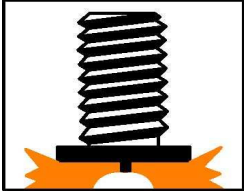
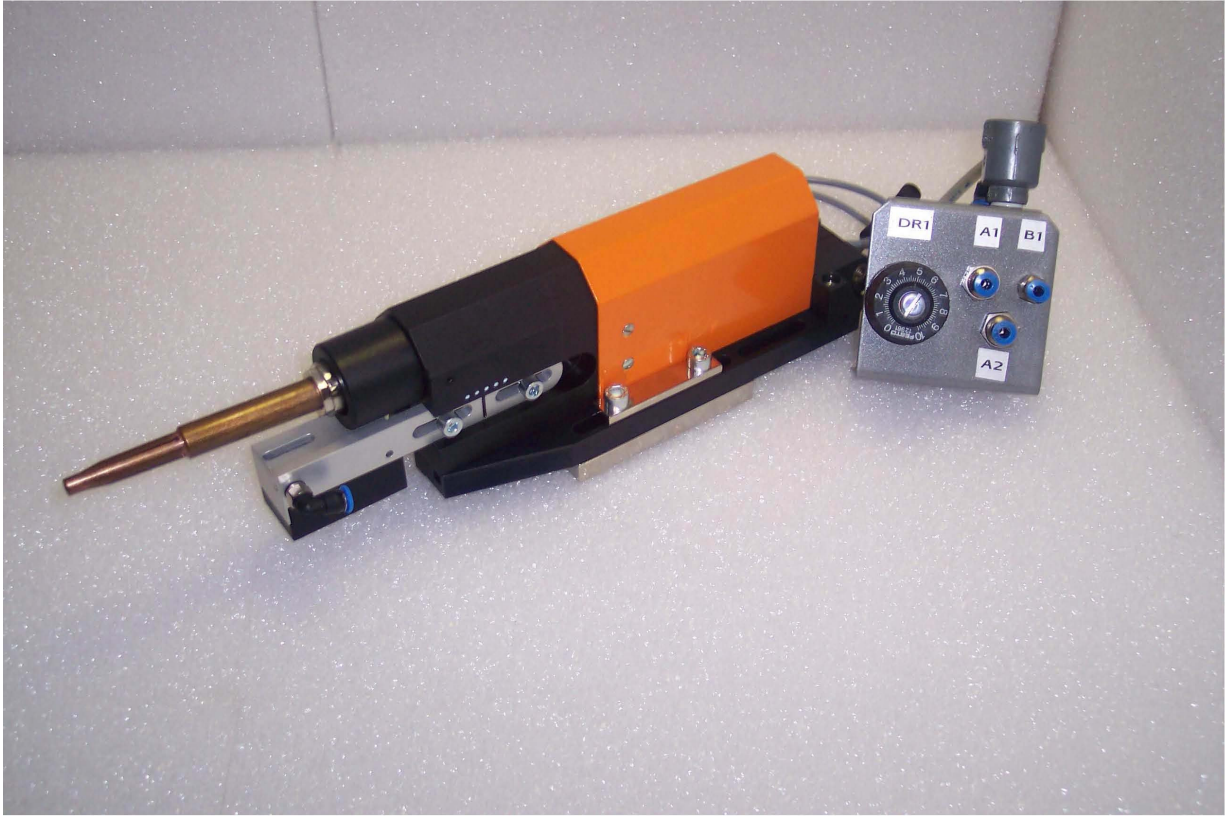


Instruction manual For the welding head SIK-2



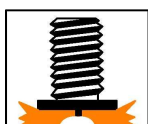
Welding studs, welding equipment and machines

DABOTEK

DABOTEK

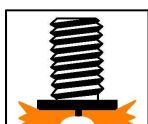
Table of contents

Copyright	4
General.....	5
who should read these instructions?	5
what is included in these instructions?	5
what is not included in these instructions?.....	5
Customer service.....	6
Safety	7
Purpose.....	7
Intended use	7
Warning against unauthorized alteration or modification.....	8
Precautions for using the stud welding equipment and its components.....	8
Description.....	9
Welding method.....	9
Weld ability of materials.....	10
Standard stud dimensions	11
Basic rules	11
Welding head SIK 2	12
Technical data.....	12
function welding head SIK	13
Mechanical parts assembly groups	14
Mechanical part list assembly groups	15
Parts of SIK 2 body.....	16
Spare part list welding head.....	17
Parts of stud finger carrier	18
Spare part list of stud finger carrier	19
Mounting plate.....	20
Spare part list mounting plate	20
Dimensions	20
Adjustments.....	21
Stud finger actuator	21
Adjusting to various stud lengths	22
Adjusting welding head height	23
Plunge speed	24
Collet	25
Description	25
Replacement of the contact inserts.....	25
Collet disassembly	26
Collet assembly.....	27
Note:	28
Collets	29
Overview SIK holder.....	29
Overview SIK contact inserts	29
Overview SIK holder slim.....	30



DABOTEK

Stud supply tube	31
Description	31
Replacement	31
Finger	32
Description	32
Replacement	32
Sensor for basic position SIK 2	33
Function	33
Replace the sensor.....	33
Exchange to other stud diameter.....	33
Maintenance	34
Welding head	34
Guide shaft of the welding head.....	34
Workpiece carrier, earth clamps, earth contacts.....	34
Collet.....	34
Troubleshooting	35
Transport and handling	36
Fingers	37
Finger standard	37
Finger special.....	37



DABOTEK

Copyright

DABOTEK ApS
Birkedam 10 S
6000 Kolding Denmark

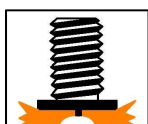
Telephone: +45 7550 5666

www.dabotek.com
sales@dabotek.com

The copyright in these Operating Instruction remains with DABOTEK . The specification and illustrations of these Operating Instructions shall not be reproduced or circulated not shall they be used by unauthorized persons or parties or communicated to others for purposes of competition.

DABOTEK reserve the right to make any technical modifications, without prior notice, from the statements and specifications in these Operating Instructions if and when such modifications become necessary in order to improve our product.

These Operating Instructions were written and edited very carefully. Should You find errors or mistakes we will appreciate if You let us know.



DABOTEK

General

Who should read these instructions?

These instructions are meant for the operators of the stud welding equipment and the ultimate customer's personnel operating and connecting the equipment.

What is included in these instructions?

In these instructions you find information on operation, maintenance and service, transport, installation and connection technical specifications and spare parts.

What is not included in these instructions?

Repair documentation is not included in these instructions.

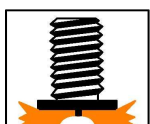
Additional technical information beyond these instructions, if needed, is available from our agents or immediately from headquarters.

These instructions convey important information prerequisite for safe working with the stud welding equipment.

Operating personnel must be able to refer to these instructions if necessary. Therefore make sure that the instructions are available to them at the appropriate time.

If you sell the equipment pass these instructions on to the new owners. Please immediately send us the name and address of the new owners in case it becomes necessary unexpectedly to contact them about the safety of the equipment.

Remark: *Study these instructions carefully before installing the equipment. In particular, pay attention to the safety hints.*



DABOTEK

Customer service

DABOTEK ApS
Birkedam 10 S
DK 6000 Kolding
Denmark
Telephone: +45 7550 5666

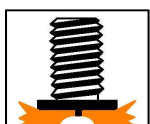
www.dabotek.com
sales@dabotek.com

Please specify the details of the fault or malfunction:

Machine or article number, welding equipment type and serial numbers, welding head type and description of the faults that have been occurred.

Please confirm every service request in writing.

For any welding problems, or if you are interested in welding samples, do not hesitate to contact us. Our welding laboratory is there ready to help you.



DABOTEK

Safety

This stud welding equipment is a state of the art product and operationally reliable. Hazards may, however, be caused by unskilled personnel connecting and operating the equipment improperly or using it in any other than the intended manner.

Everybody concerned with connecting, operating and maintaining this equipment must have read and understood the appropriate instructions and in particular the section on "Safety".

The equipment components may only be connected, operated and maintained by personnel familiar with those tasks and aware of the hazards.

