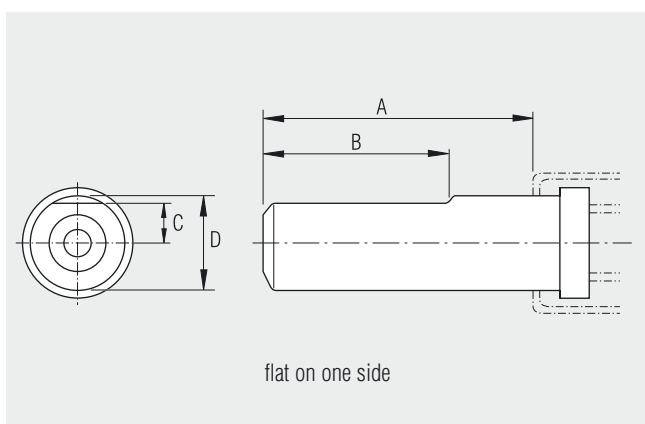
All hydraulic installation tools are connected by hose to a hydraulic power unit.

Tools with other specifications on request.

We reserve the right to amend specifications at any time.

Installation Tools for HV lockbolts

Standard HV-Pulling Heads



Pulling Heads for HV Lockbolts

For nominal pin-Ø [mm]	For tool Model	Dimensions				Flats	Pulling Head Type	Part No.
		A [mm]	B [mm]	C [mm]	D [mm]			
12.7	2620 PT	106	58	19	44	one side	99-5002	376 160
16.0	2628	106	58	23	55	one side	99-5008	376 200
19.0	2628	119	58	24	55	one side	99-5010	376 280
22.2	2630	83	54	30	70	one side	99-5014	376 240
25.4	507	100	70	38	83	two sides	99-5016	376 250

Longer pulling heads on request.

We reserve the right to amend specifications at any time.



Hydraulic power unit
Model HK 432-2 (without hose set)

For the operation of hydraulic setting tools

Technical data

Length:	540 mm
Width:	470 mm
Height:	510 mm
Weight (inc. oil):	approx. 62.0 kg
Tank volume:	approx. 7 l
Pump:	3.2 l/min
Electrical supply:	380 V AC (other operating voltages available on request)
Oil pressure on stroke:	580 bar (adjusted on-site)
Oil pressure on return:	350 bar

Part No. 370 610

We reserve the right to amend specifications at any time.

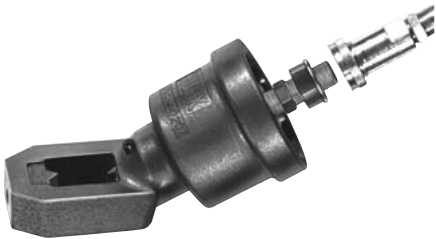
Installation Tools for HV lockbolts

hydraulic

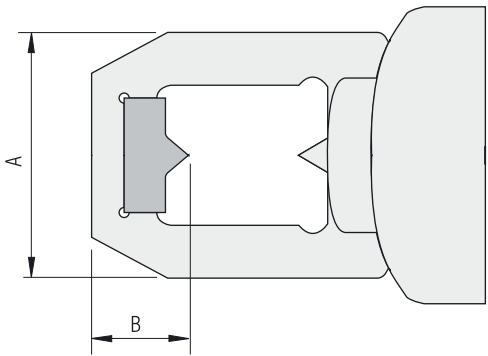
Hydraulic Collar Cutter

For removal of HV lockbolt collars

For HV Lockbolt collars ø [mm]	A [mm]	B [mm]	Weight [kg]	Model	Part No.
12.7	39.7	28.6	2.7	516	373 600
16.0	49.2	28.6	2.7	520	373 630
19.0	57.2	31.8	3.2	524	373 660
22.2	63.5	31.8	3.6	528	373 690
25.4	66.6	38.1	7.2	532	—



The hydraulic collar cutter is connected to a quick coupling on the pressure hose.



