

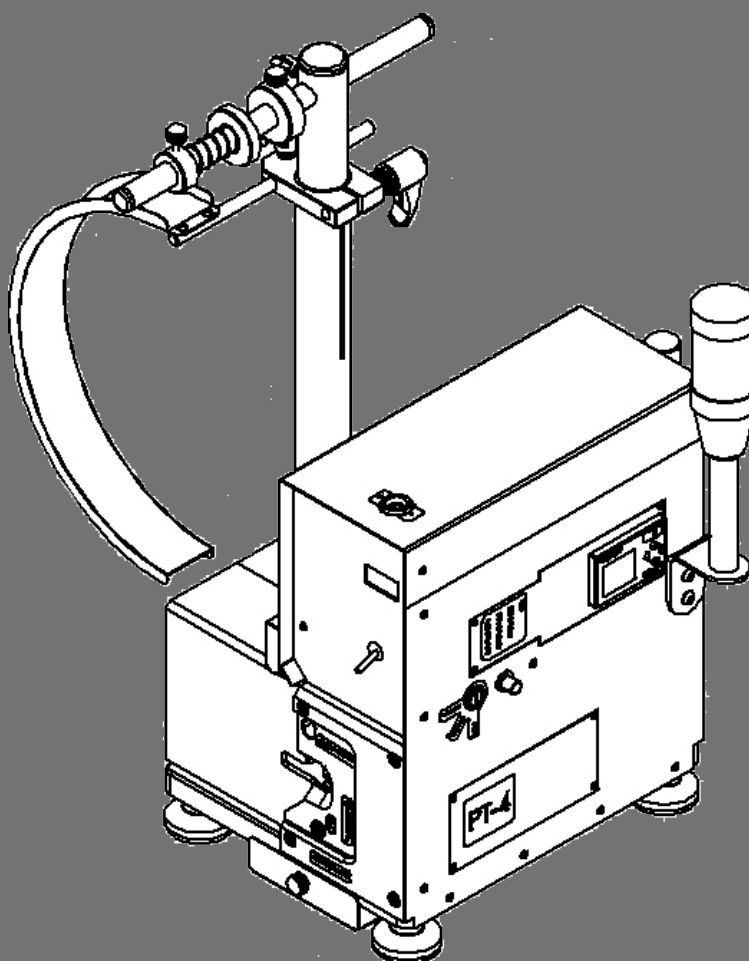
2015

Poltech

PT4

STRIPPER CRIMPER

Machine manual
Maintenance plan
Parts list



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1.1.2015



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General description of the machine

Stránka | 3

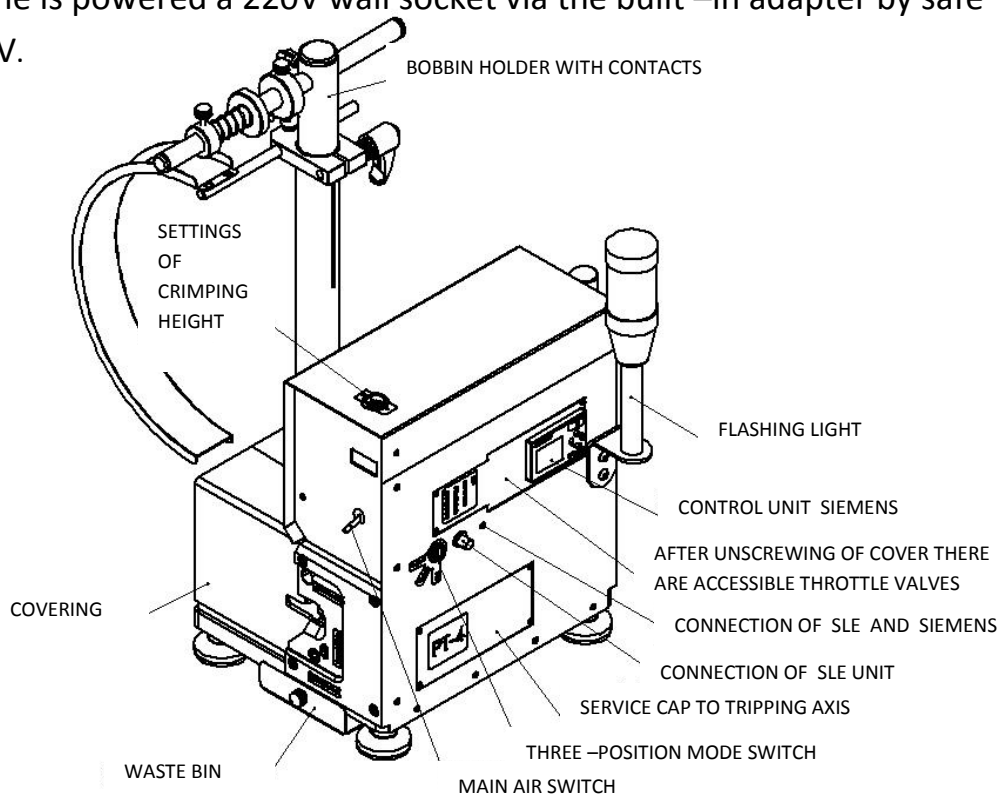
Crimping machine PT4 is a pneumatic press controlled LOGO SIEMENS. The press is entirely designed to an application of contacts to a cable and to strip of the cable insulation.

The machine can be extended only by original tools or tools previously used and approved for machines PP3.

The machine is controlled by a unit LOGO SIEMENS that ensures steady and safe running. It is possible to set and impact the running on this unit. It is described in a separate manual.