All relevant regulations and any other generally accepted rules must be complied with. Should you still be in doubt about some detail or other make sure to consult your superiors or the manufacturers.

Never work or operate in any way that might adversely affect the safety of the equipment, equipment components, or machine.

Safety devices must never be dismantled or put out of operation. Safety devices are there to protect from severe damage.

Equipment components to be completed into functional machines or systems at the operator's must be equipped with state of the art safety devices by the operator.

For any apparent damages and defects impairing the safety and for any unusual noise or smell, switch off the equipment or machine and notify your superiors.

The equipment and in particular connection lines with plugs must be checked for proper condition by an expert. This should be done every six months or earlier.

Connection lines must not be laid over traffic routes or near heat sources.

All connection, operation and maintenance of the equipment components or machines must be done in accordance with local safety and accident prevention regulations.

Purpose

The automatic welding head SIK2 is used to weld Studs DIN 32501 or special welding elements to the corresponding material.

Welding method: capacitor discharge with tip ignition.

Intended use

The manufacturer cannot be held responsible for any damages resulting from not intended use. The operator bears the risk.

The term "intended use" includes compliance with the operating instructions and the specified maintenance conditions.

The welding head is intended primarily for use in industrial areas.



DABOTEK

Warning against unauthorized alteration or modification.

Any intended alterations and modifications must be brought to the manufacturer's notice.

For reasons of safety, unauthorized alterations or modifications cannot be allowed. Any unauthorized alterations or modifications cause forfeiture of warranty.

Precautions for using the stud welding equipment and its components

Remark: All maintenance and service work must be carried out by skilled professionals. It's forbidden to remove protective devices.

Make sure to switch off the equipment before replacing wear parts (electrical, pneumatic, and mechanical).



"ALWAYS" disconnect the mains plug from the mains socket!



Remark: Wait for 10 seconds after switching off the welding equipment before opening the cover to make sure that the capacitor bank is discharged.

Remark: There will always be some residual voltage.



"NEVER" use liquids to clean the equipment! Liquids can penetrate into the electrical system.

Remark: Avoid looking into the arc while welding!

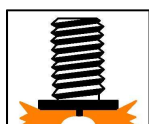
Remark: Protect your skin, eyes, and clothes against weld splatters.

Remark: Any objects sensible to magnetise should be kept away from the welding equipment.

Welding releases electromagnetic fields so that watches, magnetic cards, etc. might become unusable.



People with cardiac pacemakers should be made aware of those electromagnetic fields. Interference with cardiac pacemaker functions cannot be ruled out. Do not put your hands into moving or current-carrying parts.

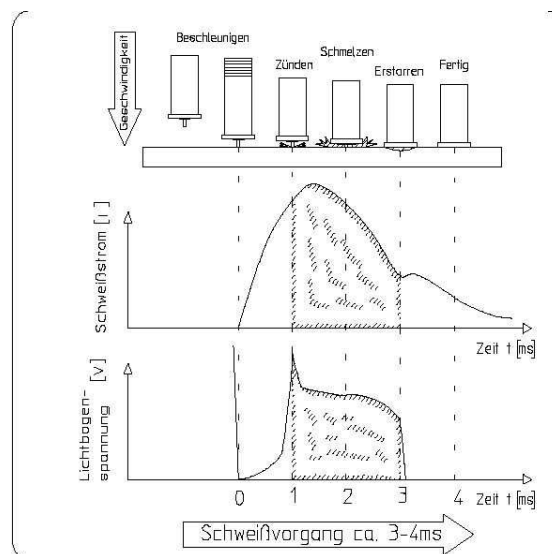


DABOTEK

Description

Welding method

The welding method is capacitor discharge welding with tip ignition. No shielding gas is used, not even for the welding of aluminium.



The welding stud is accelerated by the welding head to move at a speed of 0.5-1m/sec in the direction of the base material. At the same time, the capacitor bank is switched on.

The ignition tip touches the base material and discharge current begins to flow.

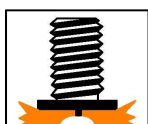
The ignition tip is heated up by high discharge current and evaporates all of a sudden.

The arc is ignited. It burns for about 1 or 2 milliseconds and melts on the base material.

The welding stud dips into the weld pool.

Heat absorption by the base material causes the weld pool to solidify.

The welding process is finished, leaving the stud firmly attached to the base material.



DABOTEK

Weld ability of materials

Steel must be suitable for stud welding. The carbon-, sulphur- and plumb content should be as low as possible. Aluminium alloys (AlMg3) can be welded perfect up to 6mm diameter depending on the application. The surface must be **not** anodised. Brass (CuZn37) can be welded perfect up to 6mm diameter depending on the application. In table 1 and 2 are standard values for the weld ability of different materials.

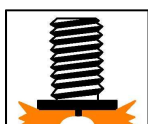
Table 1

No	Material
1	Steel ST37-3
2	Stainless steel 1.4303
3	Aluminium Al 99,5
4	Aluminium Al Mg 3
5	Brass CuZn37
6	Nickel silver

Table 2

Base material	Stud material					
	1	2	3	4	5	6
Steel to C 0,35%	X	X			X	0
Steel to C 0,6%	0	X			X	0
Austenitic CrNi Steel	X	X				
Brass CuZn37	X				X	X
Copper					X	X
Tin					0	0
Plumb					0	0
Zinc					0	0
AlMg3 , AlMg5			X	0		
AlMgMn			X	0		
AlMgMn , AlMg4,5Mn			0	X		

X = perfect weld able 0= weld able reduced in diameter



DABOTEK

Remark: The weld ability of the single materials must be checked with test weldings. The surface is important for the quality of the welding. Generally the surface must be free from grease, oil, rust or other coatings.

Standard stud dimensions

The studs DIN 32501 shown in the table can be used with the welding head SIK2.

Welding head	Stud Ø Stud length	Material			
		St. 37 3	1.4303	AlMg3	CuZn37
SIK 2	3x6-30	St. 37 3	1.4303	AlMg3	CuZn37
	4x6-35	St. 37 3	1.4303	AlMg3	CuZn37
	5x8-40	St. 37 3	1.4303	AlMg3	CuZn37
	6x8-40	St. 37 3	1.4303	AlMg3	CuZn37
	7.1x10-40 8x10-40	St. 37 3 St. 37 3	Conditional weld able, maximum strength not obtainable. Make test welding in any case.		

Remark: The table only shows approximate values. The weld ability depends on the welding head, the material and the surface of the work piece. In single cases changes for the table are possible. For 6mm the weld ability of the most materials sinks. Make test welding in any case before You start Your serial welding.

Basic rules

Please observe the following basic rules when stud welding:

The work piece surface must be free from oil or grease and must be clean.

Coatings such as zinc, scale, paint, anodizing etc. have a negative effect on weld quality or do not allow welding.

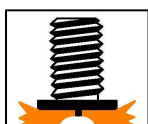
The base metal must be suitable for welding.

Steels with a high carbon content or free cutting steels cannot be welded.

The welding unit, the welding head and the collet must be in a perfect condition.

Use quality studs. The accuracy of the arcing tip has a direct effect on weld quality.

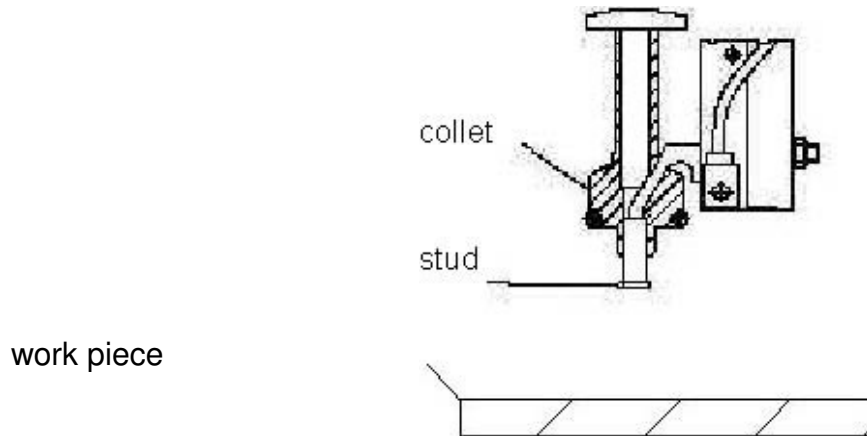
Always carry out test welding before commencing production.