Hose Sets complete

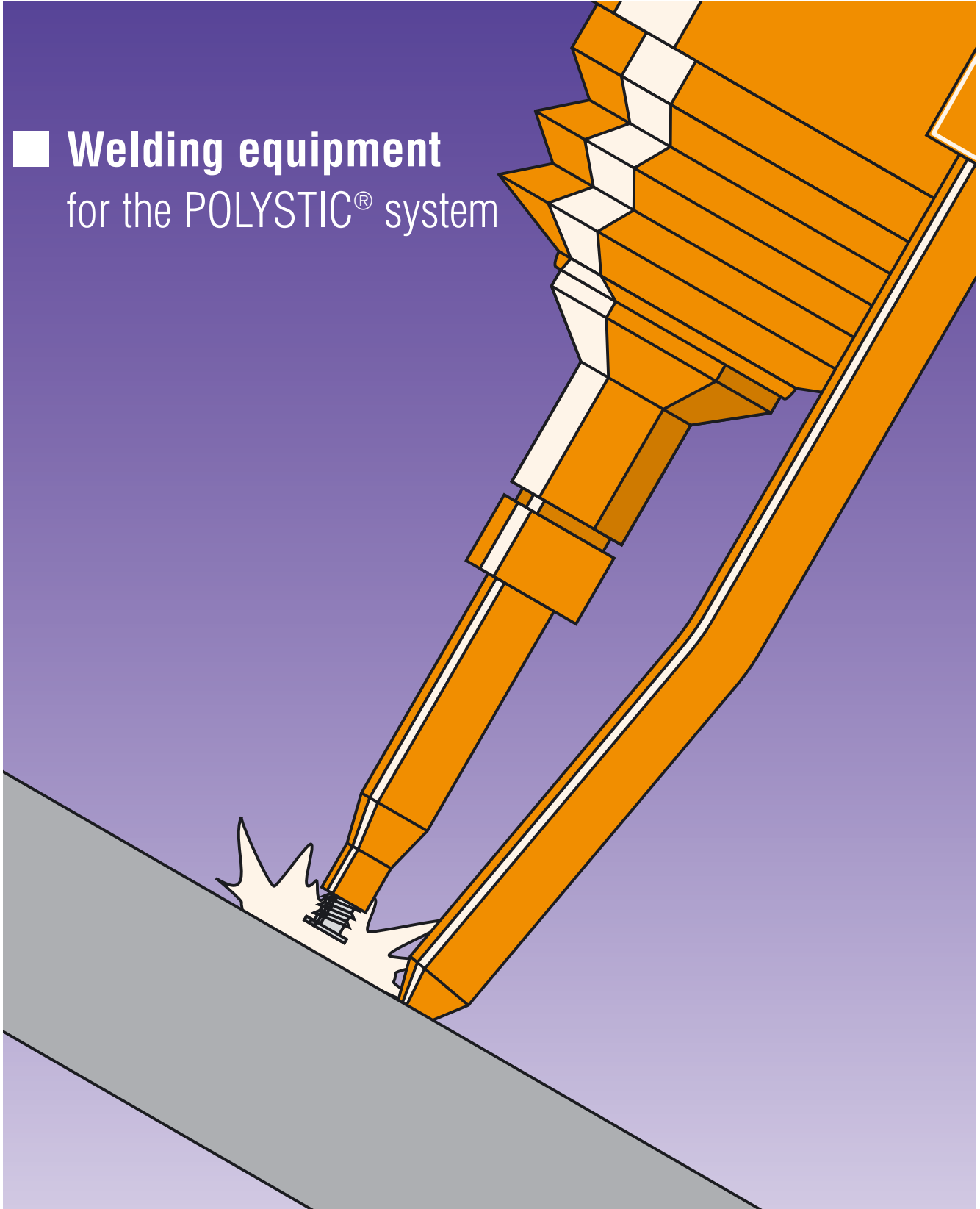
with quick-action couplings,
with couplings for hydraulic power units, installation tools
and collar cutter.

Length [m]	Diameter [mm]	Pressure max [bar]	Part No.
3.5	6.4	400	373 570 001
10.0	6.4	400	373 572 001



We reserve the right to amend specifications at any time.

■ Welding equipment for the POLYSTIC[®] system



Welding equipment for the POLYSTIC® system

Stud-welding machine TSG 60

for drawn-arc stud welding process

The compactly-designed TSG 60 combines operating reliability and optimum user-friendliness.

The device has been specially developed for the production of single items with a manually-loaded welding gun.

The standard equipment includes the PK 560 welding gun and an earth cable for connection to the workpiece.

The unit can be operated by persons without previous experience of the process.

Items supplied

TSG 60 with PK 560

Technical data

Width:	292 mm
Depth:	450 mm
Height:	345 mm
Weight:	40 kg
Connection:	400 V ¹ , 50 Hz, 32 A
Welding current:	600 A
Welding time:	8 – 150 ms
Weld stud:	3 – 7 mm nominal diameter
Welding flange:	maximum 8 mm diameter

Part No. 433 750

¹ Other voltages available on request

We reserve the right to amend specifications at any time.



Welding equipment for the POLYSTIC® system

Stud-welding machine TCD 66 A

for capacitor discharge stud-welding process



The TCD 66 capacitor-discharge welding device has been developed for highly-specialised applications in the area of stud welding. The tip-ignition procedure used in this process is applied wherever material of approximately 1 mm in thickness needs to be processed with minimal or no marks at all, left on the rear side of the bottom layer of material. The use of gap welding also allows weld studs made of aluminium to be handled without inert gas. The compact design of the device makes it easy to transport and ideal for onsite operation. It can be operated from a normal, domestic-type plug socket. Items supplied TCD 66 A with PK 211 gun.

Technical data

Length:	380 mm
Width:	180 mm
Height:	250 mm
Weight:	15 kg
Connection:	230/115 V, 50/60 Hz
Charging voltage:	60 to 200 V
Welding time:	1 – 3 ms
Weld stud:	Stud 3 – 8 mm, aluminium, steel, stainless steel, brass.



