



14 Route d'Auray – ZA de Talhouët
56330 PLUVIGNER
Tel : +33966 90 42 70
Email : info@artosfrance.com
Siret : 34273353200044

MANUAL

Rotation Stripping-machine **AM.ALL.ROUND V1.2**

+ versions

AM.ALL.ROUND V1.2 - 400

AM.ALL.ROUND V1.2 - 750

AM.ALL.ROUND V1.2 - 1000

TABLE OF CONTENTS

PRELIMINARY REMARKS -----	4
1 TECHNICAL DATA -----	5
2 SHORT DESCRIPTION OF THE MACHINE -----	6
2.1 APPROPRIATE USE CORRESPONDING TO THE ENCLOSURE II A OF THE EC MACHINERY DIRECTIVE 2006/42/EG.-----	6
2.2 NON-APPROPRIATE USE-----	6
2.3 LOCATION/ROOM CLIMATE-----	6
2.4 FUNCTIONAL DESCRIPTION-----	6
2.5 FUNCTIONAL PROCESS-----	7
2.6 SECURITY -----	8
2.6.1 GENERAL SAFETY INSTRUCTIONS-----	8
2.6.2 LABELING DANGERS AND NOTES-----	8
3 OPERATION AND ADJUSTING POSSIBILITIES -----	9
3.1 OPERATION MODE-----	9
3.1.1 CHOISE OF LANGUAGE-----	9
3.1.2 COMPATIBILITY TO OLDER AM.ALL.ROUND MACHINES-----	9
3.1.3 ANNOUNCEMENTS ON THE DISPLAY-----	10
3.1.3.1 STANDARD-ANNOUNCEMENTS-----	10
3.1.3.2 ERROR - ANNOUNCEMENTS-----	11
3.1.4 DEFECTIVE OPERATION-----	12
3.2 CABLE DIAMETER-----	13
3.3.1 STRIPPING LENGTH-----	13
3.3.2 MODIFICATION SENSOR EXTENSION-----	14
3.3.3 CONVERSION TO LONGER STRIPPING LENGTHS IN PARTIAL PULL-OFF (UP TO 1,000 MM POSSIBLE - OPTION)-----	14
3.3.3.1 PRELIMINARY REMARKS-----	14
3.3.3.2 DIRECTIONS FOR CONVERSION BY THE CUSTOMER-----	15
3.3.3.3 STANDARD STRIPPING LENGTH AND EXTENDED STRIPPING LENGTHS IN PARTIAL TAKE-OFF.-----	15
3.4 REMOVAL LENGTH-----	16
3.5 BLADE HEAD ROTATION TIME-----	16
3.6 PRESSING POWER OF THE CLAMPING JAWS-----	16
3.7 OPERATION WITH FOOT SWITCH-----	17
4 OPERATION/SETTING INTO USE -----	18
4.1 VIEWS OF THE CONTROL PANELS-----	18
4.2 OPERATING ELEMENTS-----	19
5 SETTING INTO USE -----	20
5.1 COMPRESSED AIR AND POWER CONNECTION-----	20
5.2 SWITCH ON/SWITCH OFF-----	20
5.3 SAFETY DEVICES -----	20
5.3.1 SAFETY CYCLE I-----	21
5.3.2 SAFETY CYCLE II-----	21
5.3.2.1 DEFECT CLOSURE PANEL-----	21
5.3.3 SAFETY CABLE GUIDE-----	21
5.3.4 SAFETY PANEL-----	22
5.3.5 OPERATING WITH SOFT CLAMPING-----	22
5.3.6 RESIDUAL RISKS-----	22
5.3.6.1 HAZARDS GENERATED BY LIQUIDS-----	22



FEINTECHNIK
RITTMEYER

5.3.6.2 HAZARDS GENERATED BY CABLE SLIDING THROUGH OPERATORS HAND	22
5.3.6.3 HAZARDS GENERATED BY CHANGING BLADES	23
5.4 BLADE TYPES AND FUNCTIONS:	23
5.5 BLADE CHANGE	23
5.6 AUTOMATIC MOTOR CONTROL	24
6 MAINTENANCE/SERVICE	24
6.1 GENERAL REFERENCES	24
6.2 SAFETY CHECK LIST	25
6.3 OTHER MAINTENANCE WORKS	25
6.4 PNEUMATICS	26
6.5 MACHINE INTERIOR	26
7 LIST OF DEFECTS	27
8 ACCESSORIES	28
8.1 STANDARD EQUIPMENT	28
8.2 SPECIAL EQUIPMENT	29
9 GUARANTEE	30
9.1 GUARANTEE CONCESSIONS	30
9.2 GUARANTEE RESTRICTIONS	30
10 SPARE PART-LISTS	31
10.1 DRAWING PARTS	31
10.2 DIN-PARTS	33
10.3 PNEUMATICAL PARTS	34
10.4 ELECTRICAL PARTS	35
10.5 STANDARD-MODULES/SPECIAL ACCESSORIES	36
11 ENCLOSURES	37
11.1 DRAWINGS:	37
11.1.1 OVERVIEW KNIFE SHAPES	37
11.1.2 STOP 160	38
11.1.3 PNEUMATIC PLANS	39
11.1.4 LAYOUT CONTROLLER CIRCUIT BOARD (039.5028)	40
11.1.5 EXTENDED STOP UP TO 400 MM (039.5102)	41
11.2 OTHER DOCUMENTS	42
11.2.1 SAFETY INSTRUCTIONS AND MAINTENANCE TO COMPRESSED AIR REGULATOR 039.6018	42
EC-CERTIFICATE OF CONFORMITY	47

Preliminary Remarks


First of all, we would like to thank you very much that you decided in favour of the AM.ALL.ROUND V1.2 cable stripping machine. We trust you will have many years of practical and reliable use.

The manual on hand corresponds to the regulations in enclosure II A of the EC Machinery Directive 2006/42/EG.

The original manual was made in German language.


The manual is an important part of the supplied machine and should be kept near the machine for quick access.

The manual has been structured chronologically and shows the necessary adjustments of the machine parameters, the safety devices etc. step by step. Thus, it considerably facilitates safe work with the machine.

ADVICE	
	<p>Before you take the AM.ALL.ROUND V1.2 into use, you have to study the manual carefully. It is important that the remarks in the manual are comprehensible. Please take care that each machine operator knows and acts according to the descriptions in the manual, especially to the remarks concerning the safety devices in chapter 5.3 ff.</p> <p>In paragraph 2.6 is listed, with which signal words and colors existing residual risks are identified.</p> <p>In paragraph 5.3.6, the existing residual risks are set</p>

If you do not understand the function descriptions, remarks, technical explanations etc. in the manual, please contact your responsible representation resp. our factory in Münster/Germany:

FEINTECHNIK	Tel.:	0251 / 96 115 – 0
R.Rittmeyer GmbH	Fax	0251 / 62 45 25
Höltzenweg 103	Email:	info@rittmeier-beri.de
D - 48155 Münster	Website:	www.rittmeier-beri.de

ADVICE	
	<p>Beyond the standard version of the AM.ALL.ROUND V1.2 with a maximum stripping length of 160 mm total and part stripping length, there are other versions with even longer part - stripping lengths up to 1000 mm (part strip9 - depending on the isolations).</p> <p>In this manual the extension of the AM.ALL.ROUND V1.2 up to a stripping length (part stripping) of 400 mm realised by a customer is described exemplarily.</p> <p>If you get a machine with different stripping lengths, this manual is relevant also. Please consider that the modified parts like cover and pipe will have other part numbers, and that the belonging cable and tube are fitted in their length.</p>

1 Technical Data

Machine Type	Rotation Stripping Machine
Type Name	AM.ALL.ROUND V1.2
Producer	FEINTECHNIK R. Rittmeyer GmbH Höltengeweg 103; D - 48155 Münster Phone 0251 96 115 0 Fax 0251 62 45 25
Sound Level	< 70 dB(A)
Operating Voltage	230 VAC
Power Supply	max. 120 W
Operating Pressure	6-7 bar
Air Consumption	4,1 l at 6 bar and 160 mm stripping length
Cycle Time	2 - 5 sec.
Stripping Length (total stripping)	approx. 5-160 mm major stripping length (part stripping) possible (option)
Stripping Diameter	approx. 2-24 mm
Machine Location	table, work bench, or similar
Local necessities (W x D x H)	380 x 635 x 260 mm (standard version)
Weight (without accessories)	approx. 29 Kg (standard version)
Start Impulse	with sensor or foot switch
Standard Blades	flat stripping blades
Special Blades	prismatic blades for cable Ø 2-16 mm prismatic blades for cable Ø 8-24 mm die blades adapted to cable-Ø other blade types on request TIN-coating possible for all blades
Start impulse	by sensor or by foot switch

ADVICE



The AM.ALL.ROUND V1.2 in its standard version has a stripping length of 160 mm. The machine can be rebuilt ex works or by our customers, if required. For all of these variations this manual is relevant.

The present operating instructions is valid:

- For the standard engine (stripping length up to 160 mm)
- For a machine with a stripping length (partial withdrawal) over 160 mm
- For a factory-rebuilt engine

2 Short Description of the Machine

Please check the shipment immediately after delivery of the new AM.ALL.ROUND V1.2 for completeness, for visible or covered transportation damage etc. You can find a list of the standard accessories' set in chapter 8.1.

Please contact the responsible forwarder in case of possible transportation damage. Please contact your supplier if you miss accessory parts.

2.1 Appropriate Use Corresponding to the Enclosure II A of the EC Machinery Directive 2006/42/EG.

The AM.ALL.ROUND V1.2 has been developed by FEINTECHNIK R. Rittmeyer GmbH for the stripping of round cables with isolations made of different materials like synthetics, rubber, PUR, teflon etc. and - depending on its structure - copper mesh of coaxial cables.¹

2.2 Non-Appropriate Use

The AM.ALL.ROUND V1.2 is not made for the radial processing of materials other than those which are normally used for isolation and jacket materials of cables and electric conductors.

The AM.ALL.ROUND V1.2 is not made for the processing of massive shields made of copper or harder materials, steel wire networks etc. also.

Non-appropriate use makes all guarantee and liability regulations ineffective.

2.3 Location/Room Climate

The AM.ALL.ROUND V1.2 has been constructed as a table instrument. The operator can work either in a sitting or standing position in front of the machine.

Please take care that the room climate corresponds to the usual factory conditions. The machine is not intended to be operated in humid or wet rooms, in rooms with excessive dust production or in an environment containing explosives.

No liquids or parts may enter the casing of the AM.ALL.ROUND V1.2.


2.4 Functional Description

After the release of the start impulse, either by sensor or by foot switch, rotating blades radially cut the insulation of cables, conductors etc. up to the requested diameter that has been preadjusted. They hold this diameter until the back stroke of the pneumatic cylinder pulls off the insulation of the conductor.

The insulation waste is ejected through the guide of the side cover and can easily be collected separately.

¹ also see chapters 2.4 and 2.5

2.5 Functional Process

ADVICE	
	<p>To reach the start-position of the machine after switching on the net main switch 018.7007 or after closing the Makrolon-cover you have to press the RESET – button 026.7003 for restart.</p>

To start the machine, the cutting head must be at the front of the machine and the machine must be in the basic position. If the machine is switched on and the stripping head is not in the front position, the stripping head will not automatically move to the front basic position. The safety guard must be opened and the stripping head pulled to the front by hand into the basic position.