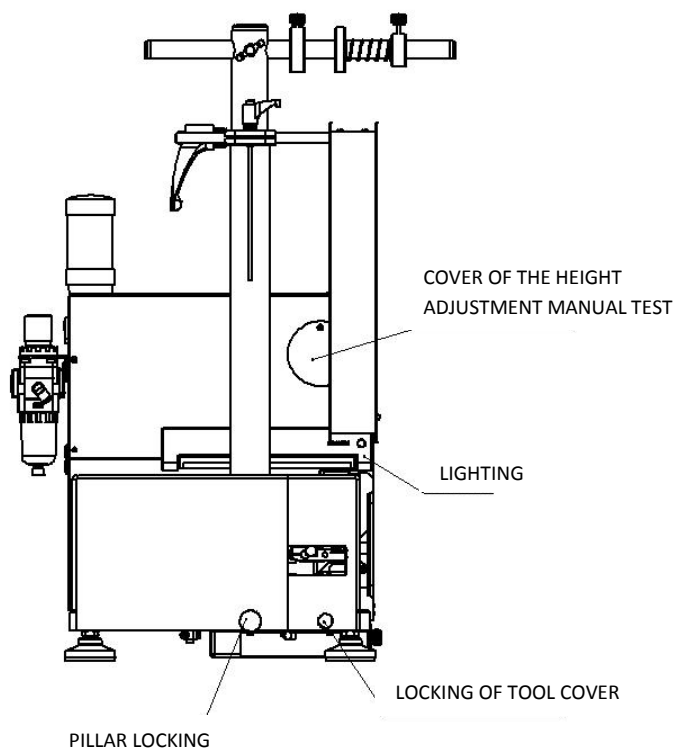
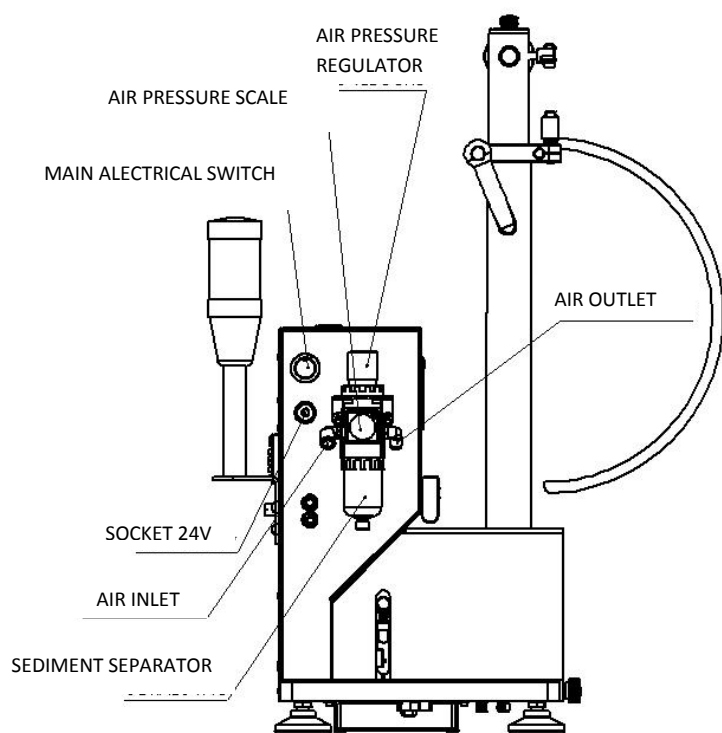
The whole machine is covered by metal covering and also by covering from pure plexiglass. Under the metal covering there are mechanical, pneumatic and electrical elements to which only the authorised and personnel has the access. The plexiglass covers the tool itself. This can be removed by an operator in order to adjust. All covers must be in place before the machine is turned on.

The machine is powered a 220V wall socket via the built –in adapter by safe voltage 24V.