PK 211 gap-welding gun

Technical data

Weld stud:	3 – 8 mm nominal diameter 6 – 40 mm in length, with special accessories up to 100 mm in length
Stud material:	Aluminium, steel, stainless steel, brass
Control cable:	3 m length
Weight:	0.7 kg; without cable

Part No. 433 865 000

Accessories

PK 311 contact-welding gun

Technical data

Weld stud:	3 – 8 mm nominal diameter 6 – 40 mm in length, with special accessories up to 100 mm in length
Stud material:	steel, stainless steel
Control cable:	6.5 m length
Weight:	0.7 kg; without cable

Part No. 433 880 000



Welding equipment for the POLYSTIC® system

Stud-welding machine TSG 90

for drawn-arc stud welding process

The TSG 90 control and energy-supply unit sets new standards. High-quality welding can be carried out without any previous knowledge of the procedure.

Just set the thickness of the material and the diameter of the stud to create optimum welding parameters.

The device also comes with a built-in parameter tracking system, which monitors the basic functions of the welding gun and its operation.

The device can be fitted with additional accessories to make it suitable for use even as an automatic welding unit.

High welding efficiency saves energy, even when working with inert gas.



Items supplied

TSG 90 with PK 560

Technical data

Width:	312 mm
Depth:	495 mm
Height:	470 mm
Weight:	approx. 50 kg
Connection:	400 V ¹ , 50 Hz, 32 A
Welding current:	900 A
Welding time:	6 – 120 ms
Weld stud:	3 – 10 mm nominal diameter
Weld nut:	M 5, M 6, M 8

Part No. 433 840

¹ Other voltages available on request

Available configurations

TSG 90, manual:	with PK 560 gun
TSG 90 A, semiautomatic:	For operation with a stud-feeding device and automatic gun

Equipment and components for fully-automatic operation on request.

We reserve the right to amend specifications at any time.

Welding equipment for the POLYSTIC® system

PK 560 stud-welding gun

Hand welding gun for the drawn-arc welding process



The PK 560 welding gun has been developed for use in manual stud-welding. Greater emphasis has been placed on creating a space-saving design. The gun combines robust stability with ideal ergonomic design and functioning reliability. The integrated angle-switch is characteristic of the unit's quality-assurance features. This ensures the gun is positioned vertically as a starting requirement for the welding procedure. Adjustment of the weld stroke and adaptation for different stud sizes are carried out with a minimum number of operations.

Items supplied

PK 560 welding gun, fully-equipped and adjusted to handle 5x14 mm studs

Technical data

Length: (min.)	150 mm
Width:	48 mm
Height:	150 mm
Min. lateral clearance with respect to welding position:	22 mm
Weight:	1.2 kg
Weld stud:	3 – 8 mm nominal diameter, 10 mm available on request, T-studs, large diameter flange/ earthing stud, welding nuts M 5, M 6, M 8
Connection lead:	6 m, maximal 8 m (available on request)

Part No. 433 826 000 – for TSG 65/90

Part No. 433 826 001 – for TSG 60

Available configurations

PK 560 standard:	for weld studs up to 38 mm in length
PK 560 long version:	for weld studs up to 56 mm in length

Both versions are available on request with inert gas options.

Suitable power units TSG 60, TSG 90

Equipment items

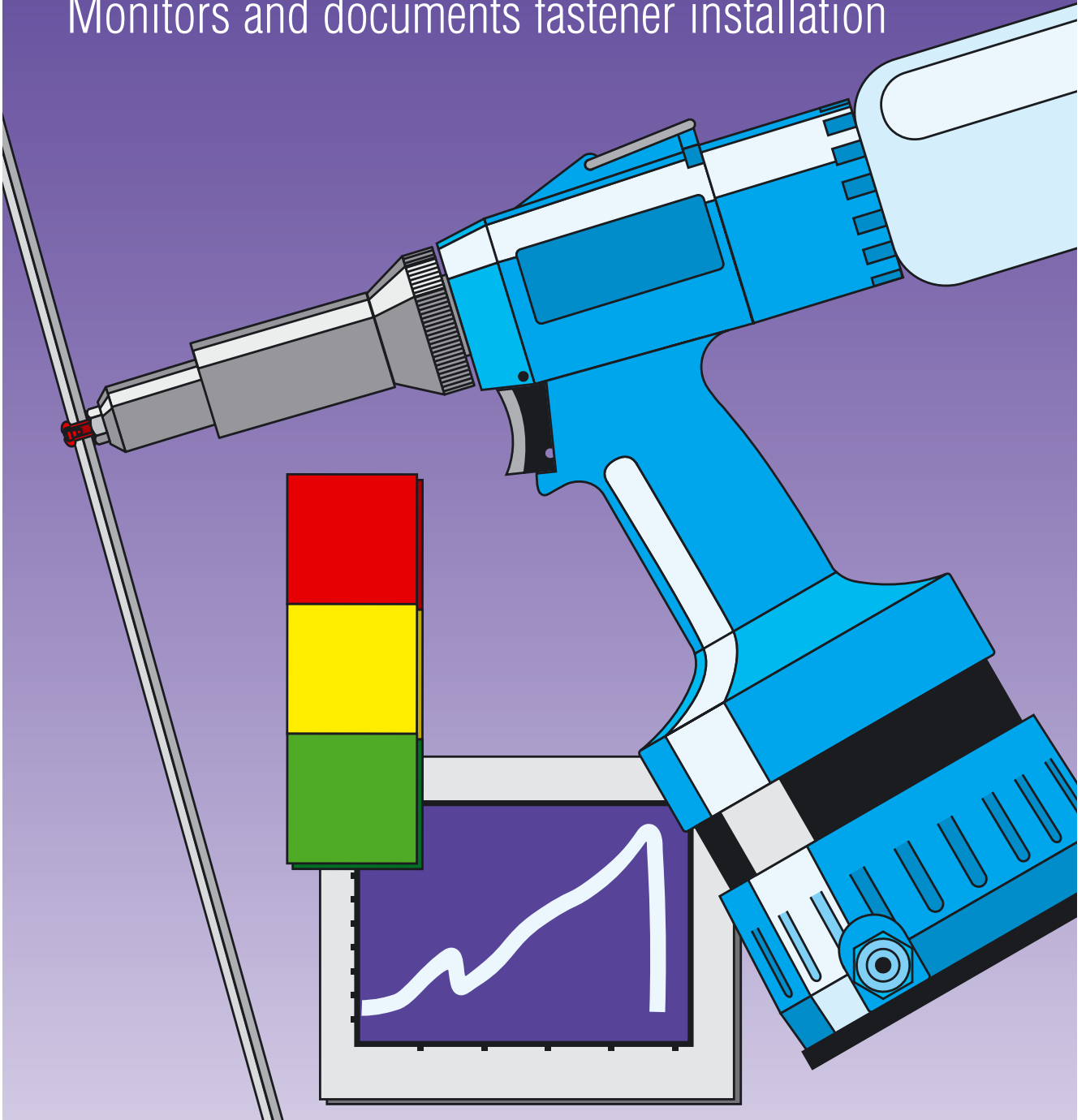
A list is available on request, showing items of equipment for various different types and sizes of welding stud and their corresponding prices.