DABOTEK

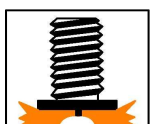
Function welding head SIK

In the basic position, the collet with the stud is positioned approx 50mm above the work piece. There is a stud in the collet.



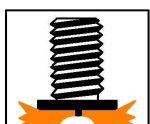
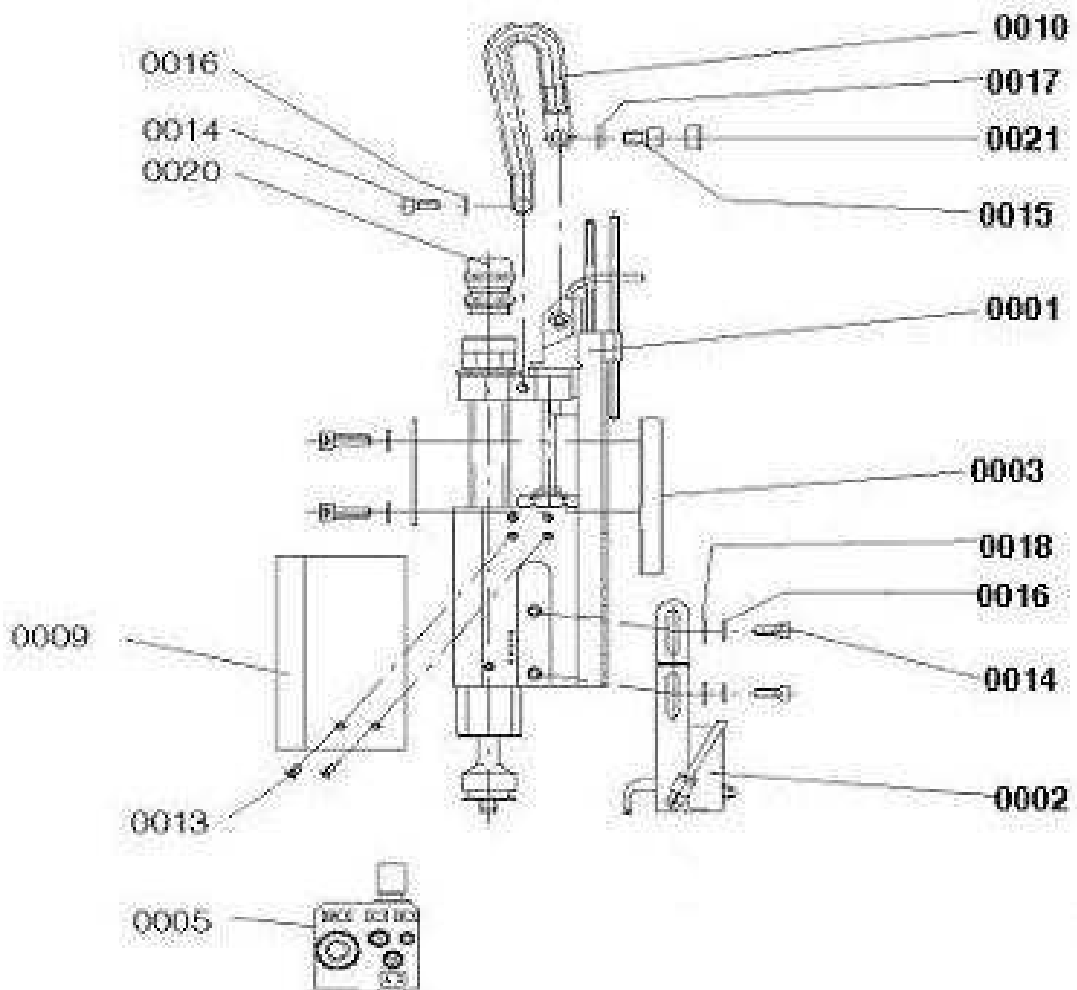
After the start of welding process, the collet with the stud moves towards the work piece. Welding begins when the stud touches the work piece. The next stud is fed automatically at the same time. The finger swivels out of the feed channel of collet and let's stud pass. The finger swivels back into the collet. Welding has been completed. The new stud is now located between the finger and the contact inserts of the collet. The collet moves to basic position. The stud that was fed presses itself back against finger and slides through the contact elements of the collet. When the basic position is reached, the welding head is ready for the next welding.

Remark: *The studs are fed axial through the welding head. In this way extremely short studs (M3x6, M4x6) can be used without problems.*



DABOTEK

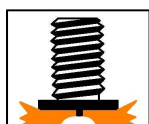
Mechanical parts assembly groups



DABOTEK

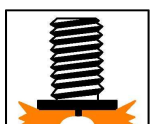
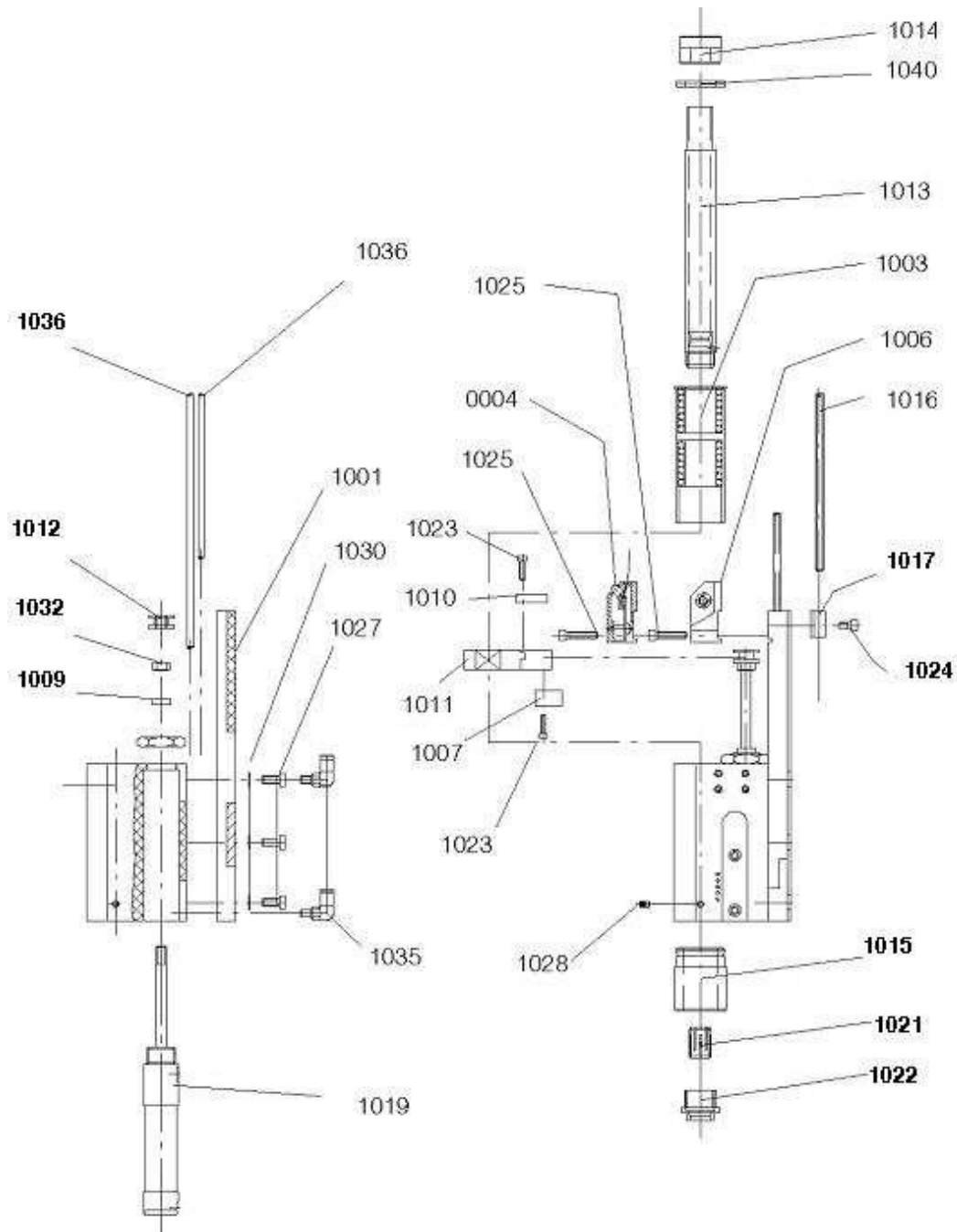
Mechanical part list assembly groups