General description of the machine

Stránka | 4

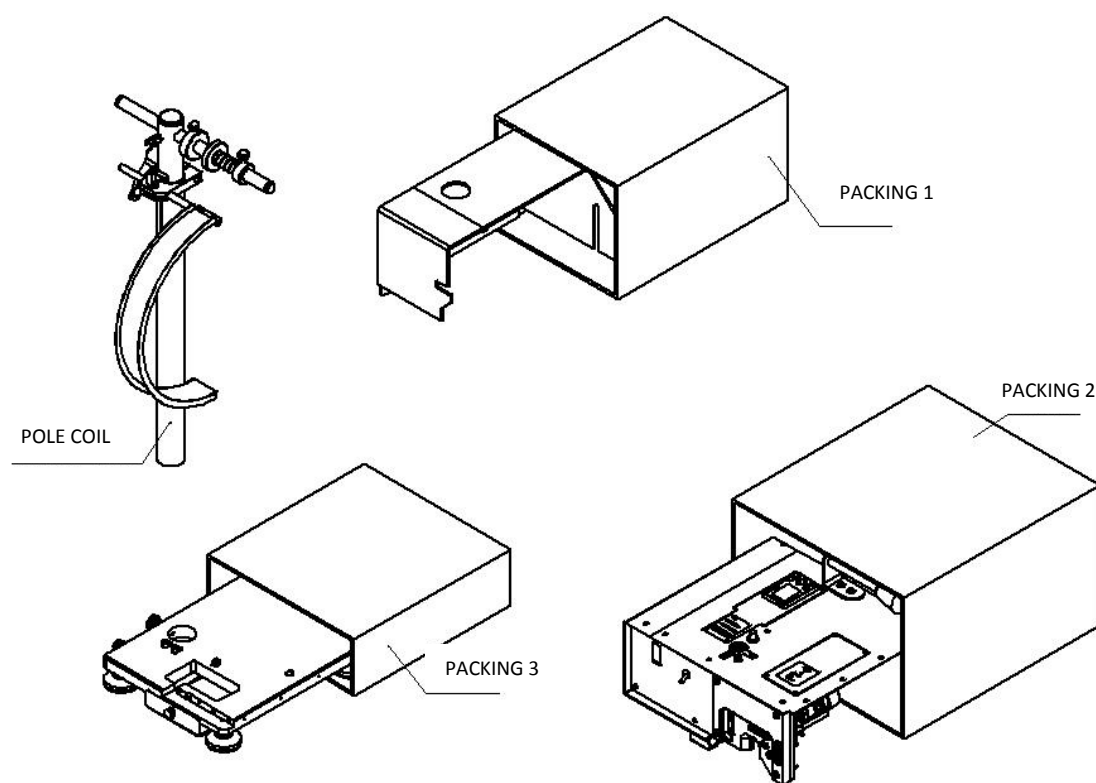


Conductor cross-sections	0,05-1,5mm ²	AWG 30-16	
Min stripping length	0,8mm	0,5mm	
	standard	special blades	
Max stripping length	12mm		
Min unjacketing length	15mm		
Machine cycle	1,2 s		
Productivity	2500pcs/hour		
Air pressure - inlet	10 bar max		
Air pressure - machine	4 – 6 bar		
Mechanical stroke	30mm		
Crimping height scale	5mm	0,04 mm	
	range	division	
Scale of cable-contact position	10mm	0,05mm	
	range	division	
Counter	Digital	Daily	Fully
		resettable	unresettable
Lighting	LEDs		
Weight	14,6kg		
Safety, directive	CE		

Packing the machine

The machine itself is divided and packed into two boxes. Accessories are also packed in the box.

All the components packed in this way are stored in a plastic box which is sent to a customer.

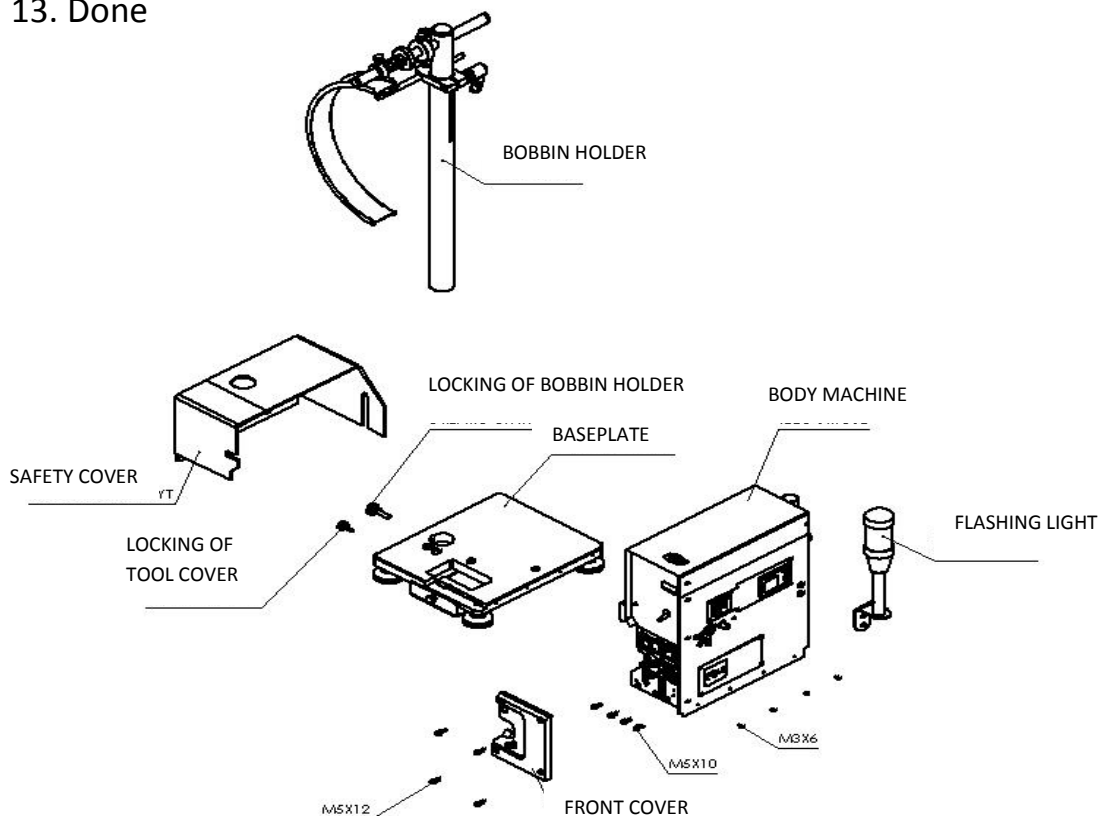


Assembly of the machine

The machine is decomposed for transportation into several parts. Their assembly is not difficult and needed tools for assembly are also supplied.

The assembly procedures:

1. Disassembling of the front cover with screws M5x12 (4x)
2. Removing the screws M5x10 (4x) under the front cover
3. Fitting the body machine to the baseplate
4. Fitting the screws M5x10 (4x) and do not tighten
5. Fitting the screws M3x6 (4x) and do not tighten
6. Tightening of all screws from paragraphs 4 and 5
7. Putting on the front cover
8. Fitting screws M5x12 (4x) slightly tighten
9. Rotating of the flashing light to the position as shown in the picture
10. Mounting the safety cover
11. Mounting the bobbin holder
12. Fixing the safety cap and bobbin holder with locking screws
13. Done