Following must be set for basic position:

Strike plate 039.5100 is closed. Strike plate button 018.7011 (inside the machine at the blade head retaining bracket) is closed in idle state but not actuated.

RESET button, sensor button or foot button are open (not actuated).

Rear stop button 018.7011 (inside the machine on the machine rear wall) is not actuated/opened.

Basic position/front stop button 018.7011 (inside the machine on the front wall) is closed (the blade head is at the front).

The cable is put through the silver aluminum cable guide on the front plate (sleeves 039.0071/..72 or ..73) all the way to the adjustable stop dog 039.0068. The single working steps are released by the sensor 039.5013_1 (resp. by the foot switch if flexible conductors or similar are processed/optional). The working cycle for the stripping process functions as follows:

- A** Initial position A; clamping jaws 039.5003 and blades are opened; blade head 039.0003 is in front position, behind the clamping jaws².
- B** After the release of the sensor or the foot switch the clamping jaws 039.5003 close. The cable is clamped and centered to the blades. Then, the blades within the blade head also will close.
- C** After ca. 0,2 sec. the blade head starts to rotate. The stripping blades cut through the insulation up to the preadjusted diameter.

The closing movement of the blades is damped by a shock absorber (M) 039.0104 in the blade head. After having reached the preadjustable rotation time (ca. 0,3-3 sec.) the blade head stops rotating.


- D** Then, the long cylinder 039.6043 pulls back the complete blade head. The insulation is removed by the blades that are preadjusted for the working diameter. When the blade head moves backwards, the semi-cup 039.5101 of the cable channel opens, and the closing panel 039.5100 (at the right machine side below) is closed due to safety reasons.
- E** In the final position, which is determined by the stop dog 039.0248 on the piston rod of the stripping cylinder 039.6043, the stripping blades open again, and the clamping jaws release the cable. The blade head remains in the back position for another ca. 0,4 sec. Within this period you **have to** remove the cable from the machine.
- F** Finally, the long cylinder moves back with blades open to the initial front position (see 2.5 A).

² "Front position" of the blade head implies that the blade head is placed in a position directly behind the clamping jaws. This position corresponds to initial position A. "Behind" implies that the blade head is placed directly before the back plate 039.0239.

2.6 Security


2.6.1 General safety instructions


The AM.ALL,ROUND stripping machine is a machine in the sense of the Machinery Directive. A hazard to operators can be largely excluded if the machine is used properly. However, no system can be completely protected against misuse. All modifications, extensions or other construction changes not made at the factory by the manufacturer and not approved in writing will result in the loss of warranty and liability claims.


DANGER	
	<p>Imminent danger</p> <p>If the information is not followed, death or serious bodily injury (disability) will be the result.</p>


2.6.2 Labeling Dangers and notes

Below is an overview of the employed notes on hazards:

DANGER	
	<p>Imminent danger</p> <p>Death or serious personal injuries (invalidity) will result, if the information is not observed.</p>

WARNING	
	<p>Possible hazardous situation</p> <p>Death or serious personal injuries (invalidity) can result, if the information is not observed.</p>

CAUTION	
	<p>Potentially dangerous situation</p> <p>Damage to property or light to medium personal injury can result, if the information is not observed.</p>

NOTE	
	<p>Notes, useful operator tips and operating recommendations, which do not affect the safety and health of the personnel.</p> <p>Highlights useful tips, recommendations and information for efficient and trouble-free operation.</p>

3 Operation and Adjusting Possibilities

In order to achieve optimum stripping results with the AM.ALL.ROUND V1.2 machine you can adjust as follows:

The cable diameter (3.2), the stripping length (3.3 ff.), the removal length (3.4), the blade head rotation time (3.5) and the pressure power of the clamping jaws (3.6).

3.1 Operation mode

The actual operation-mode of the AM.ALL.ROUND V1.2 is shown on the LC-Display.

The green light diode as well as the red one on the controller circuit board (inside the machine) are only for service. They don't give further informations than the LC-Display.

3.1.1 Choise of language

The change-over of languages (german / english) is possible during the switch on of the machine, if you press the RESET-button at the same time. The actual language is stored automatically.

3.1.2 Compatibility to older AM.ALL.ROUND machines

All existing green/red LED modes of older AM.ALL.ROUND machines are still supported due to backward compatibility with earlier AM.ALL.ROUND boards. Consequently, the new board can be installed in an older machine (without LC display).

3.1.3 Announcements on the display

3.1.3.1 Standard-announcements

No.	LCD - Indication	Description of the announcement	Notices
02	be-ri Software Version 1.1	After switching on the machine or after closing the safety-cover for about 1 sec.	*1
03	* Status OK * go on with RESET	When the machine is switched on, after about 1 sec., if there is no error	
04	No starting position	After switching on: there is no starting position (the blade head is not in the starting position; no compressed air)	
06	Internal error #01	After switching on: the internal error No. = xx. (initial error,...)	
10	ready to go	The machine is ready to work (until processing a cable or until the waiting mode is coming)	
11	working cycle started	The machine is started (the working cycle runs)	
12	* waiting mode * go on with RESET	The machine is in the waiting mode (after ca. 60 sec. without start impulse)	
13	closure panel not closed?	Closure panel is not closed (after switching on the machine, or during processing mechanically clamped, or switch/cable defective)	
14	closure panel.. go on with RESET	After closure panel at first was not closed, but now is closed.	

*1 – during this time the green LED flashes with 8 Hz (about 8 times/sec.)

3.1.3.2 Error - announcements

These announcements are for service/maintenance and demands an expert. Normally an inhouse electrician is able to solve the problem with the documents *circuit layout (Schaltplan)* and *layout of the printed circuit board of the control (Platinenlayout der Steuerungsplatine)* - see chapter 11 / enclosures. If this is not possible, please feel free to contact us in our company in Germany phone-No. +49 (0)251 . 96 115 – 0.

No.	LC-Display	Description of the announcement
30	motor-driver: overcurrent	Overcurrent-switching is activated (short circuit in the cable, in the motor..)
33	Timeout: Fehler S4	Waiting error, because after 20 sec. still not expected mode. RESET-switch
34	Timeout: Fehler S3	Waiting error, because after 20 sec. still not expected mode. START – switch.
35	Timeout: Fehler S6	Waiting error, because after 20 sec. still not expected mode. switch 018.7011
36	Timeout: Fehler S7	Waiting error, because after 20 sec. still not expected mode. switch 018.7011
37	Timeout: Fehler S5	Waiting error, because after 20 sec. still not expected mode. Closure panel security-switch.
40	Timeout: Fehler xx	Waiting error, because after 20 sec. still not expected mode. Mode not definable

After solving the problem and after closing the safety cover the machine works again as after first switching on (see 3.1.3.1).

3.1.4 Defective Operation

If a defective operation occurs with the AM.ALL.ROUND V1.2 - especially in the case of initial use, first check the ejection of the waste insulation slugs which can have an effect on the safety devices. The waste material is ejected from the machine by a moving chute. If waste is accumulated, it is possible that the closing of the chute is inhibited which in turn stops the machine operation and keeps the machine in a defect mode. Please check this and proceed according to the list given below.

Display Operation Mode	Machine State	Mode
LC-Display does not work	<p>machine stops working after defect because safety cover is opened, primary circuit is interrupted</p> <p>for restart:</p> <p>eliminate defect (insulation rests?)</p> <p>After closing the safety cover the machine can be restarted, see 3.1.1</p>	mode defect primary circuit
closure panel not closed?	<p>machine does not work because of defect closing panel</p> <p>for restart:</p> <p>eliminate defect (insulation rests?)</p> <p>After closing the safety cover the machine can be restarted, see 3.1.1</p>	mode defect closing panel

3.2 Cable Diameter

The adjusting screw (M) 039.0016 for the cable diameter is in the blade head. It is an M10 screwed pin with socket head. The adjustment is made with a 5 mm-allen key³. The adjusted diameter can be taken from the nonius (M) 039.0010, situated on the blade head.

Always first adjust a diameter, slightly above the actual measured diameter of the **jacketed** cable, in order to avoid unnecessary blade wear. Set the optimum value by several adjustments and note down the value for further applications.


The safety cover 039.0250 has to be opened in order to adjust the cable diameter. Doing so, the air supply for all pneumatic parts is exhausted, also the voltage supply for the electric motor (M) 039.7044 (Modus Störung Primärkreis/mode defect primary circuit). Then turn the blade head that way that you have direct access to the adjusting screw for the cable diameter.

For this adjustment use an allen key 5 mm with long shaft. Since this spanner is such long you cannot forget it in the machine interior. This fixed spanner should always be in reach of the operation place.


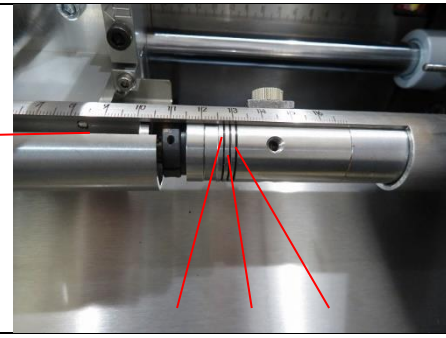
3.3.1 Stripping Length

The stop sensor 039.5013_1 is adjusted to the required stripping length⁴. It is integrated into the guide tube 039.0216 and can be manually adjusted with an M4 nut 039.0120.

The hexagon nut is tightened or loosened with an open-ended spanner (8 mm standard accessory). Make sure that the disc 039.0218 rests positively on the guide tube.

WATCH OUT	
	<p>Please ensure that the open-ended spanner is removed immediately after each sensor adjustment. Danger of collision!</p>

The set stripping length can be read off from three marking rings on the sensor cylinder:

Marking rings		
<p>In the direction of clamping / blade head</p> 		<p>1 (the left ring) = Flat knife edge at the back "positive"</p> <p>2 (the middle) = Prism knife- / V-knife- / nozzle knife cutting edge centrally</p> <p>3 (the right) = Flat knife edge in front "negative" (direction of clamping)</p>
	<p>1 2 3</p>	

³ included in standard accessories' set

⁴ "stripping length" is the distance, seen from the cable end, on which the round cut shall be made. On which length the insulation shall be removed, depends on the adjustment of the removal length (3.4). ab.

3.3.2 Modification Sensor Extension


With a cable outside from approx. 15 mm and a stripping length under approx. 15 mm, the sensor extension⁵ should be used to increase the function guarantee and a problem-free disposal of the cable remainders. This is to be attached as follows:

1 Open safety cover

2 Remove stop sensor 039.5013_1 from the cable channel

3 Screw on sensor extension 039.0108 with 2 M2x5-cylinder screws⁶ with allen key 1,5 mm⁷ on the stop plate of the stop rod 039.0068

4 Reinstall stop sensor in guide pipe

WATCH OUT	
	<p>With the sensor extension, the dimension of the sensor to the blades is reduced by 30 mm. So the sensor may max. be adjusted to a stripping length of 38 mm - otherwise, the extended stop dog sensor could get into the working area of the blades resp. clamping jaws and there lead to mechanical defects. So we recommend to only use the sensor extension in those rare cases, where it is really needed.</p> <p>In practice, the processing of cables with a diameter of more than 15 mm with a stripping length below 15 mm hardly appears - the sensor release is only made for this application that an easy management of the existing waste is possible.</p>

3.3.3 Conversion to longer stripping lengths in partial pull-off (up to 1,000 mm possible - option)

3.3.3.1 Preliminary remarks

Beyond the standard version of the AM.ALL.ROUND V1.2 with a maximum stripping length of 160 mm total and part stripping length, there are other versions even with longer part - stripping lengths (depending on the cable, stripping lengths of up to 1,000 mm are possible in the partial take-off - option).