Pos.	Name of parts	Drawing No.	Mat. No.	Part No. DABOTEK
0001	Body SIK 2	4011155 1000	08830965	
0002	Finger carrier complete	4011155 2000	08811040	600238
0003	Mounting plate for SIK 2	4011155 3000	08811105	600239
0005	Plate for pneumatic connector	4011155 5000	38831104	600700
0007	Finger different types			
0009	Standard cover for SIK 2	4011155 0009	37049119	600273
0010	Interconnecting cable	SIK-1-13/4	38830914	600274
0013	Screw DIN 964 M3x6		35000007	
0014	Screw DIN 912 M5x12		35000457	
0015	Screw DIN 912 M6x12		35000880	
0016	Lock washer DIN 128 B5		F3405052	
0017	Lock washer DIN 128 B6		F3405060	
0018	Washer DIN 125 B5		35001615	
0020	Cable fixing V TEK Pg 13,5 MS		F2085631	Z0000450
0021	Shaft cover		37049505	Z0000452
0022	Throttle valve		37030892	



DABOTEK

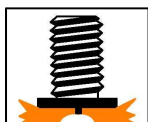
Parts of SIK 2 body



DABOTEK

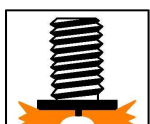
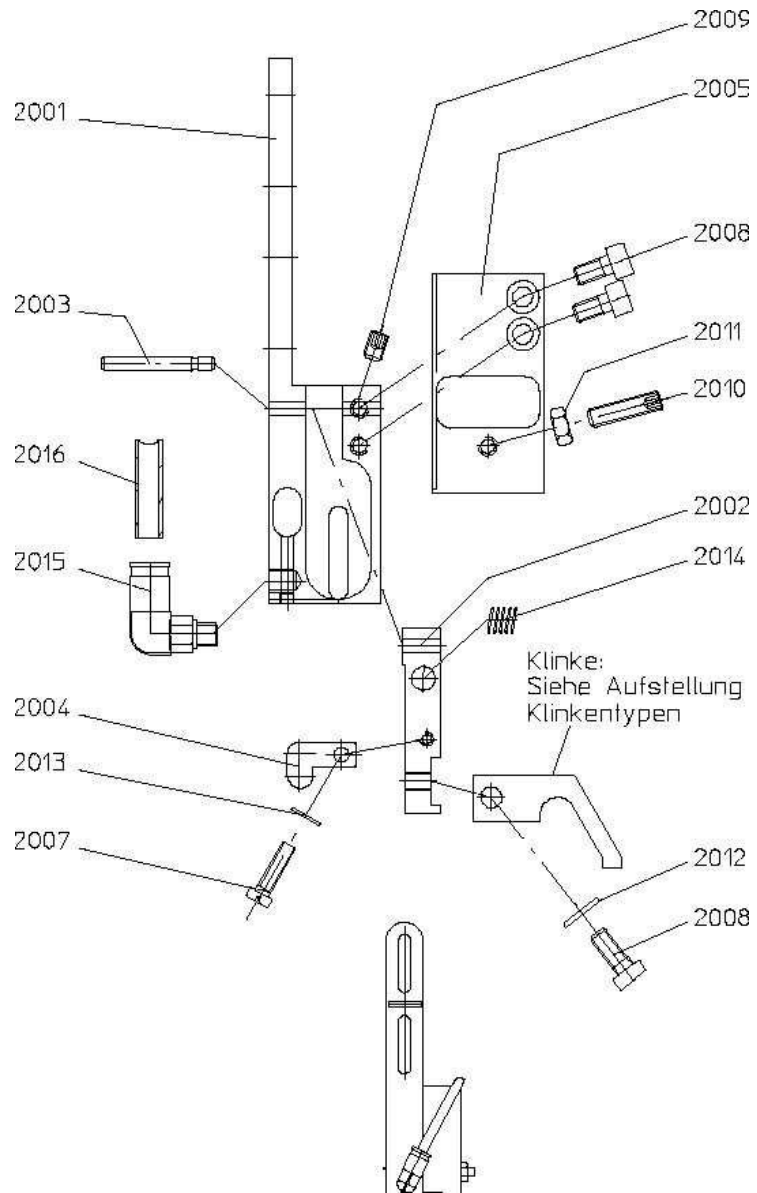
Spare part list welding head

Position No.	Name of parts	Drawing No	Material No.	Part No. DABOTEK
1000	Body for SIK 2 complete	4011155 1000	08830965	
1001	Base plate for SIK 2	4011155 1001		600217
1002	Body	4011155 1002		600224
1003	Tube complete with Bearing bush	4011155 1003 + 1039		600221+600215
1004	Sensor complete with house	4011155 4000		600218
1006	Cable carrier	4011155 1006		60022
1007	Slide piece	4011155 1007		600207
1009	Shock absorber for Cylinder	4011155 1009		600203
1010	Shock absorber for driving slot	4011155 1010		600204
1011	driving slot	4011155 1011		600213
1012	dog plate	4011155 1012		600208
1013	Guide shaft complete with stop	4011155 1013		600220
1014	Nut M18x1 Pg 13,5	4011155 1014		600211
1015	Cover tube	4011155 1015		600219
1016	Adjusting screw	4011155 1016		600206
1017	Carrier for adjusting screw	4011155 1017		600214
1019	Cylinder Fa. Festo DSEU-16-50-P-A-MQ Nut MSK-M12X1,25 Conversion kid	4011155 1019		Z000950 Z000951 600550
1021	Adaptor sleeve	4001478 1134	37050745	600523
1022	Contact nut	4011155 1022	37028219	150209
1023	Screw DIN 912 M3x10		35000961	
1024	Screw DIN 912 M4x8		35000112	
1025	Screw DIN 912 M4x20		35000171	
1027	Screw DIN 6912 M5x12		35000457	
1028	Worm gear DIN 913 M4x6 45H		35000627	
1030	Loch washer DIN 128 B5		F3405052	
1032	Nut DIN EN 24032 8 M6		35010045	
1035	L screw Fa. Festo QSML M5 4		37098101	Z0000233
1036	PUN tube Fa. Festo PUN 4x0,75 700mm		37098306	Z0000232
1037	PUN tube Fa. Festo PUN 4x0,75 650mm		37098306	Z0000232
1040	Nordlock washer for M18		37028308	600008



DABOTEK

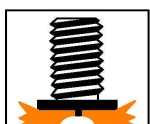
Parts of stud finger carrier



DABOTEK

Spare part list of stud finger carrier

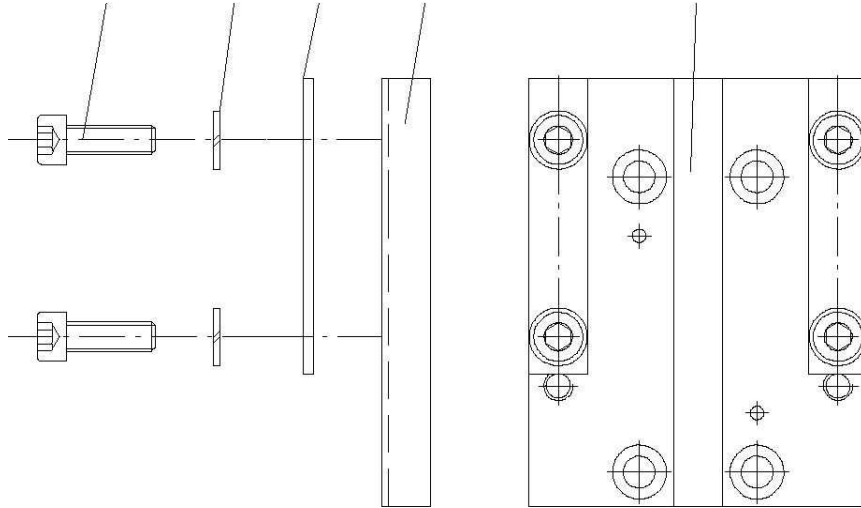
Position No.	Name of parts	Drawing No.	Material No.	Part No. DABOTEK
2001	Gip	4011155 2001		600237
2002	Catch retainer	SIK-1-5/4	37049097	600202
2003	Catch retainer shaft	SIK-1-8/4	37049127	D000009
2004	Plunger	SIK-1-19/4	37049240	600205
2005	Cover	4011155 2005		600021
2006				
2007	Screw DIN 84 M3x12		35000228	
2008	Screw DIN 912 M4x8		35000112	
2009	Wormgear DIN 913 M4x6		37000627	
2010	Wormgear			
2011	Nut DIN 934 M4		35010010	
2012	Lockwasher DIN 128 B4		35016515	
2013	Lockwasher DIN 128 B3		35016507	
2014	Spring VD 051A Fa. Gutekunst		37049100	Z0000234
2015	L screw QSML M5 Fa. Festo		37098101	Z0000233
2016	PUN tube 750mm Fa. Festo		37098306	Z0000232