Launching the machine

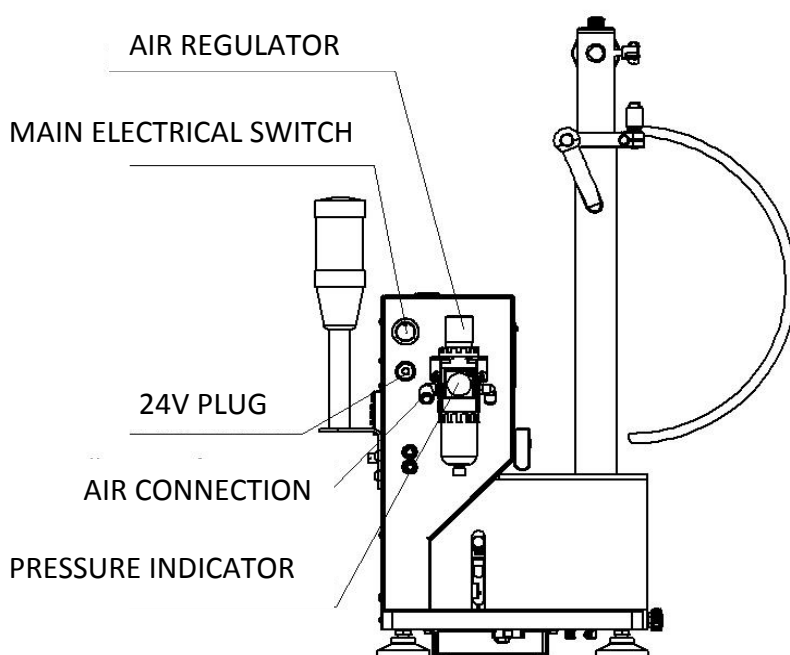
Stránka | 8

For a successful launch the machine it is necessary to connect the machine to the air distribution system and power supply 220V.

The machine is connected to air distribution system by a spiral hose pr.8mm diameter. The hose is mounted by ISO ending on one side. The other side is without ending and it is to be connected to the inlet connection of the air machine. Pressure is set in range of 5-6 bar. After connection of air there is heard weak air leakage which flow to the switching target.

The machine is connected to electrical network by a supplied adapter 220V/24V. A jack connector is connected to the plug on the machine and the plug to the power network 220V. All the electrical equipment of the machine is activated by pressing the main electrical switch.

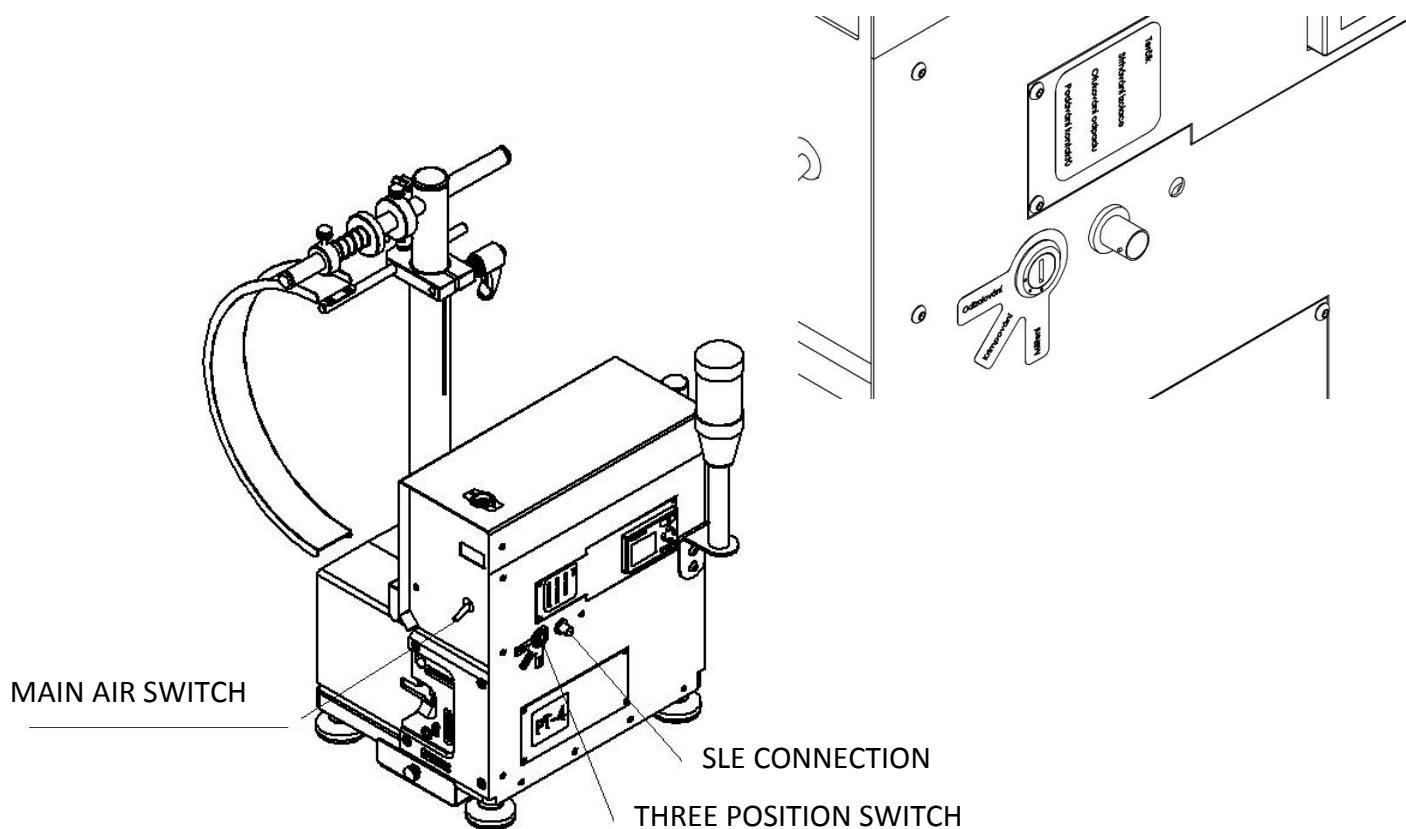
At this stage the machine is powered but inactivated (the cycle cannot run) it is safe. It is possible to make adjustments on the control unit and safely set the mechanical parts of the machine.