We reserve the right to amend specifications at any time.

NOTES

This image shows a full page of blank graph paper. The grid consists of small, equal-sized squares formed by thin black lines. There are no margins, text, or other markings on the page.

■ TIOS[®] Control process control Monitors and documents fastener installation



TIOS® Control process control

The TITGEMEYER **ProcessControlSystem** provides, for the first time, precise monitoring and documentation of fastener installation using hand held power tools. The modular system can be fitted to the TITGEMEYER range of hydro-pneumatic and hydraulic installation tools.



Evaluation Unit



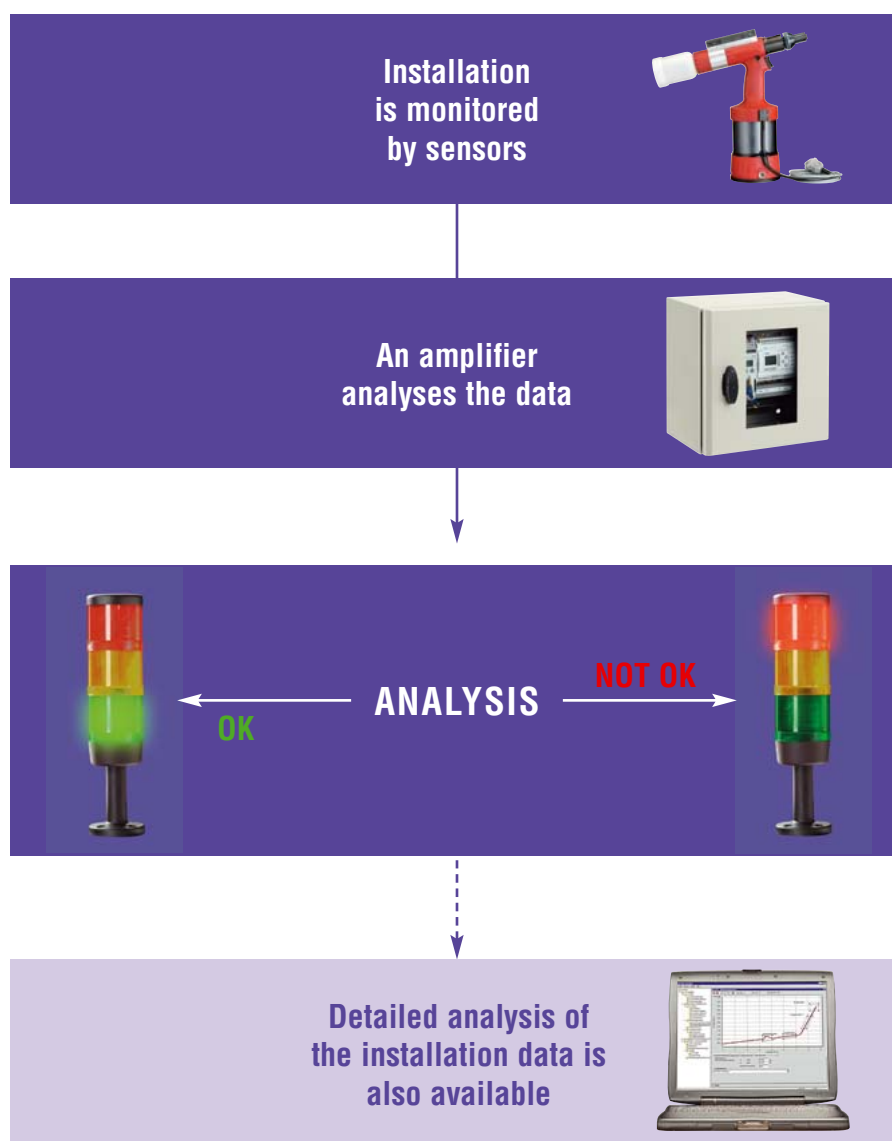
Installation Tool

The heart of the **ProcessControlSystem** is a strain gauge module that monitors applied loads. These loads provide accurate data on the entire installation process. A sensor in the tool body monitors stroke. The data is input into an amplifier (e.g. MP85 from HBM) and an internal SPS and can be transferred to a higher level system e.g. an external SPS or PC. The complete evaluation unit is self-sufficient and permits immediate use of the system. Further connections are optional and, although not absolutely necessary, provide an exact evaluation of the installation.