In this manual the extension of the AM.ALL.ROUND V1.2 up to a stripping length (part stripping) of 400 mm realised by a customer is described exemplary.

If you should get a machine with different stripping lengths, this manual also is relevant. Please consider that the modified parts as cover and pipe will have other part numbers, and that the belonging cable and tube are fitted in their length.


⁵ included in the standard accessories' set

⁶ included in the standard accessories' set

⁷ included in the standard accessories' set

3.3.3.2 Directions for conversion by the customer (see also chapter 11.1.2 and 11.1.5)

For stripping lengths > 160 mm part stripping - in this manual up to 400 mm - the standard sensor 039.5013_1 of the AM.ALL.ROUND V1.2 can be used in an extended guide pipe (*no. 039.0164 in the 400 mm version*). For the modification, the standard sensor 039.5013_1 and the pipe 039.0216 have to be removed. This is carried out as described below:

WARNING	
	Separate machine from the power supply and from the air supply before you begin the work!


Now unscrew the protective cover 039.5008 from the rear panel of the AM.ALL.ROUND V1.2. Then disconnect the air quick coupling 039.6013 from the sensor and pull the Preh plug from the plug socket 008.7002. Then the sensor lock nut 039.0120 can be unscrewed and the sensor completely removed from the guide tube.

Loosen the two screws 010.8006 and remove the guide tube holder 039.0027 with the guide tube 039.0216 from the machine.

After that, the holder of the guiding pipe from the half pipe 039.0216 can be screwed at the guiding pipe 039.0164 and mount both parts after that back into the machine.

Now the sensor with the extended tube and extended cable can be placed into the guiding pipe and then can be connected with the connectors at the backside of the machine.

After that the extended safety cover sheet (*039.5029 for the 400mm extension of the AM.ALL.ROUND V1.2*) also can be screwed at the backside of the machine.

WARNING	
	The cover panel 039.5008 (safety part) must be fastened at the back plate again before you begin with the work.

3.3.3.3 Standard stripping length and extended stripping lengths in partial take-off.

The following is an overview of the functional elements for converting the machine to different stripping lengths:

Strip	Assembly Group	Pulling off	Protectice cover	Guide tube	Guide tube-holder
160 mm; Standard	039.5123	Full-strip	039.5008	039.0216	039.0027
400 mm	039.5124	Part-strip	039.5029	039.0164	039.0027
750 mm	039.5125	Part-strip	039.5031	039.0165	039.0027
1000 mm	039.5126	Part-strip	039.5040	039.0166	039.0027

3.4 Removal Length⁸

The required removal length is adjusted with the adjustable stop 039.0248 on the piston rod of the removal cylinder 039.6043. After loosening of the socket head cap screw 004.8043, the stop on the piston rod is brought in the requested position so that the arrow on the stop is aligned with the scale mark on the separator 039.0220. Then fix it with the 5 mm hexagonal spanner.

3.5 Blade Head Rotation Time


With the turning potentiometer (**Pos. 6**) "ROTATION" on the top side of the casing of the machine, the cut time into the conductor insulation can be steplessly adjusted between 0,3 - 3 sec. By this, it is very easily possible to reach optimum process times.

The scale ring 1 - 10 does not mean the real time. The value 1 is a blade head rotation time of approx. 0,3 sec. the value 10 is approx. 3 sec.

3.6 Pressing Power of the Clamping jaws


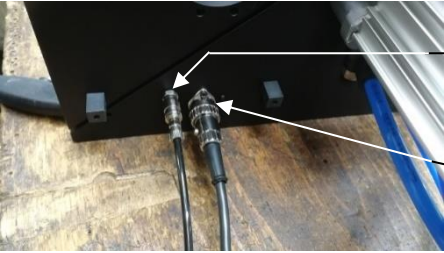

By regulating the pressure regulator valve 039.6031 (**Pos. 2**) left side of the front panel the holding power of the clamping jaws (normally between 2 - 7 bar) is adjusted. The adjusted holding power can be seen on the manometer 003.6019 (DRUCK/PRESSURE) on the top side of the casing.

Always choose a clamping power that the cable is on the one side held correctly, on the other hand possibly few print signs remain on the cable surface.

WARNiNG	
	<p>Do not attempt to hold by hand an insufficiently clamped cable, always ensure adjustment of cable clamps is correct.</p>

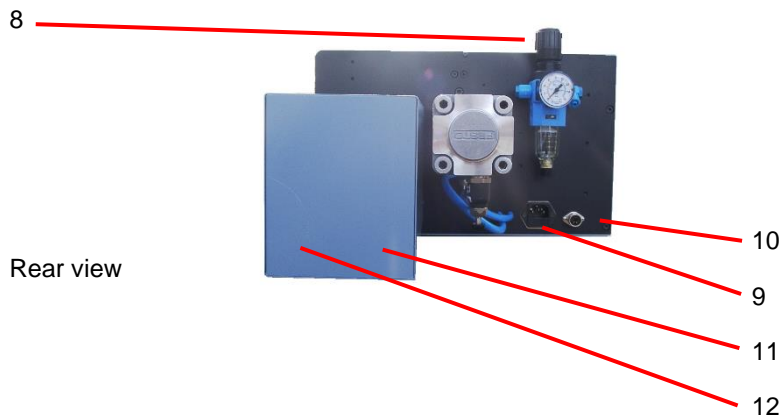
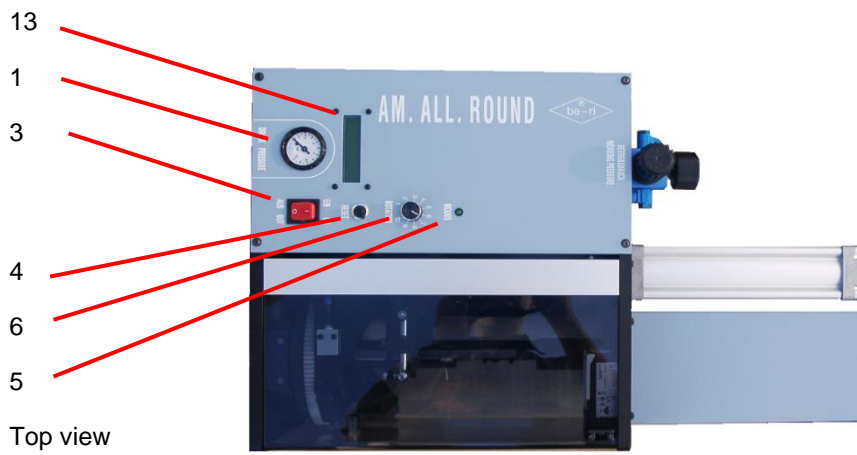
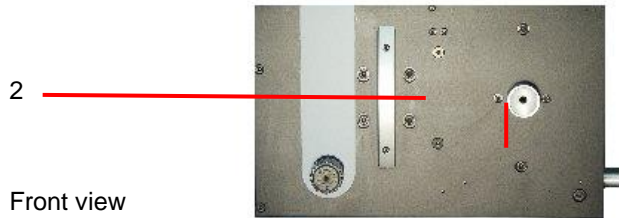
⁸ "removal length" means the distance, for which the insulation of a medium is removed - measured from the round cut in removal direction. Is the removal length smaller than the stripping length, you call it "part strip".

3.7 Operation with foot switch

	<p>Remove protective hood 039.5008</p>
<p>Rear left view (after removal of protective hood):</p> <p>Disconnect electrical connection; Pneumatics must remain connected!</p>	 <p>Leave pneumatic connection unconnected</p> <p>Loosen electrical connection</p>
<p>Rear right view (after removal of protective hood):</p> <p>Connect foot switch (socket is located to the right of the cold appliance plug connection)</p>	 <p>Cold appliance plug socket</p> <p>Socket Foot switch</p>
<p>Replace protective hood 039.5008</p>	

4 Operation/Setting into Use

4.1 Views of the Control Panels




4.2 Operating Elements

<u>Pos.</u>	<u>Description</u>	<u>Drawing No.</u>	<u>Function</u>
1	DRUCK PESSURE	003.6019	display pressure power clamping jaws
2	(press. Regulator valve) ⁹	009.6035	regulation pressure power clamping jaws
3	EIN/AUS ON/OUT	018.7007	net main switch
4	RESET	026.7003	restart of the machine after programme controlled standstill
5	MODUS	016.7007	light diode to show the working mode ¹⁰
6	ROTATION Blade Head	026.7004	regulation rotation time blade head
7	(manometer at pressure regulator valve)	039.6004	display air pressure main air supply
8	BETRIEBSDRUCK WORKING PRESSURE	039.6032	regulation main air supply
9	(net installation plug)	018.7004	net plug 230 V main power supply
10	(Preh-socket 2 poles)	018.7002	Preh-socket 2 poles connection foot switch
11	(Preh-socket 5 poles)	008.7002	Preh-socket 5 poles connector start sensor
12	(tube coupling)	039.6012	air connection sensor pneumatic connection
13	(LC-Display)	039.5022	working mode and error announcement

⁹ descriptions in brackets are not mentioned on the machine as symbols or descriptions

¹⁰ see chapter 3.1 ff

5 Setting into use

DANGER	
	<p>Before you start operating the AM.ALL.ROUND V1.2, you should read the contents of the manual, especially the paragraphs concerning the safety devices (see 5.3). Please ensure that all possible machine operators read the manual.</p>

For safety reasons, the AM.ALL.ROUND V1.2 should be positioned on a safe working bench before the commencement of use, with the safety cover closed.

5.1 Compressed Air and Power Connection

The AM.ALL.ROUND V1.2 is equipped with a filter and regulator valve 039.6032 (**Pos. 8**, working pressure/Betriebsdruck). It is situated on the right rear plate of the machine (see 4.1). At the filter and regulator valve a pin nipple 003.6107 with the locking coupling 003.6106 is attached.

Connect the net compressed air tube - **!** **let the safety cover 039.0250 closed at first** **!** - with the tube seal of the locking coupling 003.6106.

By pulling back the release sleeve at the locking coupling, the AM.ALL.ROUND V1.2 can be disconnected from the compressed air net at any time. The pneumatic components of the machine will be automatically ventilated.

Please take care that only properly prepared compressed air is used which does not contain aggressive media.

Please adjust a working pressure of 6 - 7 bar, to be seen at the compressed air display (**Pos. 8**).

After this, the electrical cable¹¹ 018.7013 should be connected. The connection (**Pos. 9**) is placed on the right bottom rear panel of the machine. Standard net voltage: 230 V/50 Hz).

5.2 Switch On/Switch Off

The switch on/switch off, marked with EIN/AUS (ON/OUT), (**Pos. 3**), is situated on the top control panel. When this switch is on, the machine is supplied with net voltage and the switch illuminates red.