After the switching the main air switch into the position 1 , the whole system is pressurized and all the mechanical elements are moved to the starting position. At this stage it is forbidden to adjust or otherwise interfere in to the space under the cover.

The required working mode is selected by the three position switch:

1. STRIPPING – only the stripping axes is activated (it is used by adjustment of stripping).
2. CRIMPING – the stripping and crimping axis are activated (normal mode of stripping and crimping without measurements).
3. MEASUREMENT – active are crimping axis, stripping axis, shearing blade of defective and measurement of crimp force (crimping mode with tracking the crimp force. In case of a bad crimp the cable is cut off).

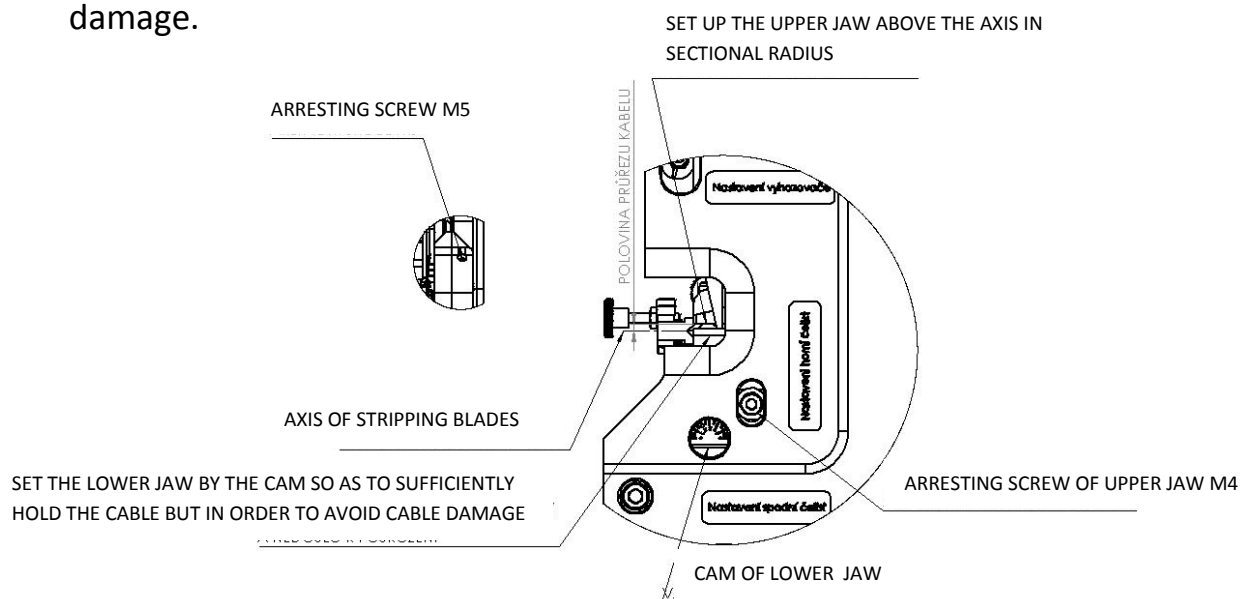


The first step to the quality crimping is to correctly adjust stripping. For proper stripping it is important that the axis of the upper jaw was in level with stripping blades. Otherwise it occurs:

- Skewed stripping
- Wire damage
- Cable deformation

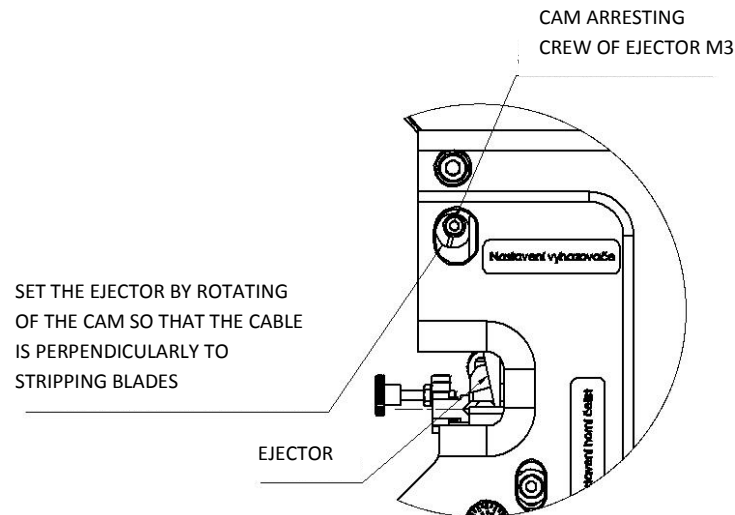
Firstly the upper jaw is set up by loosening the arresting screw M4 and down it is positioned into the level with stripping blades. It should be taken into account the conductor cross section and move the jaw above the axis in sectional radius.

The lower jaw is set up by loosening the arresting screw M5 and rotating of the lower jaw. The cam is set so as to sufficiently hold but in order to avoid cable damage.



After setting of individual elements tighten the arresting screws.