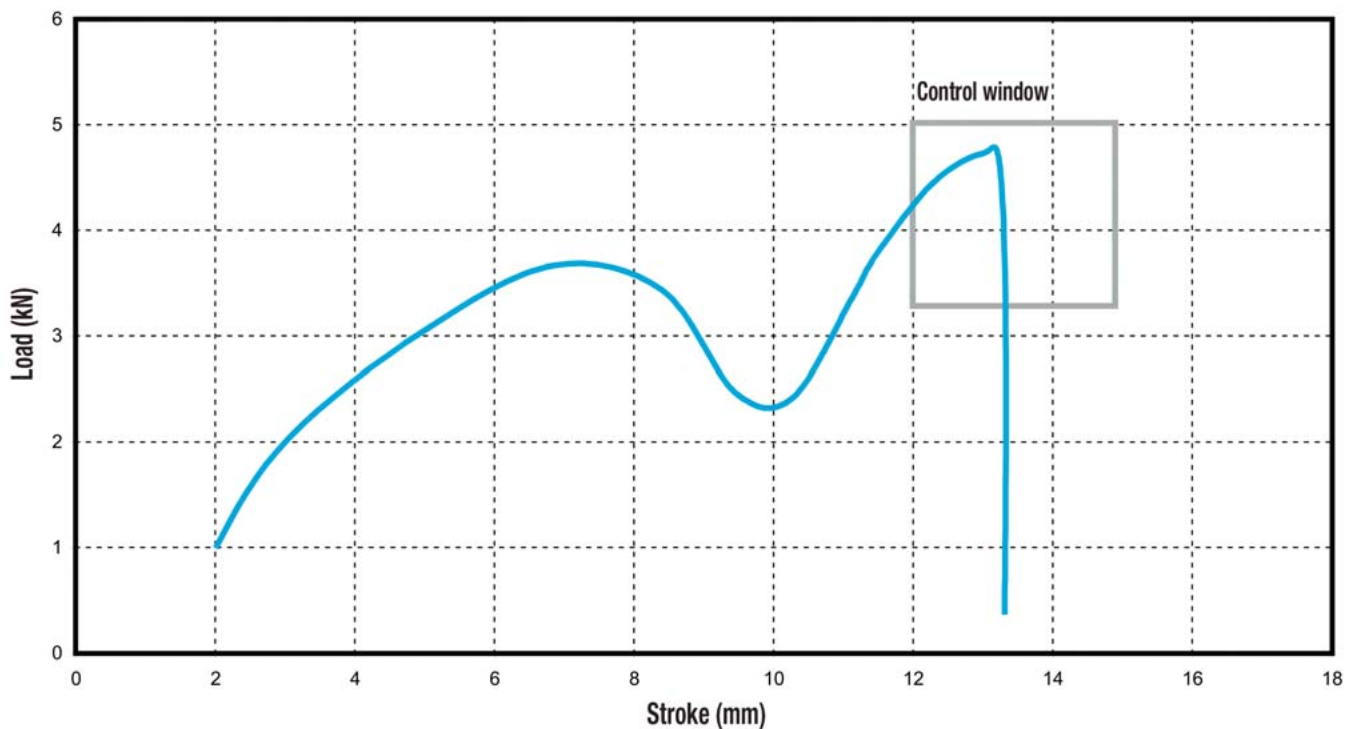
The TITGEMEYER **ProcessControlSystem** provides continuous quality control of fastener installation. Critical fasteners can be reliably installed and documented with minimal effort.

System Features:

- Precise monitoring of the installation process by measuring the installation load against stroke.
- Instant alarm if control parameters are not achieved.
- All relevant process control data is available:
 - correct installation of the fastener
 - material and grade of the fastener
 - application parameters e.g. grip range and hole size



The installation process produces a load-stroke diagram



The result – a curve of load against stroke – is available in real time. The evaluation unit monitors the curve against various parameters and gives an “OK” or “NOT OK” signal. The signal can, for example, be connected to a mechanical control that will ensure an instant intervention e.g. to cut-off of the compressed air supply to the installation tool, or to prevent the release of the component from its jig. The data can also be displayed graphically, printed or used as the basis of statistical analysis.