DABOTEK

Mounting plate

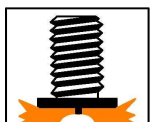
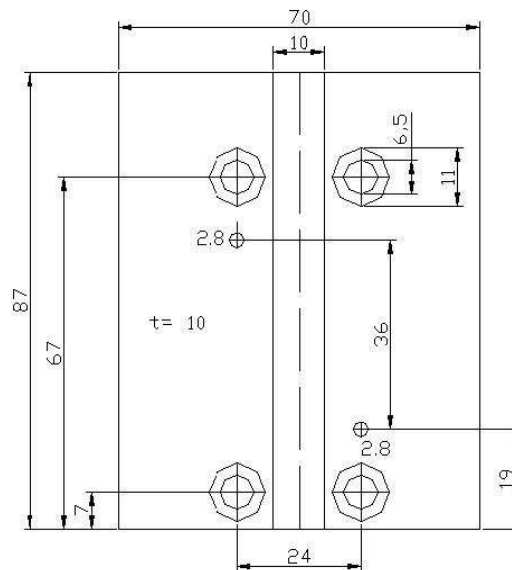
3008 3009 3002 3001 3000



Spare part list mounting plate

Position No.	Name of parts	Drawing No.	Material No.	Part No. DABOTEK
3000	Mounting plate complete	4011155 3000	08811105	600239
3001	Base plate for SIK 2	4011155 3001		600223
3002	Clamping part for SIK 2	4011155 3002		600201
3008	Screw DIN 912 M6x25		35000929	
3009	Lockwasher DIN 128 A6		35016531	

Dimensions

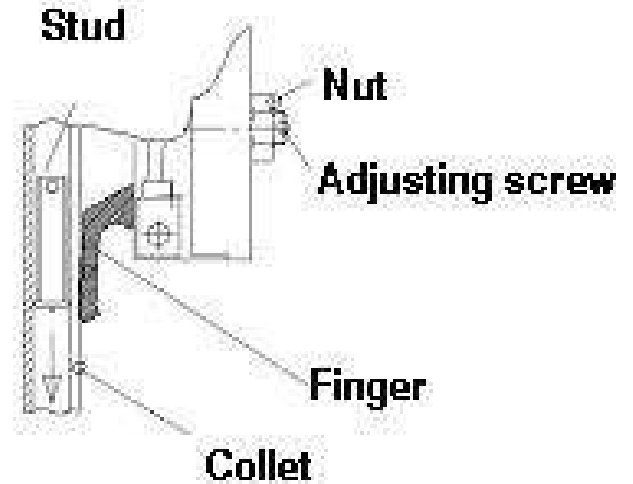


DABOTEK

Adjustments

Stud finger actuator

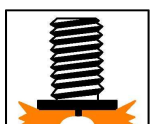
The stud finger has the job to press the stud through the collet during the reverse movement of the welding head. In this case the finger must swivel during the stud feeding to let the stud pass. The swivel of the finger, the stud feeding and the welding takes place simultaneously. Mechanical adjustment of the finger movement Loosen the nut and turn the adjusting screw that the stud can move through the collet without touching the finger.



Adjustment of the finger movement (time)

The finger must swivel to his basic position before the welding is completely done and the collet moves back to the basic position.

In machines the reverse movement of the finger is controlled by the PLC or other controller. A changing of the movement can only be done by a program changing.



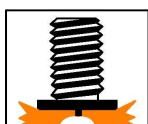
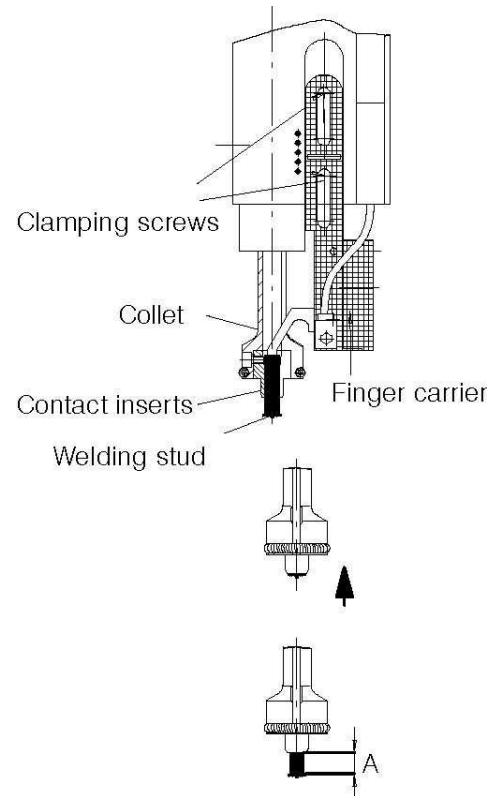
DABOTEK

Adjusting to various stud lengths

The welding head must be in the base position.
Move a stud into the collet.
Loosen the clamping screws.
Move the adjusting element to its top position.
Press the stud completely into the collet inserts until the stud flange contact the inserts.

Press the finger carrier downwards, until the stud is out of the inserts with the dimension "A".
Locate the finger carrier in this position.
Lock the clamping screws.
Reference values for dimension "A".

Stud lengths	Dimension "A"
6 to 8mm	1 to 2mm
10 to 15 mm	3 to 4mm
15 to 20 mm	5 to 8mm
20 to 30 mm	10 to 15 mm



DABOTEK

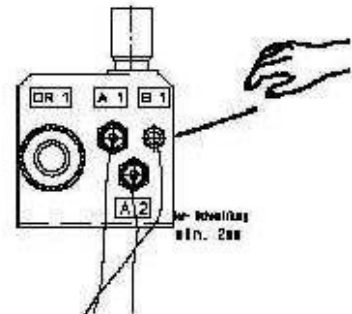
Adjusting welding head height

The stroke of the welding head is limited to about 50 mm. It can not be increased. The complete welding head can be moved in the height in its holding fixture.

Fasten your work piece in your holding fixture

Switch of the air pressure or pull the tube "B1" out of the air connector "B1".

The air connector "B1" has an automatic air stop.



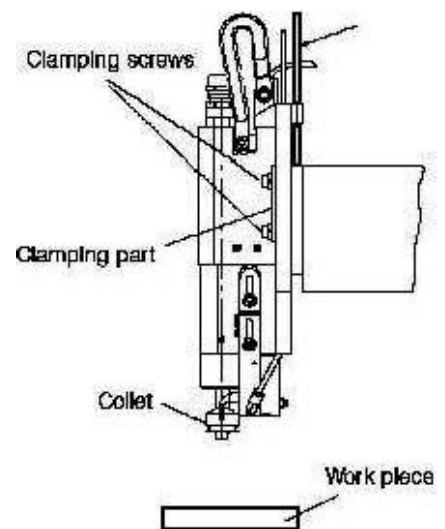
Loosen the clamping screws of the clamping gib.

Now you can adjust the height of the welding head

Turn the adjusting screw clockwise, you increase the distance between collet and work piece.

Turn the adjusting screw anti clockwise, you decrease the distance between collet and work piece.