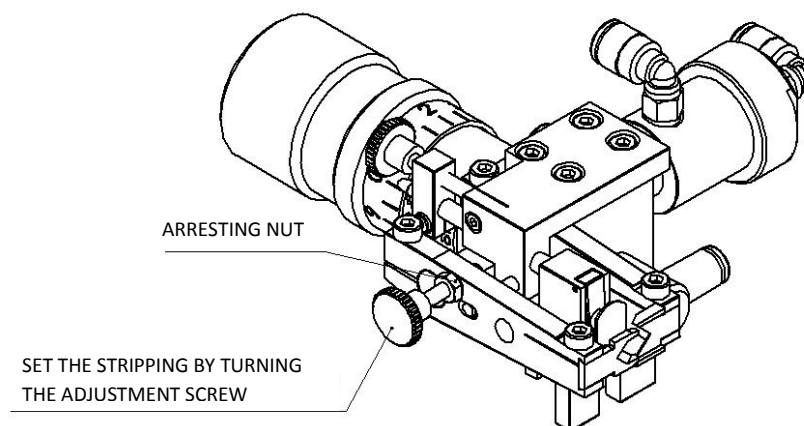
The correct side position gives the bouncer in the idling position. The cam is loosened by screw M3. Rotating the cam the ejector is set so that it does not cover the switch target.



After setting of individual elements tighten the arresting screws.

The proper stripping is set by loosening the arresting nut and turning the adjustment screw. After each test stripping adjust the position of blades:

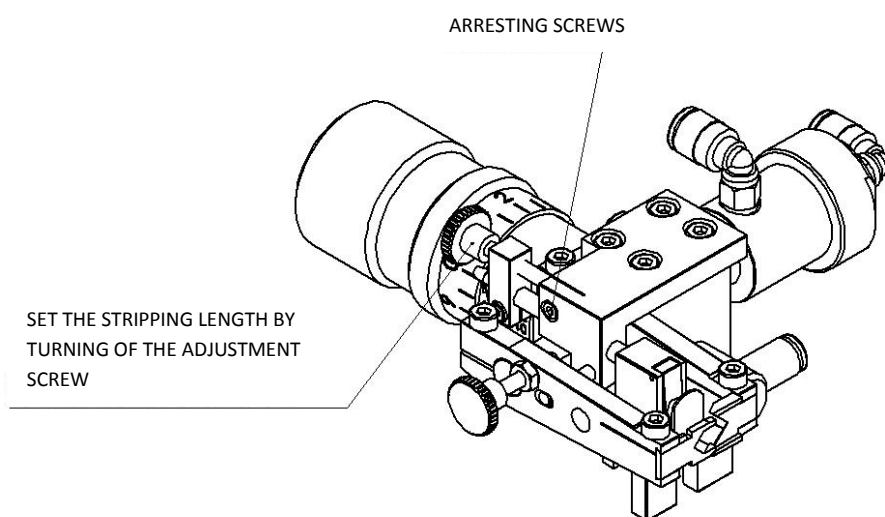
- + clockwise
- – turn left



After setting of individual elements tighten the arresting screws.

The correct length of stripping is set by loosening M2 and turning of the adjustment screw. After each test stripping adjust the position.

- + clockwise
- – turn left



After setting of individual elements tighten the arresting screw.

Position adjustment of the cable in contact

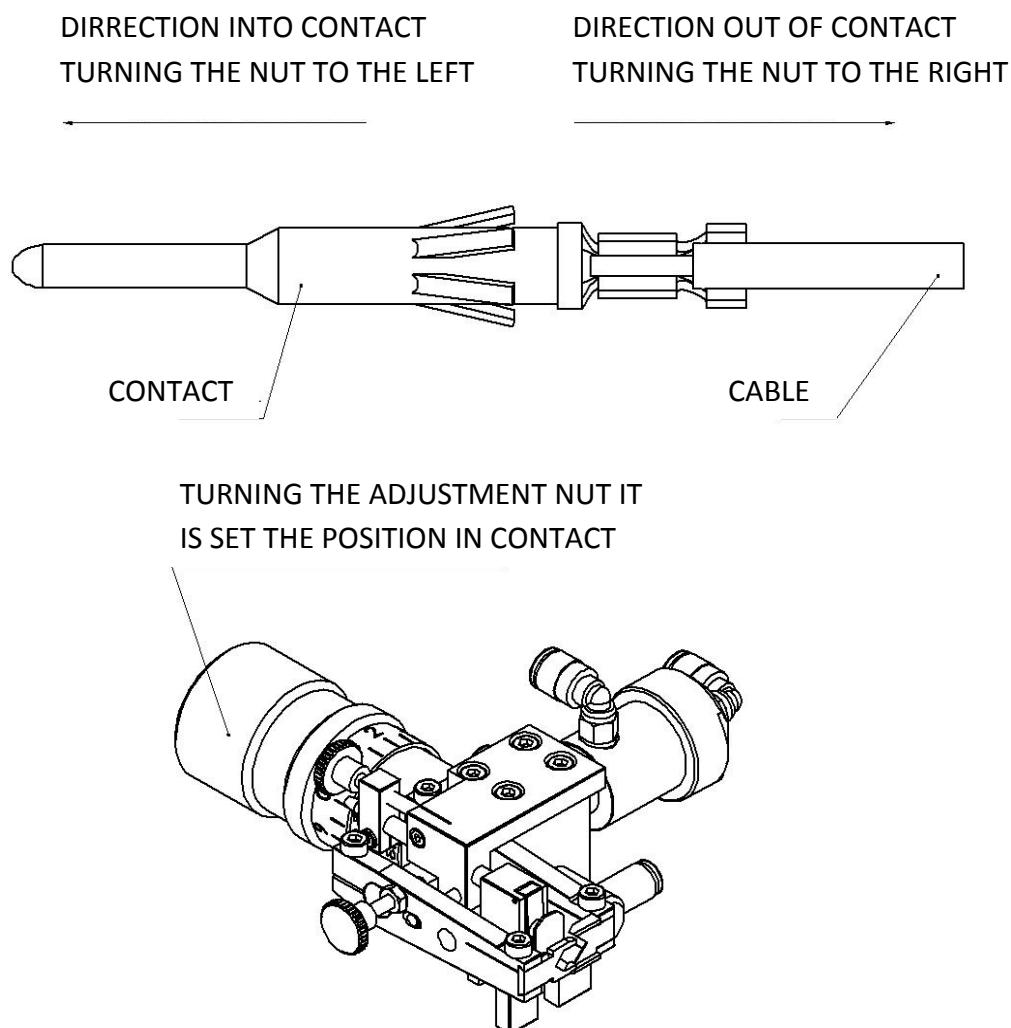
After settings of stripping and stripping length is need be after inserting of a tool to right position of the cable in contact.