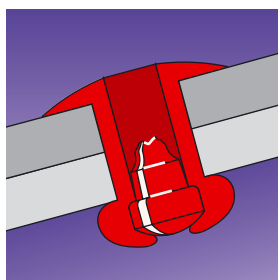
Key Benefits:

- monitoring and problem-free documentation of continuous production process
- documentation and archiving of the data from error-free production (product liability)
- prevention of complaints and product recalls
- cost savings from elimination of repairs and customer service calls as a result of poor production control
- improved company image through 100% reliability for your customers

The technology of continuous process monitoring

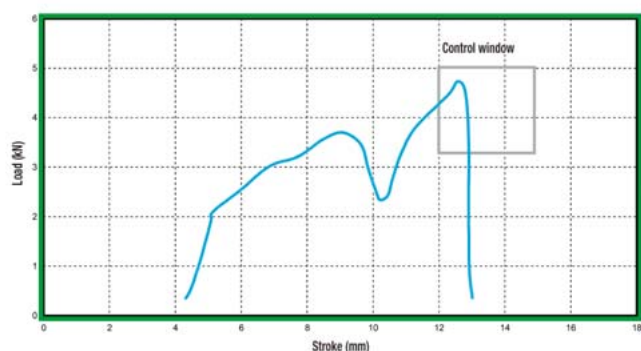
Installation tools with process monitoring from TITGEMEYER record the load (kN) and stroke (mm) of a fastener installation. The TITGEMEYER range of MS tools can be fitted with this system.

To install a fastener, a certain force is required. The pulling head of the tool grips the fastener. The outer sleeve of the pulling head presses against part of the fastener e.g. the rivet head or lockbolt collar. This creates pressure within the sleeve. This pressure is measured by a load sensor that monitors the actual setting load of the fastener. The movement of the hydraulic piston (stroke) is measured by a sensor on the hydraulic piston.

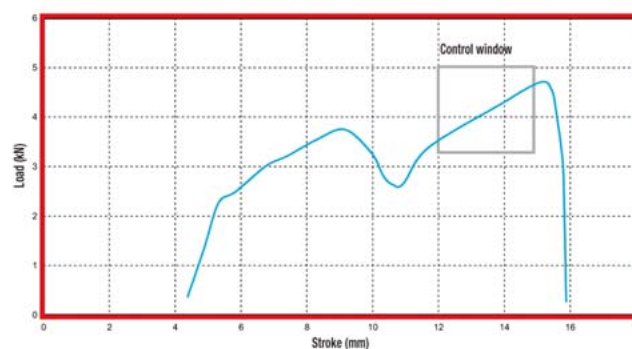


Installation of Blind Rivets

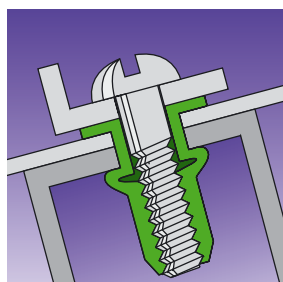
- Example: 4.8 mm steel blind rivets
- monitors variation of grip range
- monitors variation of hole dimensions
- monitors variation in fasteners (e.g. material, sleeve length)



Result "OK", grip range 3.0

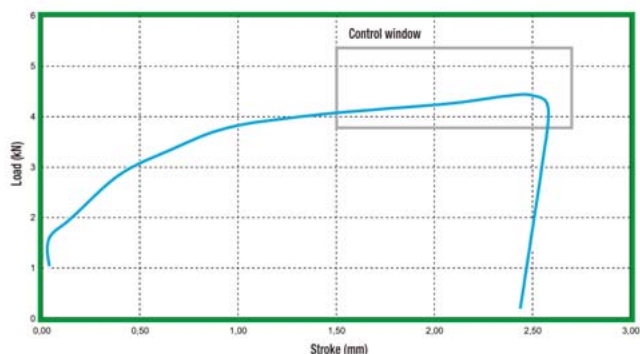


Result "NOT OK", grip range 2.0 mm e.g. a component is missing

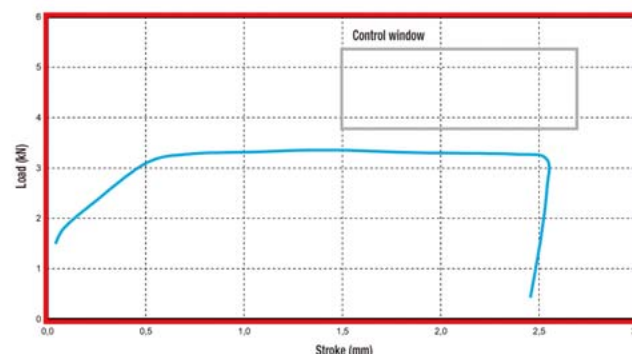


Installation of Blind Rivet Nuts

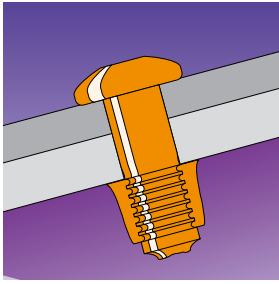
- Example: M6 steel blind rivet nuts
- confirms that the rivet nut is correctly installed
- monitors variation in fasteners
- can monitor grip range