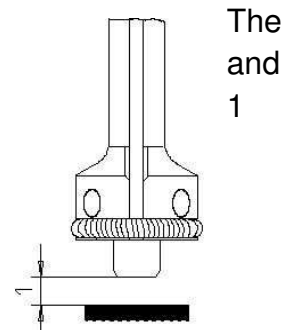
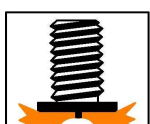
If you have the correct distance, lock the clamping screw.



distance is correct when the collet is in the end position the gap between the collet and the work piece. is about

mm without stud.

Plunge speed



DABOTEK

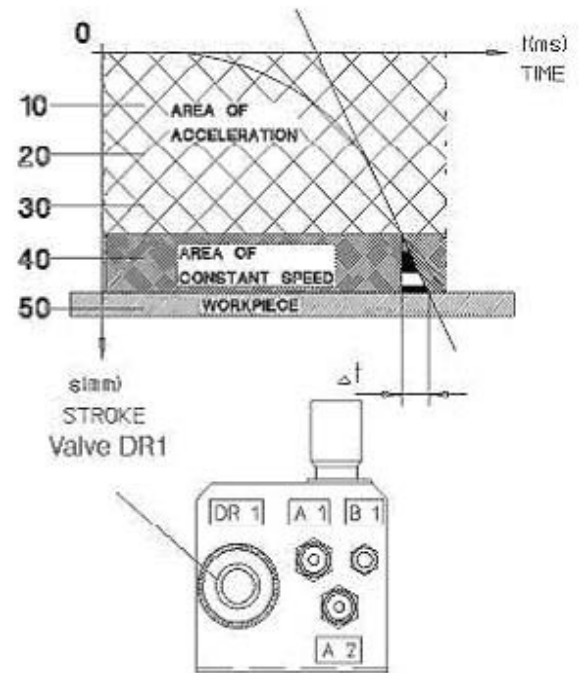
Description

To have perfect welding results, the stud must touch the work piece and plunge with a special speed (plunge speed). This plunge speed depends on the material and the ignition tip of the stud. For perfect results make some test welding with different settings.

Adjusting the plunge speed

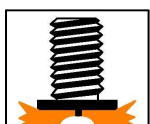
To adjust the plunge speed set the throttle valve "DR1" to the correct value.

The table shows the plunge speed depending of the setting on scale of throttle valve DR1.



Scale DR1	Plunge speed [m/s]
1,5	1,0
2,2	0,9
2,5	0,8
3,0	0,7
3,4	0,6
3,8	0,5

Remark: Make some test welding to find the best settings.



DABOTEK

Collet

Description

The standard collet consists of five parts:

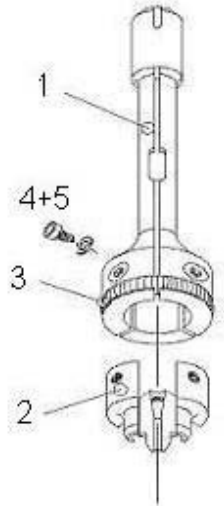
- 1 Holder
- 2 Contact inserts
- 3 Spring
- 4 Allen screws
- 5 Lock washers

The holder has the job to fix and to guide the studs.

The contact inserts transfer the welding current to the stud.

The contact inserts are replaceable, so different materials for different purposes can be used.

The spring produce the necessary contact pressure and can be replaced when it is worn.



Replacement of the contact inserts

Remark: The three contact inserts are made from one piece, belong together and build one set. Do not mix contact inserts of different sets.

The contact inserts and the holder have different slots.

The measure "A" is a little bit wider than "B".

The finger moves through slot "A".

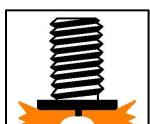
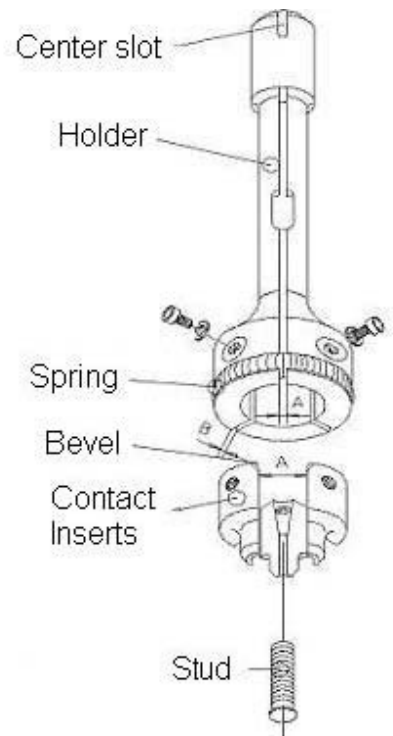
For marking the contact inserts have a bevel at the side of the wider slot.

Plug first the insert without the bevel into the holder.

Then plug the other two other inserts into the holder so that the bevels are at the wider slot of the holder.

Plug in the allen screws with the lock washers and tighten the screws lightly.

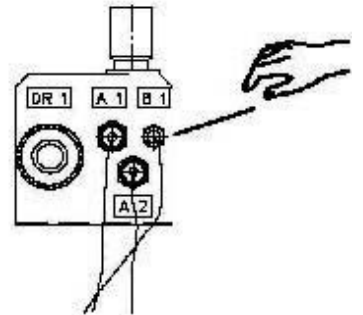
To center the inserts put a stud in and tighten the screws firmly.



DABOTEK

Collet disassembly

Switch off the air pressure or pull the pneumatic tube B1 out of the socket.

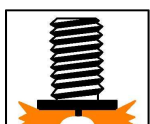
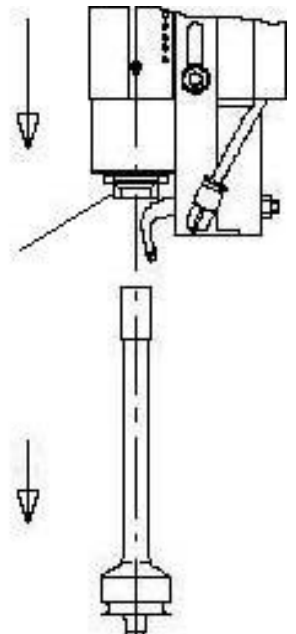


Push the guide shaft downwards.

Loosen the clamping nut with a spanner.

Pull the collet out of the guide shaft.

Clamping nut



DABOTEK

Collet assembly

The assembly is the reverse way of the disassembly.

Note that the centre slot of the collet is in direction to the finger. After you have put the collet into the guide shaft, check that the centre slit of the collet is in the centre pin of the guide shaft.

Twist the collet in both directions.

If the centre pin is in the centre slot you cannot turn the collet.

Push the collet completely into the guide shaft.

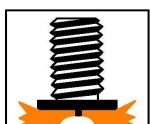
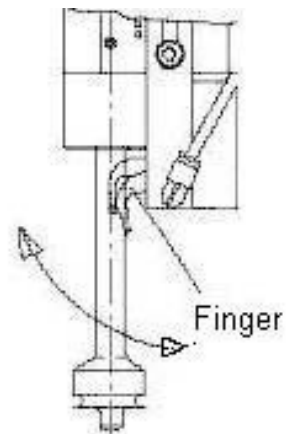
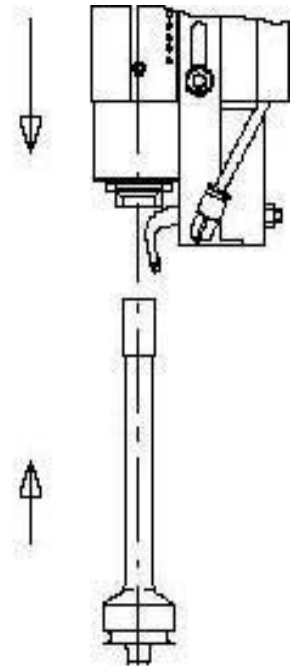
Fix the collet in this position and tighten the clamping nut firmly with the spanner.



Check the correct assembly

Move the finger with your hand up and down.

If the collet assembly is correct, the finger moves easily into the slot of the collet.