Stránka | 13

This is done by turning of the adjusting nut:

- Cable into contact (turn left)
- Cable out of the contact (turn right)

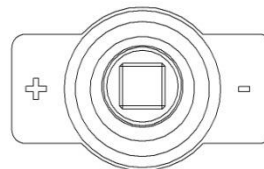
The element has no fixing or arresting.



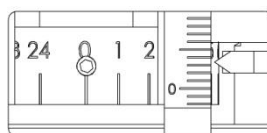
Setting of the crimping height

The adjustment of the crimping height is done by a spanner 4HR as per symbols on the cover of the machine. Wherein :

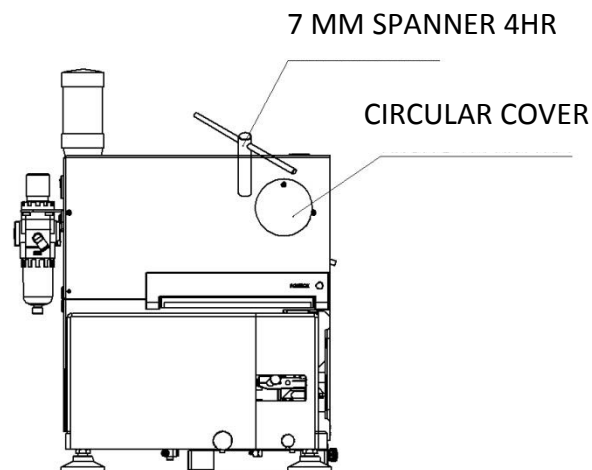
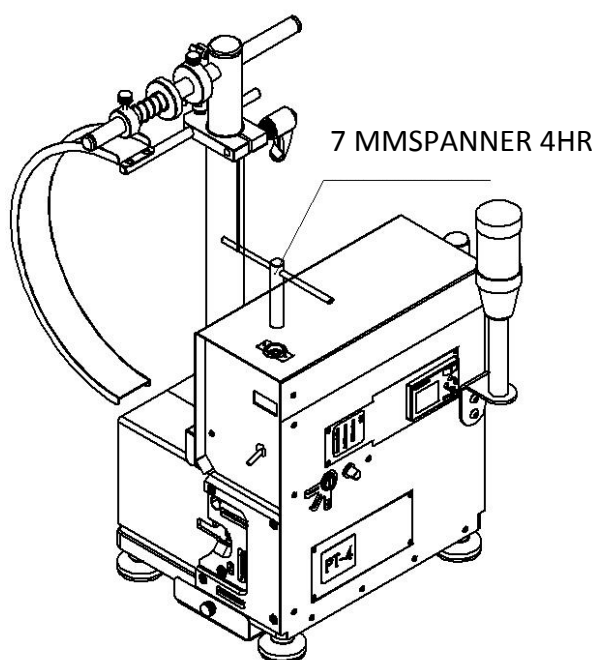
- + enlargement (adding on crimping height)
- - reduction (subtracting on crimping height)



One division on the scale is equal to 0,04mm. Each shift is evident at a spanner 4HR and aurally (click).



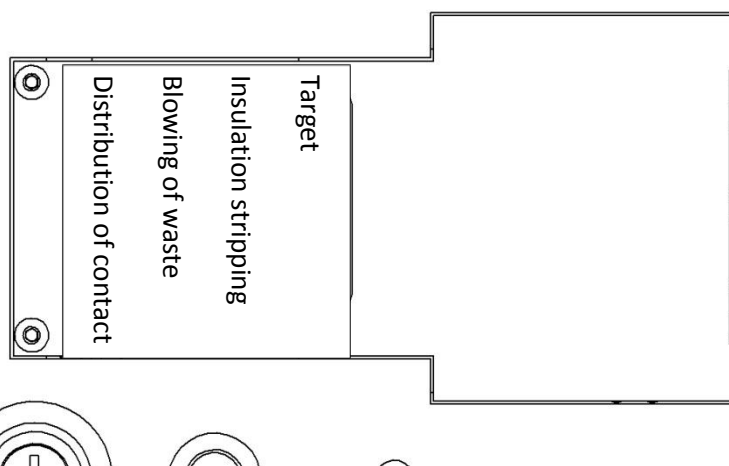
After every change of crimping height it should be checked for possible collision of lower tool part with the upper. It is done by the spanner 4HR after removing of the circular cover on the side of the machine.