5.3 Safety Devices¹²

The AM.ALL.ROUND V1.2 is equipped with all necessary safety devices. However, no system can be completely protected against misuse. All changes and additions that are not made in the company by the producer or other constructional measures that are not granted in writing, lead to the loss of all guarantee and liability claims.

¹¹ included in the standard accessories' set


¹² The following safety rules and regulations have been considered for the construction of the machine:
- enclosure II A of the EC Machinery Directive 2006/42/EG
- low-voltage directive 2006/95/EG

The individual safety functions and elements are listed below:

5.3.1 Safety Cycle I

After lifting the Makrolon safety cover 039.0250, the primary supply voltage (230 V) is switched off by the safety position switch 039.7005. The net switch still illuminates red in order to show that the machine is still connected to the power net and that the net voltage is not interrupted.

At the same time, the cylinders are exhausted, so that the machine has no pressure and the blades go into a closed position.

WARNING	
	<p>A start of the working cycle <u>may not be possible</u> when the Makrolon safety cover is opened.</p> <p>Should this safety cycle (I) not function correctly then please do not use the machine until the machine has been inspected by a competent engineer - this action must be taken to ensure complete safety to the operator.</p>

When the safety cover is closed and the stripping head is in the basic position, then the blades will open, if the RESET-switch (Pos.4) is activated. The machine can now be started by the foot switch or the sensor.

5.3.2 Safety Cycle II

The opening between Makrolon safety cover 039.0250 and bottom panel 039.5115 for the waste management of the insulation slugs (right machine side) is secured by a closing panel 039.5100. When the blade head goes to its "back position" (see foot note 2), the closing panel is mechanically turned 90°, so that the waste management area for the insulation slugs is closed and that it is impossible to get into the working area of the machine.

When the blade head returns to the front again, the closing panel opens approx. 20 mm before the initial position, and the insulation slugs fall out of the machine.

5.3.2.1 Defect Closure Panel

If material is situated between Makrolon cover and closure panel, when the blade head goes back, the working area of the machine cannot be closed. In that case the electric safety switch 018.7011 puts the machine to the mode "defect closure panel" ("Störung Schließblech").

5.3.3 Safety Cable Guide

Another - mechanical - safety device restricts the access to the clamping jaws' and blade area when the cable guide sleeves 039.0071-.73 are changed. When the sleeves are removed, an internal bolt 039.0246 closes off the hole (M32x1,5) in the front plate.

When refitting the cable guide sleeve, the bolt has to be pulled back manually (accessible from the inside of the machine when the safety cover is opened).


5.3.4 Safety Panel

A safety panel 039.0107 is screwed on to the back of the AM.ALL.ROUND V1.2. This avoids injuries by the cable guide pipe and waste panel 039.0232, coming out of the machine interior.

5.3.5 Operating with soft clamping




Soft clamping with safety instructions


WARNING	
	<p>For safety reasons the AM.ALL.ROUND V1.2 should be operated only with sensor release while the soft clamping is inserted (not with pedal switch).</p> <p>Should the use of a pedal switch becomes necessary, an additional protective pipe / guide tube has to be refitted to ensure the safety distance between user's hand and clamping operation of the soft clamping.</p>

5.3.6 Residual risks


5.3.6.1 Hazards generated by liquids

DANGER	
	<p>Liquids can get into the interior of the machine and cause damage and harm to persons (eg from electric shock by a short circuit caused by liquids).</p> <p>Prior to the resumption of the work must be ensured that professional repairs of the machine have been carried out by qualified personnel.</p>

5.3.6.2 Hazards generated by cable sliding through operators hand

WATCH OUT	
	<p>At too low holding force of the clamping jaws (adjustable) the cable can be pulled into the machine during return stroke of the cylinder. The operator must release the cable then, otherwise the cable slides through the operators hand, which can lead to injury.</p>

5.3.6.3 Hazards generated by changing blades

WATCH OUT	
	<p>When changing blades, caution is advised. Even if the machine is not in operation itself, injuries by sharp knife edge are possible due to rough handling.</p>

5.4 Blade Types and Functions:

The standard AM.ALL.ROUND V1.2 is supplied with flat blades, edges "negatively"¹³. These can also be positioned "positively" through the boths-sided sinking at the blades.

Other available blade types are:

V-blades resp. prismatic blades 039.0601 / 039.0602¹⁴

- for insulation types, where a working surface of the blades at 4 mm circular segments is sufficient

Die Blades 039.0085

- for especially hard adhering, especially thin or tough insulation types or s. th. similar, where a maximum working surface of the blades is necessary for the insulation removal.

Special Blades


- for example with centering aid, available on request for example with TIN-coating

5.5 Blade Change

The blade change is carried out as follows:

- open Makrolon safety cover and manually push back blade head

- loosen countersunk bolt M4 with the 2,5 mm allen key¹⁵. Now, the blades can be pushed from their guides nuts in the blade head. The installation is made in the opposite way.

WATCH OUT	
	<p>Before new blades are fitted, clean blade guides and remove foreign parts.</p>

¹³ "negative" put in blades mean, the sloping cutting surface shows in direction machine back plate. The sloping cutting surface removes the insulation from the cable.

¹⁴ blades 039.0601 (generation 2) for cable-Ø 1-16 mm
blades 039.0602 (generation 2) for cable-Ø 8-25 mm

¹⁵ included in the standard accessories' set

5.6 Automatic Motor Control

A direct current motor (24 V) turns the blade head to the right and so makes the cutting movement of the blades. Turned to the left, the motor opens the blades and keeps them open against a spring in the blade head. In order to not unnecessarily stress the motor and to increase its life time, it automatically switches off approx. 60 sec. after the last working cycle. (*valid from machine no. 700*) The blades go together until the adjusted diameter is reached.

The compressed air is kept.

In order to be able to restart the machine, please release "reset" (**Pos. 4**). This brings the machine to the mode "readiness for use" ("Betriebsbereitschaft"). The blades are reopened and the next working cycle can be started.

6 Maintenance/Service

6.1 General References

In order to be able to fulfil the correct conditions for an optimum operating and machine security, we recommend the regular control of all safety relevant construction parts and function cycles, corresponding to the frequency of their use.

A safety check as described in 6.2 only takes a few minutes.

6.2 Safety Check List


Control situation of the AM.ALL.ROUND V1.2	<ul style="list-style-type: none"> - Machine connected to compressed air and power net - Makrolon safety cover 039.0250 closed - panel 039.5100 opened - cable guide sleeve 039.0071,..72 or ..73 screwed in
--	--

machine mode	safety control	effect
--------------	----------------	--------

work	during blade head goes back, slightly open safety cover after release	primary circuit interrupted <ul style="list-style-type: none"> - blade head stops - all compressed air gets out - EIN/AUS (On/Out) main switch illuminates red
work	push a soft thing (for example insulation rest, cable or s. th. similar) for a length of approx. 5 cm between closure panel and safety cover, to avoid that the closure panel can close completely	<ul style="list-style-type: none"> - blade head stops - all compressed air gets out - EIN/AUS (On/Out) main switch illuminates red
machine switched off, red EIN/AUS (On/Out) lamp does not illuminate, safety cover closed	screw out guide sleeve	internal bolt closes opening and cannot be pushed from outside
machine switched off, red EIN/AUS (On/Out) lamp does not illuminate, safety cover closed	check safety cover 039.5008 for correct position	possibly fasten screws

6.3 Other Maintenance Works

All important rotating and other movable elements of the AM.ALL.ROUND V1.2 are equipped with antifriction bearings or maintenance-free slide bearings. These parts have a durable greasing and do not need any further maintenance.

WATCH OUT	
	Do not use compressed air for cleaning the working area! Foreign parts or chalk could get into the blade head and influence the function.

6.4 Pneumatics

All control valves and cylinders have been durably oiled with pneumatic oil and do not need any further maintenance. Concerning filter and regulator valve, please see enclosed manual of the Pneumax-company.

6.5 Machine Interior

The working area of the AM.ALL.ROUND V1.2 should weekly carefully be cleaned with brush and duster. An intermediate cleaning is recommended in case of considerable dirt due to chalk and stripping residues.

Take care that no foreign parts or liquids get into the machine.

7 List of Defects

The following list shows the most often interruption reasons and indicates quick solutions.

defect description	defect reason	defect solution/control
red EIN/AUS (On/Out) main power switch does not illuminate after switch on LC-Display does not illuminate	net voltage missing	- net cable connected correctly? - net cable okay? - net okay? - fuse ¹⁶ 018.7012; T 2,5 A ok? mode defect net voltage
red EIN/AUS (On/Out) main power switch illuminates after switch on, but machine does not work LC-Display does not illuminate	primary circuit interrupted	- safety cover closed?
sensor/foot switch does not re-lease; machine does not work LCD announcement	machine in waiting mode?	- release "RESET"
Closing panel?	closing panel does not close correctly	- remove disturbing parts out of closing panel area
guide sleeve cannot be screwed in	safety panel pushed before it	- manually push back safety panel from inner machine side, put in new sleeve
Cross section adjustment of the blades changes itself	Adjustment screw in the blade head 039.0016 is too easy going	- turn grub screw 016.8010 in the adjusting screw clockwise, until adjusting screw is heavy going

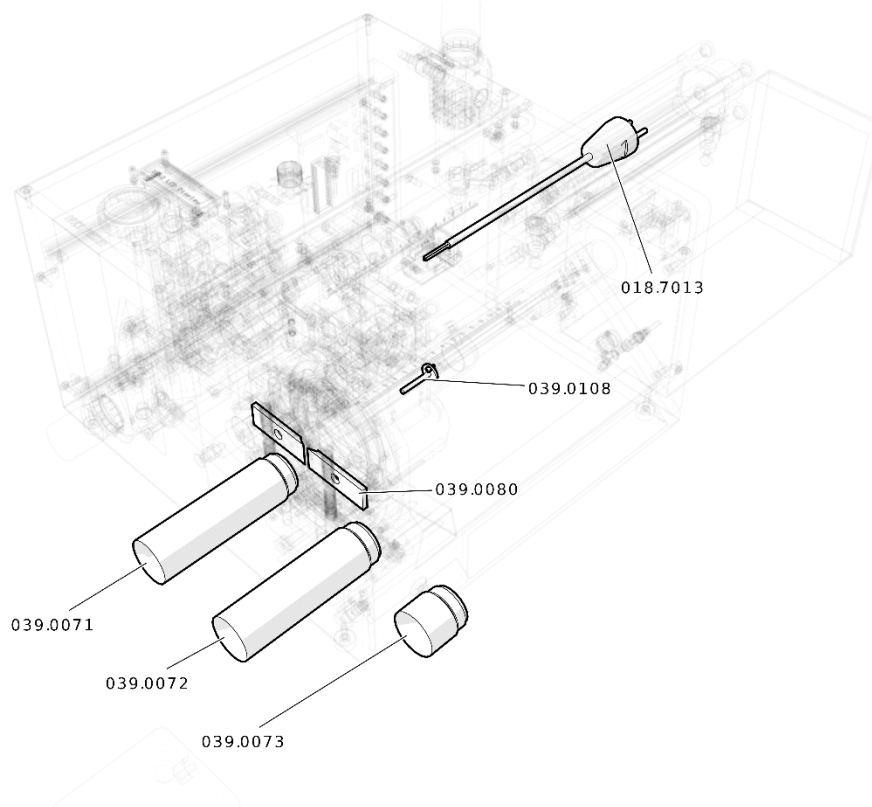
¹⁶The fine fuse 018.7012, T 2,5 A is in the net plug 018.7004 of the machine. Disconnect the mains plug from the power circuit. Pull safety holder out with a screw driver, change the fine fuse and put in safety holder again.