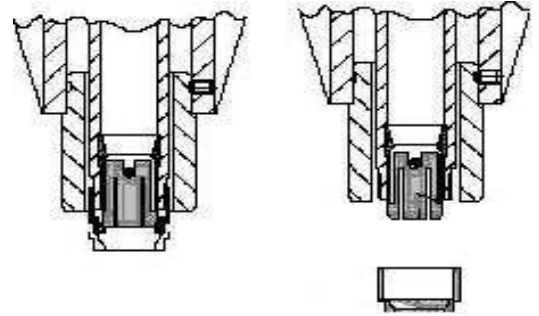


DABOTEK

Note:

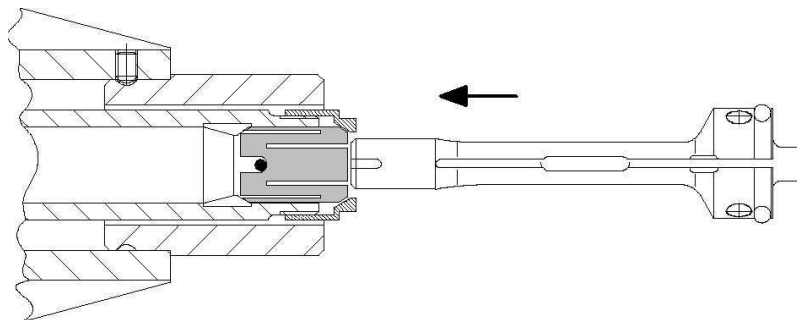
The collet is fixed in the guide shaft with a clamping sleeve. The clamping sleeve ensures a good mechanical connection and a good current transfer between the collet and the guide shaft.

When You replace the collet, it may be that the clamping sleeve is too tight inside the guide shaft. A correct fixing is then not possible. In this case loosen the clamping nut and pull out the clamping sleeve. Put in the clamping sleeve lightly and turn on the clamping nut.



Regard that the slot in the clamping sleeve is direction of the centre pin of the guide shaft.

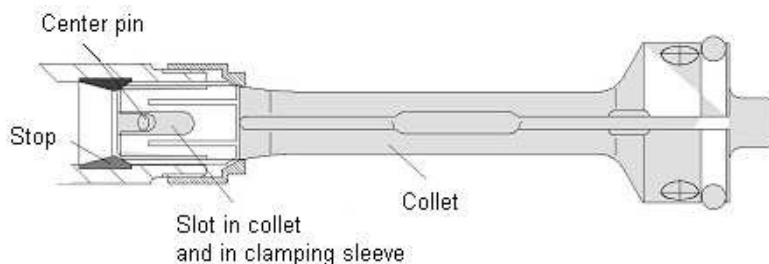
Push the collet inside the guide shaft till its stop.



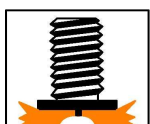
Press the collet to the stop.

Regard that the slot of the collet is in direction of the centre pin.

Fasten the clamping nut with a spanner.



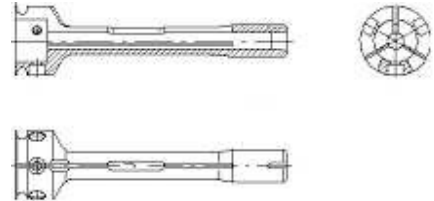
Remark: In the future the clamping sleeve is fixed inside the guide shaft.
This allows a simple clamping of the collet.



DABOTEK

Collets Overview SIK holder

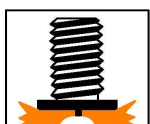
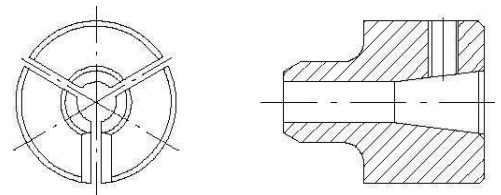
Stud Ø	New No.:	Old no.:
3	600262	4013077
4	600166	4013085
5	600151	4013107
6	600166	4013166
7,1	602176	4013069
8	602163	4013174



Overview SIK contact inserts

Material W/CU

Stud Ø	New No.:	Old no.:
3x6 -20	600159	4014928
3x20 -30	600160	4014901
4x6 -20	600118	4013522
4x20 -35	600375	4015312
5x8 -20	600143	4013409
5x20 -40	600103	4015320
6x8 -20	600169	4015037
6x8 -20	600376	4015339
7.1x10 -25	600381	4015355
7.1x25 -40	600380	4015347
8x10 -25	600197	4015053
8x20 -40	600382	4015363



DABOTEK

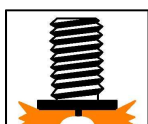
Overview SIK holder slim

Material Cube

Stud Ø	Order No.
2.3	4011449
2.5	4017226
3	4017781
4	4017668
5	4015258
6	4017648
7.1	4017676
8	4017692



Remark: The articles in the tables are standard articles.
Special dimensions are possible.



DABOTEK

Stud supply tube

Description

The stud supply tube transport the stud into the welding head. The tubes are made from a non abrading polyamide. The tube diameter depends on the different stud types. In Table you find the different types with order number

Stud Ø (mm)	Tube Ø (mm) outside	Tube Ø (mm) inside	Order No.	Mat. No.
3	8	5	4020863	12500011
4	10	6	4026667	12500038
5		7	4019989	12500046
6		8	4020901	12500070
7.1	12	10	4020928	12500062
8 _				

Replacement

The stud supply tube is directly put into the guide shaft of the welding head and clamped.

Loosen the nut of the tube fixing.

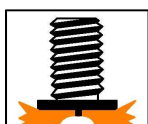
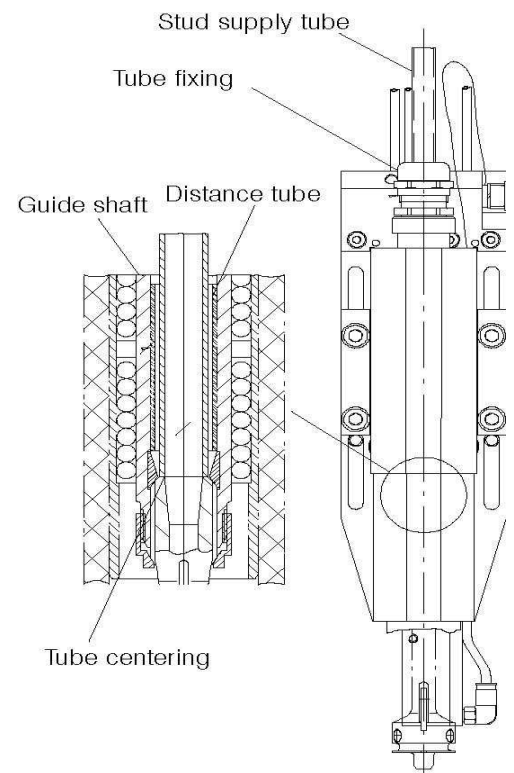
Pull the stud supply tube out of the guide shaft.

Before you mount a new stud supply tube, put in the required collet.

Put the new stud supply tube into the guide shaft down to the stop.

The tube centres itself. With slender stud supply tubes its recommended to use a distance tube with a outside diameter of 14mm.

Remark: The tube must be put into the guide shaft down to the stop! In other cases there is a gap between the tube and the collet. If there is a gap the stud can be clamped.



DABOTEK

Finger

Description

Additional to the standard finger special fingers for different jobs are available.

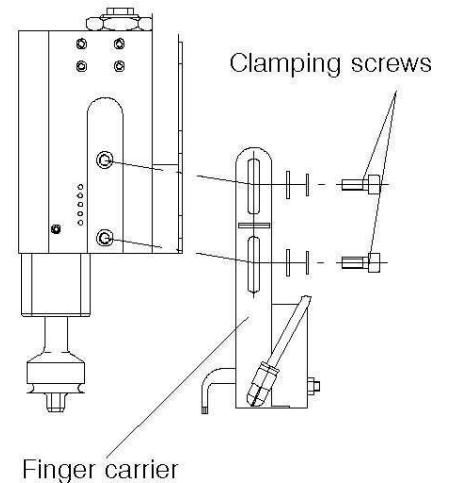
In the appendix You find the different finger types and their using.

Replacement

The easiest way to replace the finger is to dismount the complete finger carrier.