Result "OK", installation in component

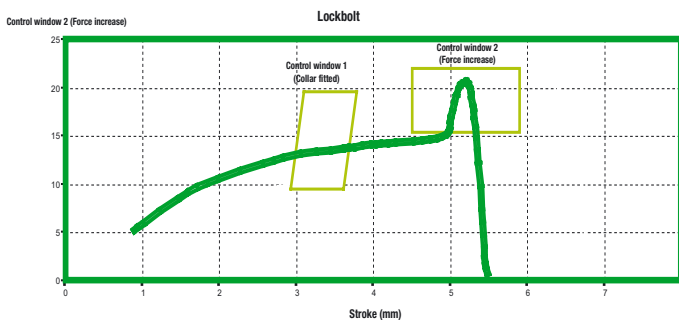


Result "NOT OK", installation without component

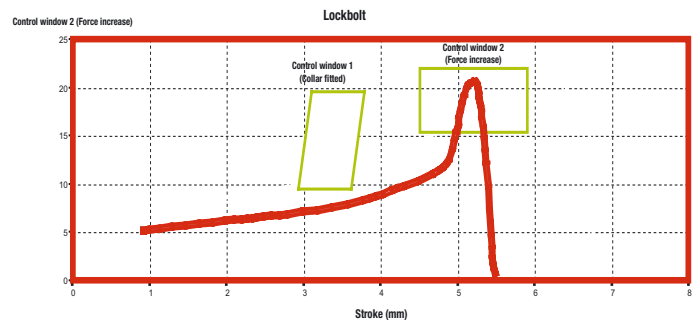


Installation of Lockbolt Pins and Collars

- Example: 6.5 mm steel lockbolts
- confirms whether a collar is correctly swaged
- confirms material and grade of the fastener



Result "OK",
installation with collar



Result "NOT OK",
installation without collar

The TITGEMEYER ProcessControlSystem makes fastener installation transparent

Whether for very high value products or for safety critical applications, the TITGEMEYER **ProcessControlSystem** gives the user the assurance that each and every fastener satisfies the required quality. Printing of the data provides documented evidence of process quality for your customers and your own quality management.

The TITGEMEYER **ProcessControlSystem** involves several components. The evaluation unit is comprised of an enclosure containing an amplifier and SPS unit. The amplifier evaluates the sensor data and the SPS provides the communication link to a further SPS unit. The evaluation unit can be further extended e.g. by connection to data storage via a PC or server or to a scanner, printer, light signal or monitor.

The installation tools are fitted with a chip. The amplifier automatically uploads the parameters of the tools sensor when the tool is connected. The basic parameters for the tool are saved on the chip. When tools need to be taken out of service e.g. for routine maintenance, the replacement tool can immediately be introduced into production using the tool parameters saved on the chip. Re-programming at the workstation is not required.

For a visualisation of the data and to set up the amplifier software, a PC or laptop or, alternatively, an Ethernet connection is required. The evaluation unit has a basic software set-up that allows process monitoring to start immediately. For demanding applications the SPS and the software set-up must be individually configured.

We would be pleased to advise you.

Evaluation Unit

Dimensions: 300 x 370 x 240 mm (WxHxD)
Power supply: 24 V DC
Input/output: connection to external SPS as required
Connection:

- multi-pin Sub-D plug for the installation tool
- Ethernet interface to amplifier

Accessory: Set-Up, Part No. 430 001
Part No. 430 009 002



Hydro-pneumatic Installation Tools



MS 50 Load-Stroke

Fastener range

RIV-TI blind rivet nuts
M 3 – M 10 (M 12 Aluminium)

Technical data

Air pressure: max. 7 bar
Setting load: 23.5 kN at 6 bar
Stroke: 5.8 mm
Weight: approx. 2.3 kg
Height: 250 mm
Width: 270 mm

Part No. 348 501 000



MS 60 Load-Stroke

Fastener range

Standard and closed end blind rivets to 6.4 mm diameter and structural blind rivets to 6.4 mm diameter in all materials.

Technical data

Air pressure: max. 7 bar
Setting load: approx. 18.2 kN at 6 bar
Stroke: 25 mm
Weight: approx. 2.7 kg
Height: 360 mm
Width: 320 mm

Part No. 431 620 001



MS 75 Load-Stroke

Fastener range

Standard lockbolts to 6.5 mm diameter, multigrip lockbolts to 6.5 mm diameter in steel and aluminium, structural blind rivets to 6.5 mm diameter and BOM blind rivets to 5.0 mm diameter.