8 Accessories

8.1 Standard Equipment

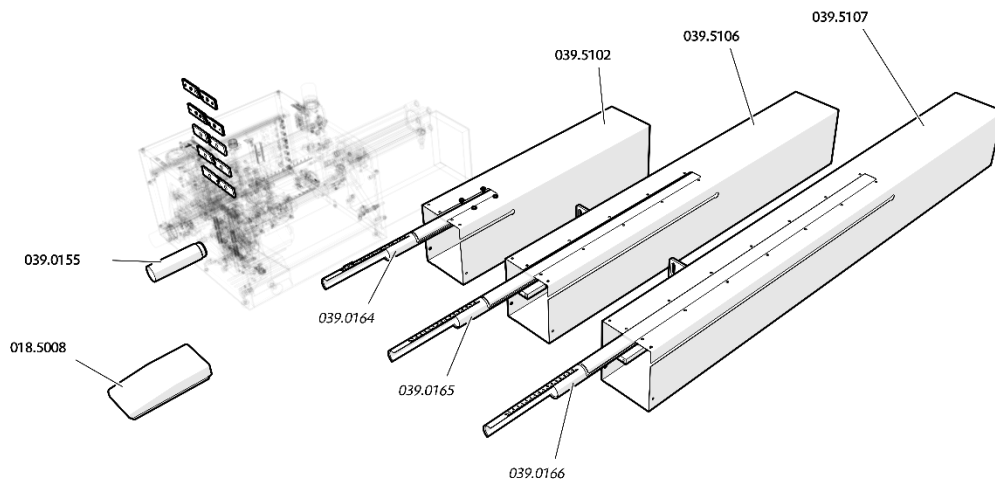
<u>Qty.</u>	<u>Text</u>	<u>Order No.</u>
1	pair of flat blades (installed in the company)	039.0080
3	cable guide sleeves: - 8 mm inside-Ø - 16 mm inside-Ø - 25 mm inside-Ø	039.0073 039.0072 039.0071
1	sensor extension with 2 screws M2x5	039.0108
1	allen key 5 mm with shaft	----
1	allen key 2,5 mm (hook)	----
1	allen key 1,5 mm (hook)	----
1	open jaw spanner 8mm	----
1	net cable	018.7013
1	manual in the native language	----

Please check immediately after delivery if the standard accessories set is complete.



8.2 Special Equipment

<u>Text</u>	<u>Order No.</u>
prismatic blades generation 2 (cable-Ø 1-16mm)	039.0601
prismatic blades generation 2 (cable-Ø 8-25mm)	039.0602
die blades	039.0085
special blades	special no.
foot switch with cable and Preh-plug	018.5008
extended stop up to 400 mm (partial stroke)	039.5102
extended stop up to 750 mm (partial stroke)	039.5106
extended stop up to 1000 mm (partial stroke)	039.5107



9 Guarantee

9.1 Guarantee Concessions

We grant a guarantee of one year from the date of dispatch on our rotation stripping machine AM.ALL.ROUND V1.2 for one shift use. The guarantee includes material defects and processing defects in case of appropriate use¹⁷, corresponding to the applications described in this manual.

During the guarantee period, FEINTECHNIK R. Rittmeyer GmbH or a representation, authorized from the FEINTECHNIK R. Rittmeyer GmbH as guarantee granting company, is obliged to either repair or replace the part(s), which proved to be defective after inspection, without material or working charges, provided that the defect parts are returned to us or our representation, correctly packed and carriage charges paid.

9.2 Guarantee Restrictions

The above guarantee period does not include machines, which were repaired without allowance resp. in connection with misuse, carelessness or an accident. In the case of machines, where it is in our opinion proved that they were used in other form than the applications in the manual or where the serial number has been changed or removed, a guarantee concession is excluded.

Excluded are as well parts from other manufacturers we have to buy, and for which we only obtain a restricted guarantee period, as parts subject to wear and tear like blades, blade guides etc.

FEINTECHNIK R. Rittmeyer GmbH by this refuses any guarantee for the suitability or qualification for a special purpose. In no case, FEINTECHNIK R. Rittmeyer GmbH is liable towards the buyer or a third person for casually occurred damages or consequential damages, loss in profit or production, which are deemed due to a defect or failure of the machine.

Should the machine be used for applications apart from those in the manual, you should first contact our company for a written confirmation of their suitability.

No person or company has the right to change, modify or amend guarantee.

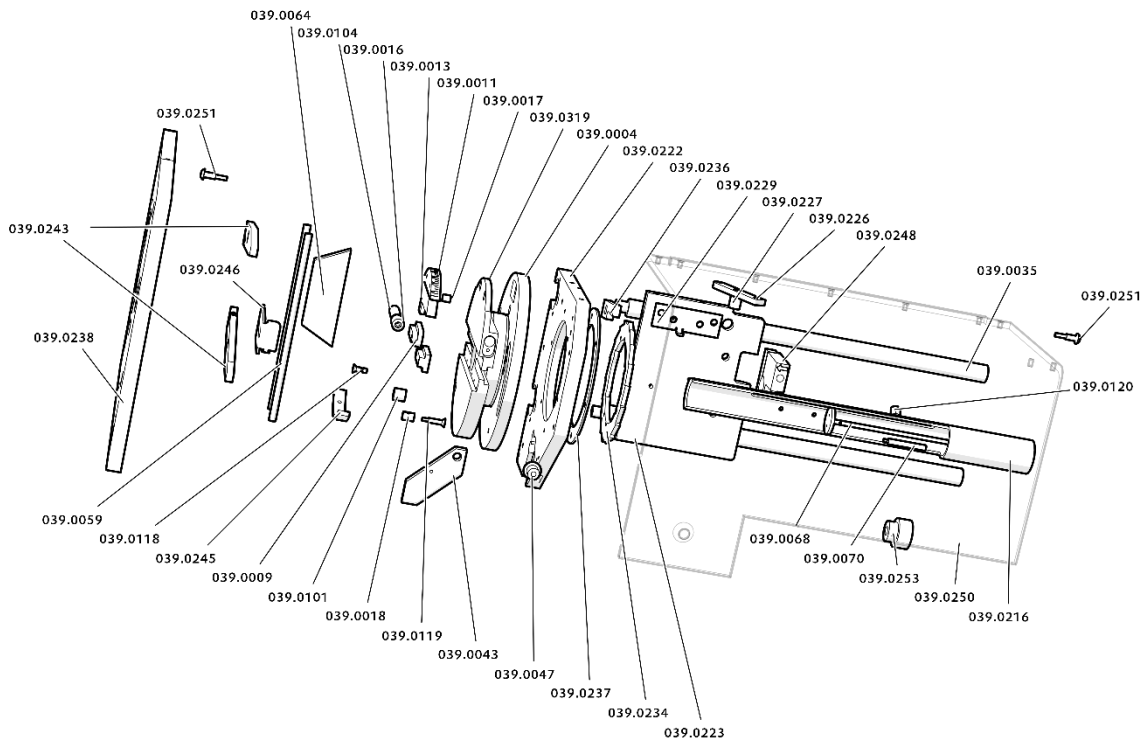
¹⁷ see chapter 2.1 and 2.2

10 Spare part-lists

10.1 Drawing parts

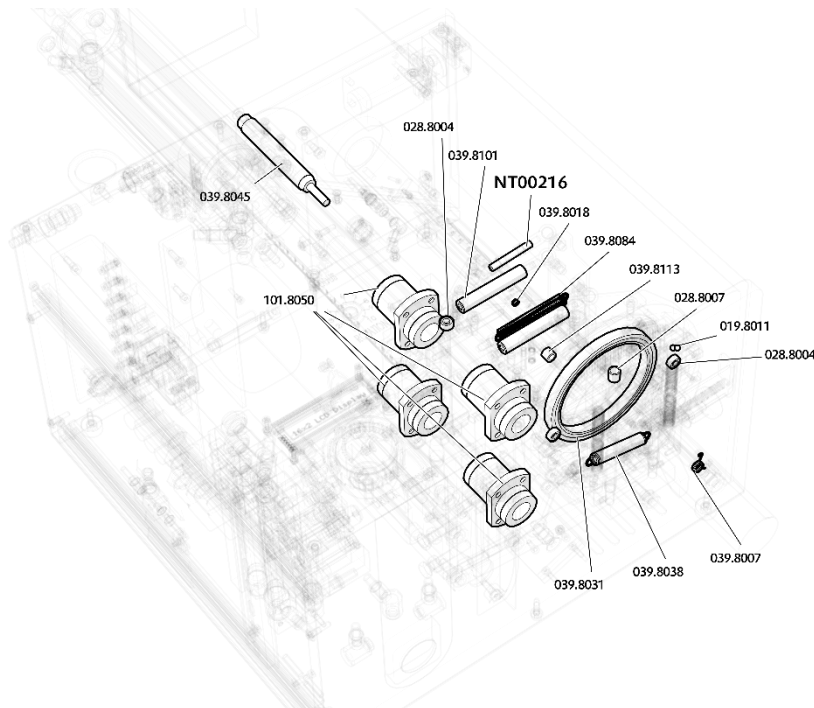
Art.-Nr.	Name	V1.2	V12. 2CLAMP
039.0004	Spur wheel	x	x
.0009	Sliding block	x	x
.0011	Scale	x	x
.0013	Slider	x	x
.0016	Setscrew	x	x
.0017	Slider bolt	x	x
.0018	Spring bolt	x	x
.0035	Guide column	x	x
.0043	Downholder	x	x
.0047	Spring axis	x	x
.0059	Clamping jaws guide column	x	x
.0064	Cone	x	x
.0070	Extension	x	x
.0071	Cable guide box Ø25 mm	x	
.0072	Cable guide box Ø16 mm	x	
.0073	Cable guide box Ø8 mm	x	
.0101	Rubber pads	x	x
.0104	Shock absorber	x	x
.0108	Sensor extension	?	?
.0118	Spring-retaining-screw	x	x
.0119	Shoulder screw	x	x
.0120	Sensor nut	?	?
.0155	Cable guide box Ø19 mm	x	
.0216	Guide tube	x	x
.0222	Knife head holder	x	x
.0223	Retaining plate	x	x
.0226	Swivelling lever	x	x

.0227	Stud	X	X
.0229	Shaft support	X	X
.0234	Grating disc	X	X
.0236	Safety catch	X	X
.0237	Support ring	X	X
.0238	Front plate	X	
.0243	Arm	X	X
.0245	Counterweight	X	X
.0246	Protection angle	X	
.0248	Stop	X	X
.0250	Makrolon-Protective hood	X	X
.0251	Shoulder screw	X	X
.0253	Spur wheel	X	X
.0319	Knife head	X	X