Remove the clamping screws.

Press down the blue flange of the tube fixing and pull out the pneumatic tube.

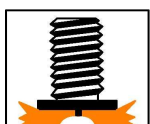
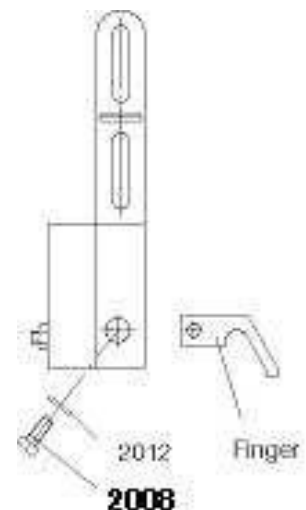


Now you can take the complete finger carrier in your hand.

Remove the screw 2008 and the washer 2012.

Pull the finger out of the finger carrier.

Put in the new finger in the reverse way



DABOTEK

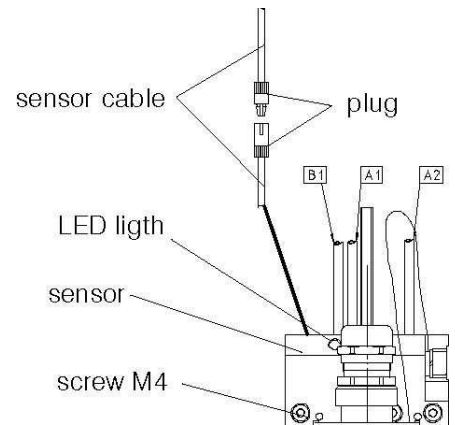
Sensor for basic position SIK 2

Function

The welding head SIK 2 has an sensor for basic position. The sensor is fixed on the welding head. An LED light shows the position. "green" = basic position "red" = no basic position

Replace the sensor

Remove the screw M4 and take away the sensor.
Unplug the sensor cable.
Put on a new sensor.
Connect the sensor cable.



Exchange to other stud diameter

To exchange the welding head to another stud diameter you have to remove the following components:

1	Collet for the new type
2	Finger if it is necessary
3	Feeding tube if it is necessary

Refer to this manual when You exchange the parts.



DABOTEK

Maintenance

Welding head

Clean periodic all parts of the welding head from adhesive splashes and smoke.

Guide shaft of the welding head

The guide shaft of the welding head moves in two gearings. The guide shaft and the bearings are greased and protected against splashes and smoke .Anyway we recommend to clean the guide shaft with a clean cloth and grease it from time to time.

Remark: *Do not use oil. Oil will move to the bottom and may adhesive other parts.*

Workpiece carrier, earth clamps, earth contacts

Clean the contacts of the earth clamps from splashes and smoke. Only with clean contacts You have a good fixing and a good welding current transfer to the work piece.

Remark: *If there are burning marks at the work piece a good current transfer is no longer possible. Please replace the earth contacts*

Collet

The collet consists of three parts.

The holder has the job to fix and to guide the contact inserts

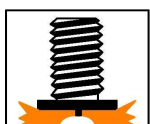
The contact inserts transfer the welding current to the stud.

The spring produces the necessary contact pressure.

For a proper function all parts must be cleaned accurately.

Remove splashes and dispositions from the slots and the contact inserts.

If there are burning marks at the contacts, they should be replaced.



DABOTEK

Troubleshooting

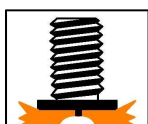
Fault	Cause	Correction
Stud is welded, but strength is not good	Plunge speed of the welding head is not correct Welding energy is not correct Distance between welding head and work piece is not correct Welding cable broken Increased resistance	Change the plunge speed Increase or decrease the welding energy Adjust the welding head Check welding cable and replace if necessary
Burn marks on stud	Stud contact insert worn	Replace contact insert
Studs are not always firm Molten metal flows out of the welding zone on one side only	Arc blow effect earth contacts applied too much on one side	Apply earth contacts symmetrically to the to the welding position

Remark: Do you need help ?

If so, please contact our factory direct:

DABOTEK ApS
 Birkedam 10 S
 DK- 6000 Kolding
 Denmark
 Telephone: +45 7550 5666

www.dabotek.com
sales@dabotek.com



DABOTEK

Transport and handling

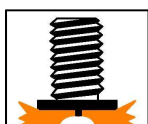
The appliance is transported by suitable means in appropriate packaging. Please keep the transport packaging carefully. Transport or send the appliance only in this original packing. If you do not want to keep the packaging material, dispose of it as appropriate for the material.

Damage in transit contact our dispatch department before you return any goods.

Under no circumstances return the appliance to us without being asked to do so.

Be sure to adhere to the notification periods, since the replacement obligation of the carriers will otherwise lapse.

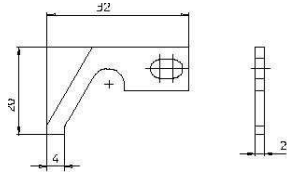
Packing damaged during transit by	
Rail	Carriers
Unpack in the presence of a rail employee, have damage inspected and apply to the goods service department for a condition report.	Unpack in the presence of the driver. Obtain written confirmation of the damage.
Notification period: 1 week	Notification period: 4 days
Packaging in order; contents damaged	
Notify the goods clearance department concerned. Inspect and apply for a condition report.	Notify the carriers and ask for an inspection. Have damage inspected.
Notification period: 1 week	Notification period: 4 days



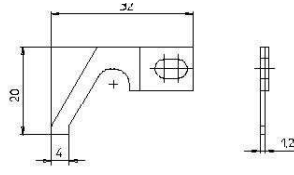
DABOTEK

Fingers

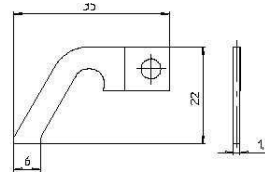
Finger standard



Part no.
4014162
Mat.no.
377049909

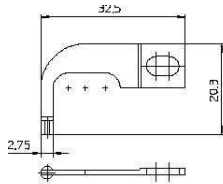


Part no.
4014138
Mat.no.
377049445

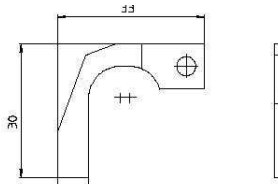


Part no.
4014294
Mat.no.
37049984

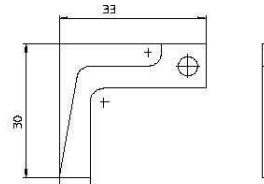
Finger special



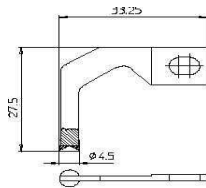
Part no.
Finger for SIK2
universal 4014197
Mat. no. 37049992



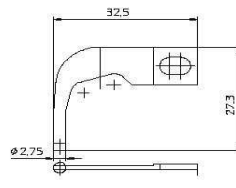
Part no.
Finger for 10x10 Stud
holder 4014278
Mat. no. 37049712



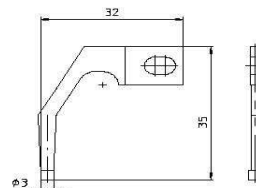
Part no.
Finger pneumatic
collet 10x10 4014251
Mat. no. 37049917



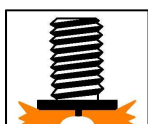
Part no.
Finger for studs $\text{\O}3 \times 10$
special 4014227
Mat. no. 37049933



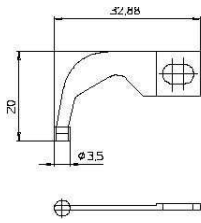
Part no.
Finger for studs $\text{\O}3 \times 6$
special 4014170
Mat. no. 37049045



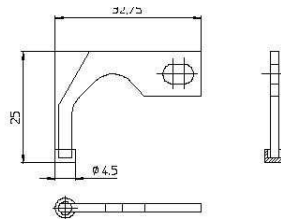
Part no.
Finger for studs $\text{\O}4 \times 6$
special 4014219
Mat. no. 37049925



DABOTEK



Part no. 4014189
Finger studs $\text{Ø}3 \times 20$
37049976 special
Microprint



Part no. 4014200
Finger for studs
37049968
Neil tools