Technical data

Air pressure: max. 7 bar
Setting load: approx. 22 kN at 6 bar
Stroke: 15 mm
Weight without pulling head: approx. 2.4 kg
Height: 335 mm
Width without pulling head: 280 mm
Part No. 385 501 014



TIOS 220 Load-Stroke

Fastener range

Standard and closed end blind rivets from 2.4 to 5.0 mm diameter in all materials.

Technical data

Air pressure: max. 7 bar
Setting load: 13 kN at 6 bar
Stroke: 16 mm
Weight: 1.7 kg
Height: 280 mm
Width: 350 mm

Part No. 431 501 300

Part No. 431 501 350

Special configuration

TIOS® Control process control

Product informations

Hydraulic unit with TIOS® Control

The system is suitable for large-scale industrial operation. Suitable for working with lockbolts (ø 6.5, 8.0 and 10.0 mm) and high-strength blind rivets (ø 6.5 mm), with simultaneous process monitoring. The unit functions hydraulically. The hydraulic unit consists of a pump and a valve-control device. The switchgear cabinet also houses an amplifier for evaluation of the load-stroke monitoring signals. The sensor system is installed inside the setting head. The system is SPS-controlled. A communications interface (Harting plug) permits the trouble-free integration of the system into existing production facilities. An Ethernet connection allows adjustment of the application process control parameters, while providing access to the curve data readings.

There is a choice of two different setting tools, which can be fitted with a pulling head, depending on the type of fastener. Two types of hydraulic unit are available.



Technical data hydraulic units

Type	TIOS® 350	TIOS® 450
Power supply	400/50 Hz	400/50 Hz
Operating voltage	24 V	24 V
Maximum air pressure	350 bar	450 bar
Dimensions	780 x 400 x 660 mm	780 x 400 x 660 mm
Weight	90 kg	90 kg
Communications interface	Harting plug/Ethernet (IP)	Harting plug/Ethernet (IP)
Part No.	385 122 001	385 190 000

Technical data installation tool

	TIOS H35	TIOS H40
Stroke	30 mm	30 mm
Setting load (350/450 bar)	27/34 kN	31/39 kN
Maximum air pressure	350 bar	450 bar
Weight (setting tool)	2.5 kg	3.7 kg
Length (without pulling head and container)	269 mm	315 mm
Width	max. 54 mm	max. 54 mm
Height (without hose)	approx. 230 mm	approx. 230 mm
Hose length	approx. 2.5 m	approx. 2.5 m
Operating capacity	Lockbolts to ø 6.5 mm High-strength blind rivets up to ø 6.5 mm	Lockbolts to ø 10.0 mm High-strength blind rivets up to ø 6.5 mm
Part No.	385 136 000	385 130 000



TIOS® H35



TIOS® H40

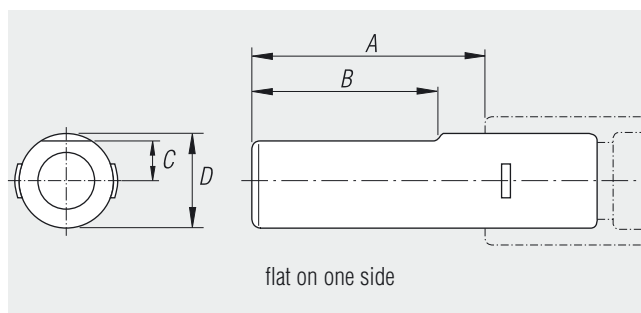
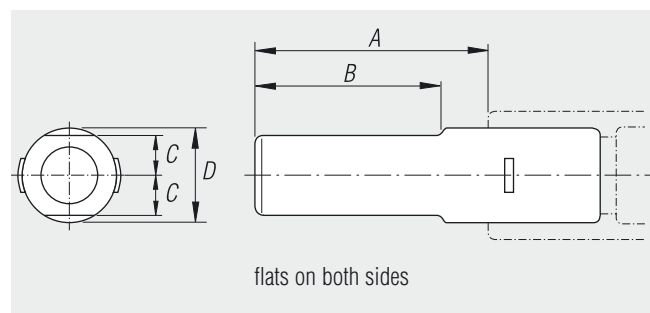
We reserve the right to amend specifications at any time.

Pulling heads

For fasteners	for tool model	Nominal- $\varnothing$ [mm]	Pulling head type	Part No.
for lockbolts				
SRB Standard	TIOS H35/40	5.0	99-3003	371 680
	TIOS H35/40	6.5	99-3006	371 705¹
	TIOS H35/40	8.0	99-99-245	375 885
	TIOS H40	10.0	99-100-245	375 945
SRB Maxigrip	TIOS H35/40	5.0	99-1456	372 985
	TIOS H35/40	6.5	99-1477	371 980
	TIOS H35/40	8.0	99-1439	371 965
	TIOS H40	10.0	99-1440	371 970
For high-strength blind rivets				
M-LOCK / MAGNA-BULB®	TIOS H35/40	5.0	99-3303	371 805
TIBULB® blind rivet	TIOS H35/40	6.5	99-3305	371 815

¹ Special configuration, Part no. 371 705 001

Note: Please order the pulling heads separately.



TIOS® Control process control

Product informations

Installation tool with TIOS® Control