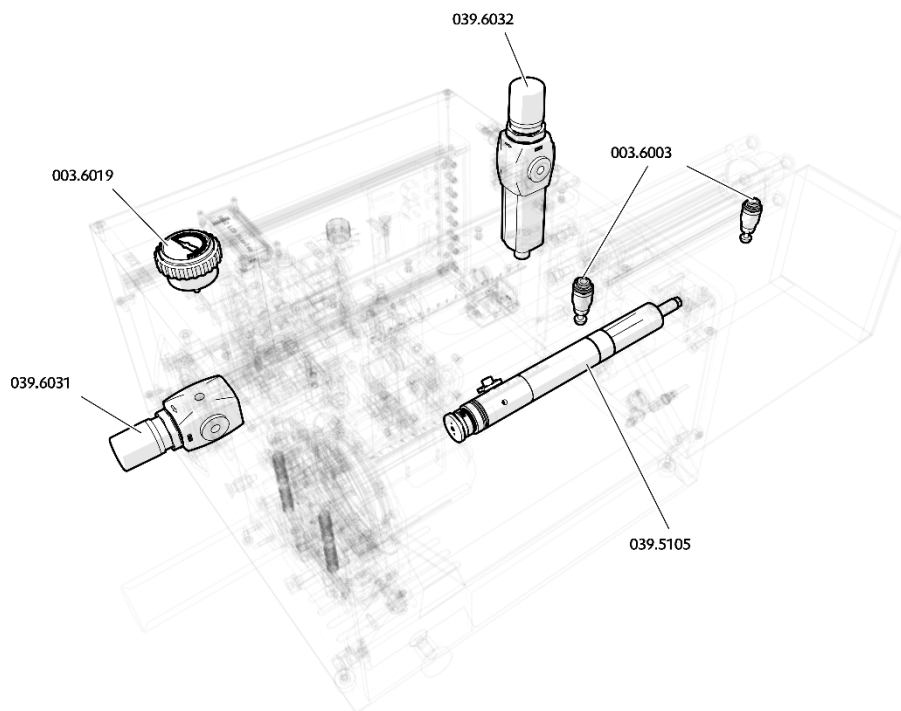
10.2 DIN-Parts

Art.-Nr.	Name	V1.2	V12. 2CLAMP
NT00216	DIN 913 M5x35 ST VZ	x	x
019.8011	Ball Ø 4 Nylon	x	x
028.8004	Deep groove ball bearing 623.ZZ	x	x
028.8007	DU-Box 06 08 DU	x	x
039.8005	Shock absorber up to machine -Nr. 609	x	x
039.8007	Leg spring T-18458L	x	x
039.8018	Compression spring D-046A	x	x
039.8031	THK-Cross roller ball bearing	x	x
039.8038	Tension spring 8788	x	x
039.8045	Shock absorber up to machine -Nr. 610	x	x
039.8084	Tension spring ZE07-28	x	x
039.8101	Linear wave FSFJBB-D10-L56-M5-N5	x	x
039.8113	Centring box JBAUF8-P5-L6.4	x	x
101.8050	Linear bearing Ø16 LHIFC-MX16	x	x



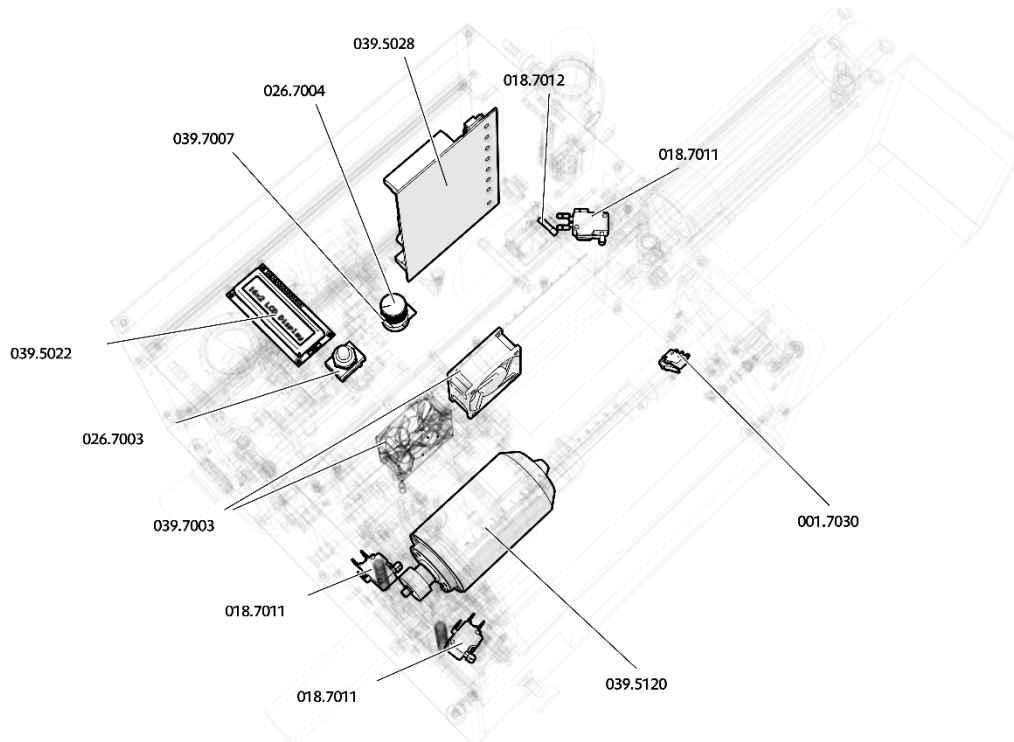
10.3 Pneumactical Parts

Art.-Nr.	Name	V1.2	V12. 2CLAMP
039.5013_1	Trigger cylinder	x	x
003.6003	Throttle valve	?	?
003.6019	Pressure gauge	?	?
039.6031	Pressure regulator	x	?
039.6032	Filter and Control valve	x	x



10.4 Electrical Parts

Art.-Nr.	Name	V1.2	V12. 2CLAMP
001.7030	Micro-switch	x	x
018.7011	Micro-switch XG-K2-S20	x	x
018.7012	Fuse	?	?
026.7003	Installation-push button	x	x
026.7004	Rotary knob	x	x
039.7003	Cooling fan 60x60 12 V	x	x
039.7007	Potentiometer	x	x
039.7044	Electrical motor	x	x
039.5022	LCD-complete	?	?
039.5027	Spare wire harness	?	?
039.5028	Control board cpl.	x	x
039.5050	Microcontroller standard software	?	?
039.5051	Microcontroller waste disposal	?	?
039.5120	Spare motor with spur wheel	?	?



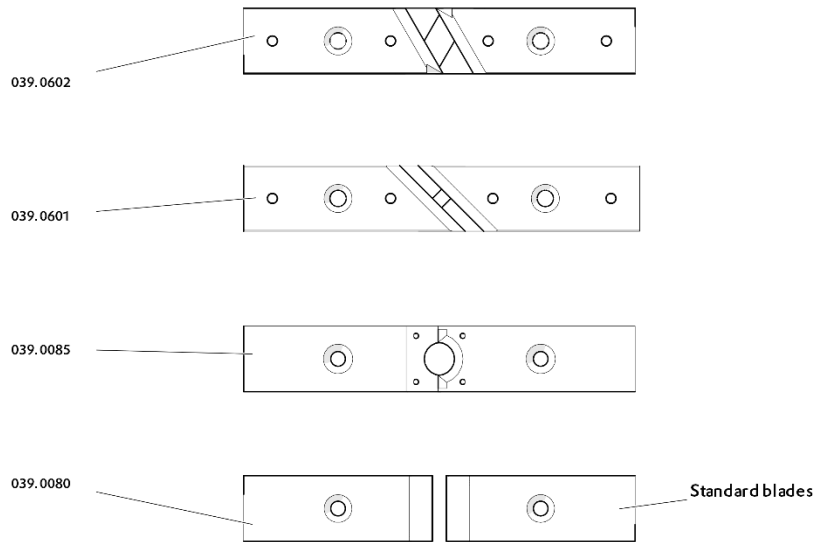
10.5 Standard-Modules/Special Accessories

Art.-Nr.	Name	V1.2	V12. 2CLAMP	Info
018.5008	Foot switch	x	x	No CAD Modell
039.0085	Pair nozzle blades, Ø at option			
039.0601	Prism blade (Gen. 2) Ø1-15 mm			
039.0602	Prism blade (Gen. 2) Ø8-25 mm			
039.0164	Guide tube 400			
039.5003	Pair clamping jaws			
039.5008	Protective plate varnished			
039.5013	Sensor cpl.			
039.5029	Protective plate 400 varnished			
039.5031	Protective plate 750 varnished			
039.5040	Protective plate 1000 varnished			
039.5054	Sensor 400 cpl.			
039.5055	Sensor 750 cpl.			
039.5100	Striking plate			
039.5101	Swivelling lever			
039.5102	Extended stop up to 400 mm			
039.5104	Stopping bracket knife head			
039.5106	Extended stop up to 750 mm			
039.5107	Extended stop up to 1000 mm			

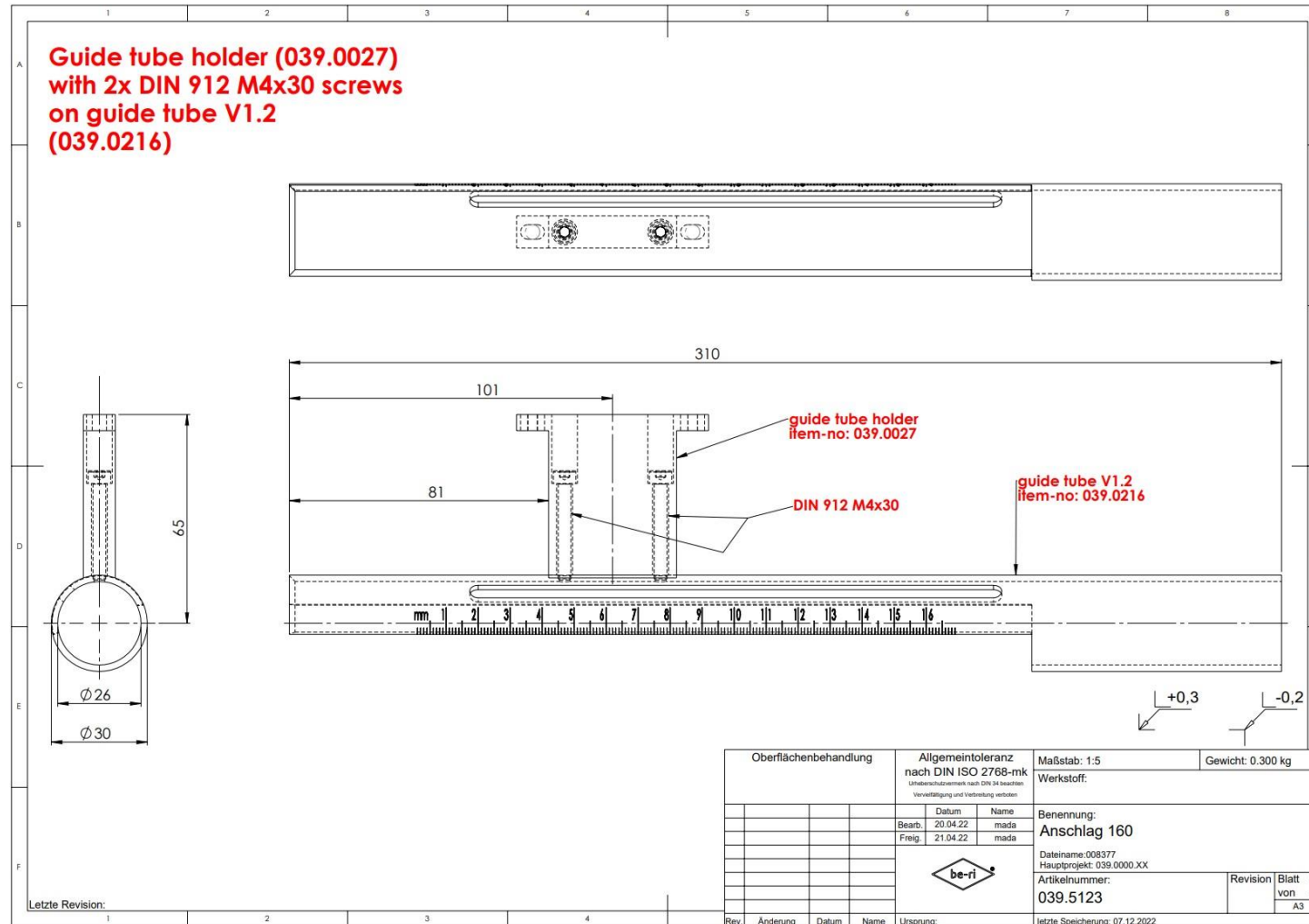
11 Enclosures

11.1 Drawings:

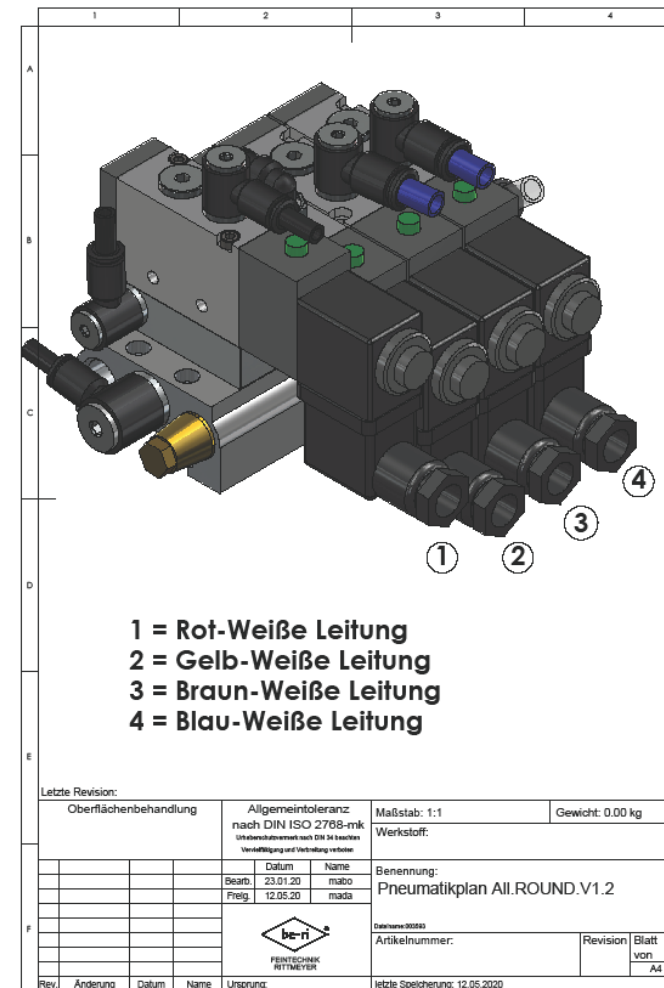
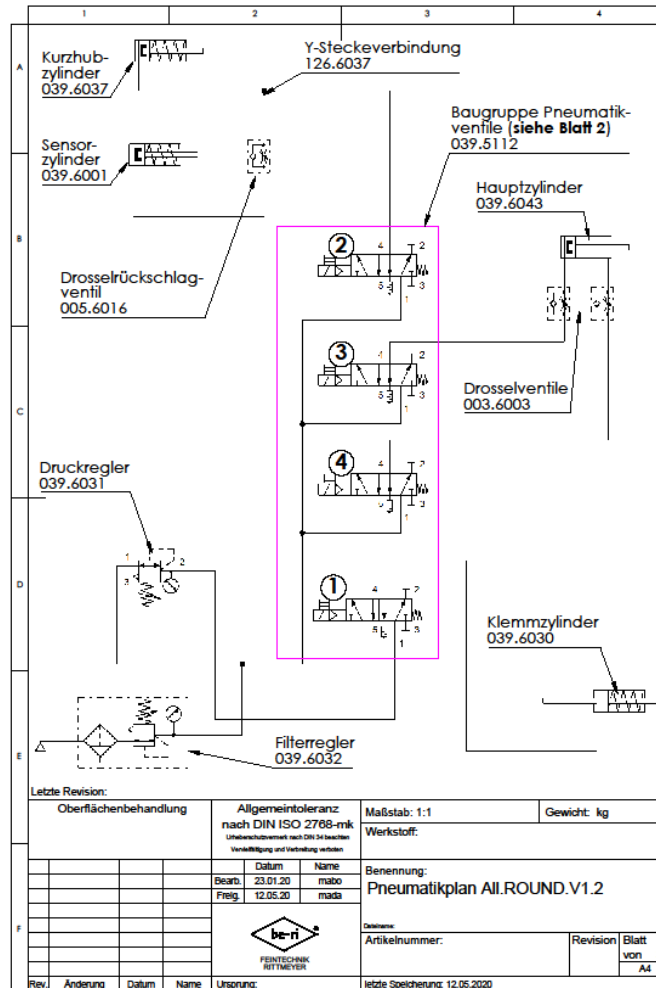
11.1.1 Overview knife shapes



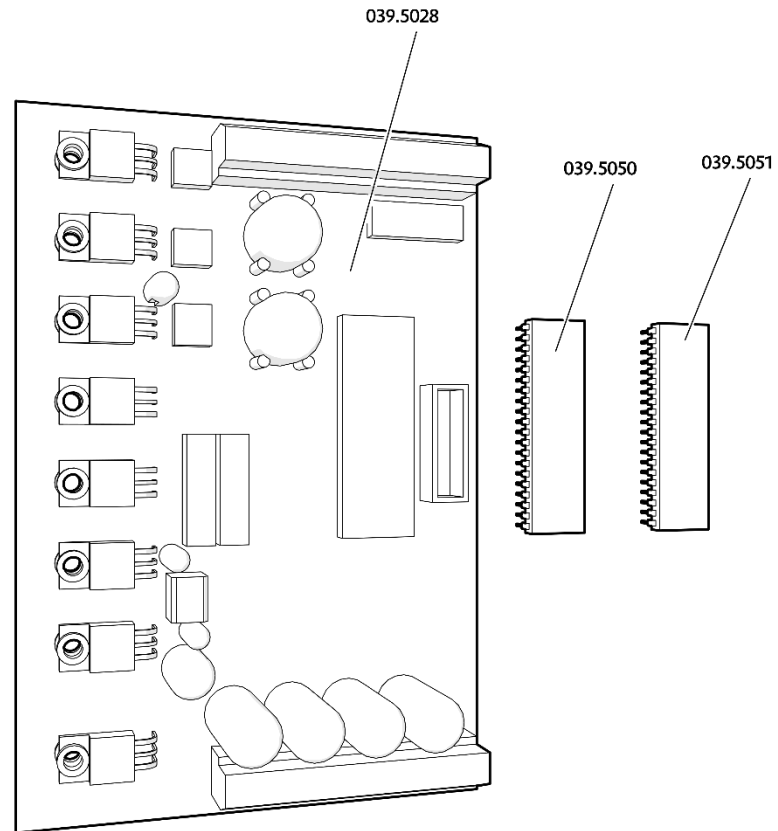
11.1.2 Stop 160



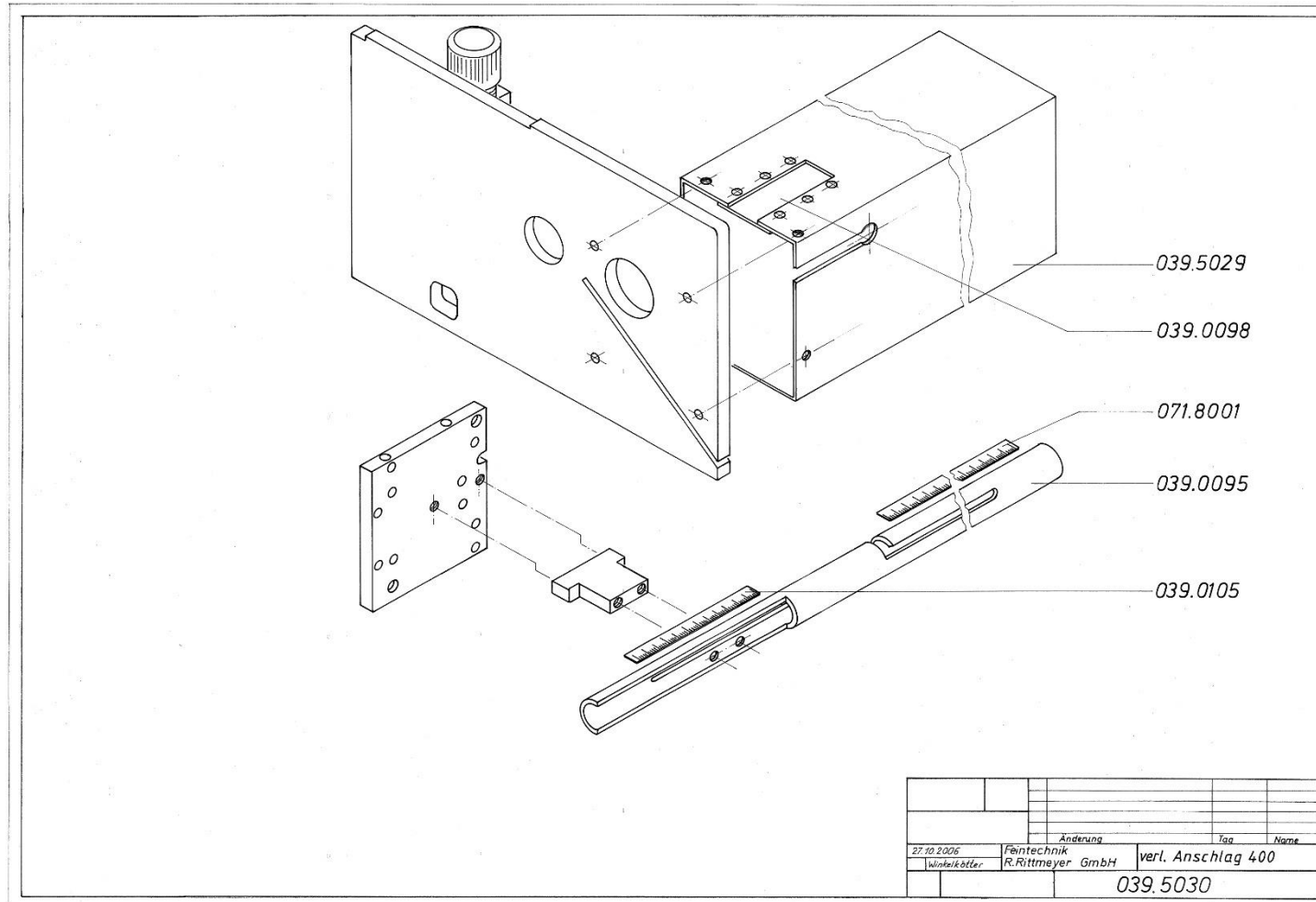
11.1.3 Pneumatic plans



11.1.4 Layout controller circuit board (039.5028)



11.1.5 extended stop up to 400 mm (039.5102)




11.2 Other Documents


11.2.1 Safety instructions and maintenance to compressed air regulator 039.6018 *(compendium from the manual to the air regulator)*


1. PRECAUTIONS FOR SAFETY

Precautions shown here are to ensure the product is used correctly and safely, and to prevent hazard and damage inflicting upon people from occurring. These precautions are divided into three categories, "Caution", "Warning", and "Danger" to indicate the degree of possible hazard and damage, and urgency.

As all these are important for safety, never fail to follow them in addition of ISO4414, JIS B8370, and other safety regulations.

 **Caution** : Possible harmful effects are expected to be on people and possible loss is expected only of objects when wrong operation occurred.

 **Warning** : Possible loss or serious injury of people is expected when wrong operation occurred.

 **Danger** : Imminent danger that possible loss or serious injury of people is expected without evacuation.

※1)ISO4414 Pneumatic fluid power—Recommendations for the application of equipment to transmission and control systems.

※2)JIS B 8370 Common regulations for pneumatic systems.

WARNING

①Suitability of pneumatic equipment should be determined by a designer of the pneumatic system or a person who prescribes its specifications.

Since the product shown here is used in various operating conditions, its suitability to a system should be determined by the pneumatic system designer or the person prescribes its specifications based on necessary analysis and tests. The person who determined the suitability of the system is responsible for the performance at a certain point of time and safety assurance of this system. A system should be constructed by referring to the latest product information and catalogues, discussing all the contents of specifications, and considering possibilities of equipment failure.

②Equipment should be handled by those who have sufficient knowledge and experience

Compressed air fluid could be hazardous if it is handled incorrectly. Assembly, operation and maintenance of machinery and equipment for which pneumatic apparatuses are used should be performed by those who have sufficient knowledge and experience.

③Never handle the machinery or equipment, or never take out the apparatus until safety is confirmed

- a. Check and maintenance of machinery or equipment should be performed after it is confirmed that dropping or uncontrollable running prevention measures are taken for the equipment on which the product is mounted.
- b. Apparatuses should be taken out after it is confirmed equipment corresponding to air supply, that is an energy source, should be turned off; and compressed air in the system should be exhausted.
- c. Re-starting of machinery or equipment should be done with ample care after it is confirmed that prevention measures for sudden movement are taken.

④When the product is used in the following conditions or environment, considerations for safety measures should be given along with consultation to our company

- a. Outdoor usage, or usage in conditions or environment outside of the specifications indicated.
- b. Usage for nuclear power, railroad, air navigation, vehicle, medical equipment, appliances contacting food and beverage, entertainment apparatuses, emergency shutdown circuits, clutch/break circuits for pressing, and safety devices.
- c. Usage for applications which especially require safety because considerable effects to people and properties are expected.

Design

Warning

○Air combination

- ① If any leakage isn't permitted due to ambient environment or fluid other than air is used, contact SMC.
- ② External parts including the bonnet, bowl, the sight dome are made of resin. Organic solvents including, thinner, acetone, alcohol, ethylene chloride, chemicals including sulphuric acid, nitrate and hydrochloric acid, cutting oil, synthetic oil, ester-base compressor oil, alkali, kerosene, gasoline, lock material of screw are harmful. Don't use the regulator where containing those.
- ③ Protect from ultra violet ray and radiation heat by shield.
- ④ If output over setting pressure may cause damage and operating failure of the machine and equipment installed secondary side, be sure to place safety device.

Caution

○Regulator and Filter-regulator

- ① Air consumption from release port is 0.1L/min(ANR) or less.

Selection

Warning

○Air combination

- ① Mineral grease used for internal sliding surface and packing may leak to the outlet. Please contact SMC if this is a problem.

○Regulator and Filter-regulator

- ① Residual pressure(outlet pressure) is not released even if releasing inlet pressure. Select the regulator with counter flow function. Without the function, residual pressure may not be eliminated.
- ② Long absence of operation or operation with outlet circuit sealed or balance circuit may cause pressure fluctuation in outlet set pressure. Please consult SMC if this is a problem.
- ③ Set pressure of outlet pressure shall be 85% or less of inlet pressure. Pressure over 85% makes operation susceptible to flow and inlet pressure which lead to cause unstable operation.
- ④ Maximum set pressure range in the spec. has margin. Pressure set may be higher than the maximum value.
- ⑤ If regulator is used with circuit which require high exhaust sensitivity or set precision, please consult SMC.

○Lubricator

- ① The use at high frequency such as the use in press machine may damage internal components and cause operating failure of the equipments installed to secondary side.
- ② Small air consumption may prevent the oil from dropping. Decide the size which can flow the air necessary to drop required amount of oil.
- ③ Do not supply the air from secondary side (reverse air flow). Otherwise, internal components may be damaged.
- ④ If piping is branched at primary side, the oil may flow back. Avoid the reverse flow by install check valve (AKM series) to primary side.

Installation • Adjustment

Warning

○ Air combination

- ① Connect the air combination ensuring the direction of "IN" and "OUT" for air direction or an arrow. Wrong connection lead to cause malfunction.
- ② Install vertically so that outlet of drain would turned downward. Use with the outlet of drain turned lateral or upward causes malfunction.
- ③ Make a space to provide easy access at the bottom when replacing element or draining. For dimensions of the space, refer to Outside dimensions.

○ Regulator and Filter-regulator

- ① Operate the pressure adjusting handle manually. Tools may break the handle.
- ② Adjust the pressure ensuring inlet pressure and outlet pressure. Excessive rotation may cause internal parts.
- ③ Confirm set pressure is as required periodically because secondary pressure may change for extended operation.

○ Lubricator

- ① Adjust oil needle by manual in AL20~60. Rotate clockwise for increase and anticlockwise for decrease. Adjustment with a tool may damage the needle. Twice rotation from the condition closed fully makes the needle opened fully. Do not give any rotation to the needle after opening fully.

Caution

○ Air combination

- ① Don't drop nor apply impact during transportation or installation. gauge. These lead to cause precision failure of pressure.
- ② Don't install where highly humid or temperature is high. Or pressure gauge may malfunction.

○ Regulator and Filter-regulator

- ① Adjust pressure incrementally. Pressure may become lower than set pressure if adjusted by decreasing the value. Rotate the handle clockwise to raise the set pressure. Counterclockwise, reduce the pressure.
- ② Outlet pressure may rise if eliminate the inlet pressure after pressure setting and supply pressure again. The pressure becomes close to the set pressure after air is consumed in outlet.
- ③ For the regulator with the pressure gauge, don't apply pressure over the maximum scale of the pressure gauge in order to protect the gauge.

Piping

Warning

○ Air combination

- ① Flash or clean piping before piping to eliminate flaw, cutting oil, solid foreign material. Remaining of these lead to cause malfunction.
- ② When screw in piping or fitting, avoid entering of chips and sealing materials from piping screws into the inside of equipment. Or malfunction is led to occur. When use sealing tapes, leave 2 threads of a screw and starts taping.

③ Hold the female screw side and screw in piping with recommended tightening torque. Insufficient tightening torque lead to cause loose piping or sealing failure. Excessive torque may lead to cause screw breakage. Tightening without holding female screw side applies excessive force to the piping bracket which lead to cause breakage.

Recommended tightening torque		Unit: N·m					
Screw	M5	1/8	1/4	3/8	1/2	3/4	1
Torque	*1	7~9	12~14	22~24	28~30	28~30	36~38

*1:After tightening fitting, tighten approx. 1/6 more by using tool.

④ Don't apply any torsional moment, or bending moment except the weight of this product itself. External pipings need its support separately. Hard piping like steel tube is susceptible to excessive moment load or vibration. Insert the flexible tube to cancel the influence.

⚠ Caution

○Lubricator

① Avoid rising piping and branch of the piping at secondary pressure side. Otherwise, lubricating failure may be caused.

Air source

⚠ Warning

○Air combination

① Use clean air. Compressed air containing chemicals, organic solvent, synthetic oil or corrosive gas may lead to cause breakage of parts or malfunction.

② Air containing much drain lead to cause malfunction. Install the air drier or the after-cooler before the regulator.

Maintenance

⚠ Warning

○Air combination

① Maintenance or check should be done by following the procedure in the operation manual. Incorrect handling of the product may cause breakage or malfunction of the equipment or device.

② Perform periodical check to find crack, flaw or other deterioration on resin bowl. If any of them is seen, as malfunction is caused, replace with new bowl or metal bowl.

○Air filter, Lubricator, Filter-regulator and Mist separator

① Check the dirt of resin bowl periodically. If any dirt is seen, replace with new bowl. And if removing off the dirt by washing instead of replacement, never use washing material other than neutral detergent. Otherwise, the bowl is damaged.

② Open and close drain cock manually. Open and close by a too may damage the drain cock

③ Replace the element two years after starting to use it or before pressure drop of 0.1MPa or more is seen. Continuity of the use after the replacement period may damage the element.

⚠ Caution

○Regulator and Filter-regulator

① For First-aid for setting failure or leakage, check the internal valve sliding surface or the valve seat before giving first-aid treatment.

○Air filter, Filter-regulator and Mist separator

② Drain the bowl by opening drain cock before the drain level in the bowl reaches baffle plat

Distribué en France par :



 14 Route d'Auray – ZA de Talhouët
 56330 PLUVIGNER
 Tel : +33966 90 42 70
 Email : info@artosfrance.com
 Siret : 34273353200044



EC-CERTIFICATE OF CONFORMITY

in accordance with the EC Machinery Directive 2006/42/EG appendix II A

We hereby declare that on the basis of its conception and design and in the version of the relevant and fundamental safety and health regulations, put into circulation by us, the machine mentioned in the following meets the currently valid EC Machinery Directive. This declaration will immediately cease its legal force if the machine is altered in any way without our permittance.

Producer	FEINTECHNIK R.Rittmeyer GmbH
Machine Designation	AM.ALL.ROUND V1.2 + versions
Machine Type	Rotation Stripping Machine
Fundamental EC-Directives	EC Machinery Directive 2006/42/EG Appendix II A; "Interference emission" EN 55016-2-1, EN 55016-2-3, evaluation according to EN 61000-6-4
Hamonized Standards	-
National Standards	-

Revision status Operating instructions _____

Machine No. _____

Date _____

Signatory Manufacturer  

Renate Rittmeyer-Müller **Walter Rittmeyer**

Position of the Signatory _____
Managing Director



FEINTECHNIK
R.Rittmeyer GmbH
Höltenweg 103
48 155 Münster
Germany

Tel. +49 . (0)251.96115-0
Fax +49 . (0)251.624 525
Email info@rittmeier-beri.de
Web rittmeier-beri.de