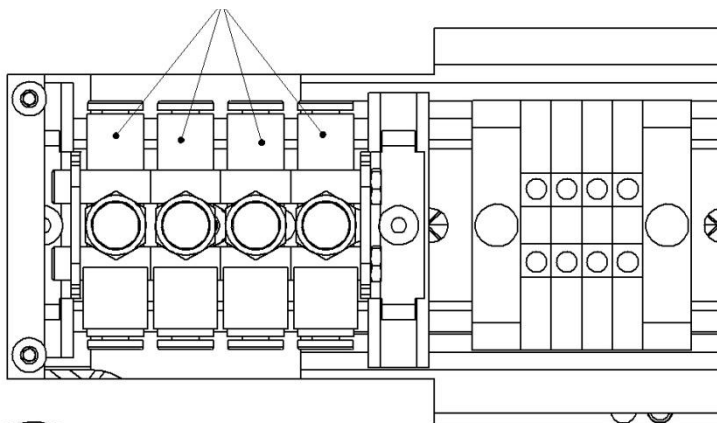
On the machine there are elements which affect the run of the machine. Adjustments can make the authorized and trained person. They are covered. For accessing to them it is necessary to unscrew screw M3 (4x).

Description :

- Distribution of contact – affects speed of contact distribution. It is possible only with a combination with a pneumatic tool.
- Blowing of waste – affects the intensity of blowing of waste
- Insulation stripping – affects speed of returning the stripping axis
- Target – affects the sensitivity of the switching target

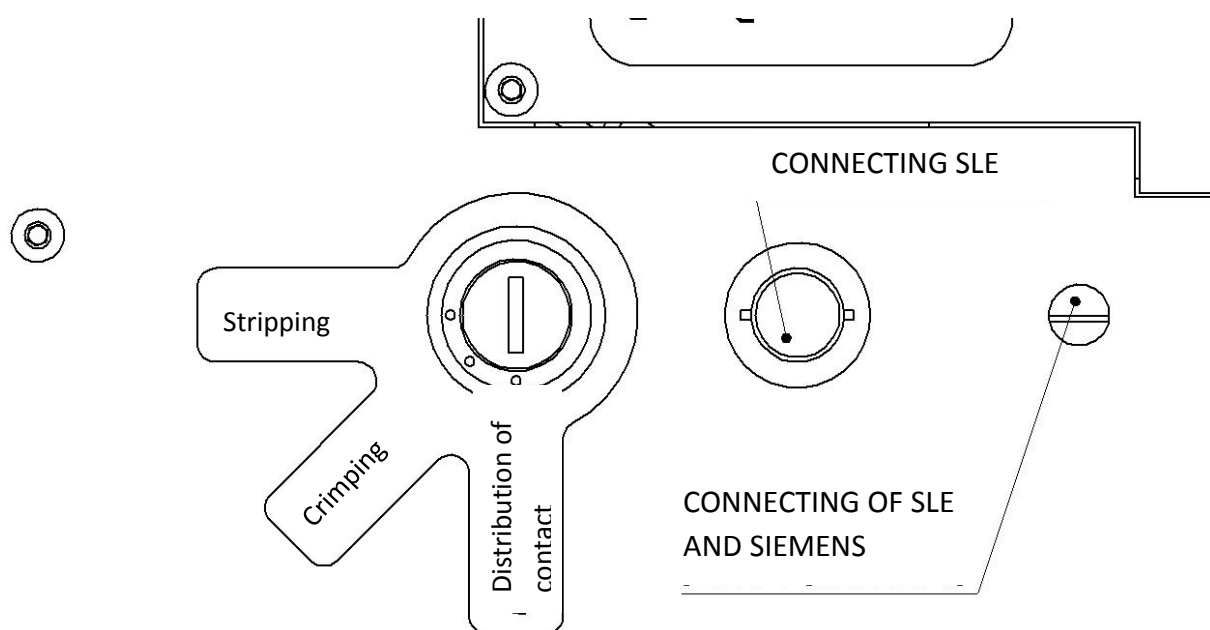


THROTTLE VALVES



Mode selector is a three-position switch. It is used for choosing the working mode.

- Stripping mode – in this mode only the stripping axis is active. Crimping and measurement is inactive. The mode is used for setting of stripping.
- Crimping mode – in this mode the classical crimping is on without measuring and cutting off a damaged contact. This mode may be used when there is no need of tracking the crimping force.
- Measuring mode – in this mode there is crimping as well measuring (tracking of crimping force). Cutting off the damaged crimp is active. It occurs when the source evaluation is out of the set tolerance. To use this mode it is necessary to connect SLE unit and connecting of SLE and SIEMENS.



Insulating axis PT.001



Name of the part	Item number	Ordering number	Quantity	Note
Tělo válce Z	1	PT-P.001.001	1	
Pouzdro válce Z	2	PT-P.001.002	1	
Tělo válce X	3	PT-P.002.001	1	
Držák	4	PT-P.001.008	1	
Pístnice osa X	5	PT-P.002.005	1	
Víko válce X	6	PT-P.002.002	1	
Čelist P	7	PT-P.002.004	1	
Čelist L	8	PT-P.002.003	1	
Palec	9	PT-P.001.005	1	
Kolík 3x28	10	PT-020.072	1	
Úhlové šroubení	11	PT-020.068	3	
Nastavovací matice	12	PT-P.001.009	1	
Pístnice odizolovávací osy	13	PT-P.001.003	1	
Píst odizolovávací osy	14	PT-P.001.004	1	
Spojka přímá	15	PT-020.069	1	
Červ M5x5	16		1	
Šroub M2x4	17		2	
Šroub M3x10	18		2	
Šroub M3x12	19		2	
Šroub M3x5	20		5	
Šroub M3x6	21		2	
Rýhovaný šroub	22	PT-020.042	1	
Matice M3	23		1	
Odizolovávací nůž pravý	24	PT-020.069	1	
Odizolovávací nůž levý	25	PT-020.070	1	
Terčík sestava	26	PT.002	1	
Rýhovaný šroub	27	PT-020.044	1	
Nastavení délky odizolování	28	PT-P.001.006	1	
O-kroužek 26x2	29	PT-020.016	1	
O-kroužek 18x1,2	30	PT-020.012	1	
Těsnění píst osa Z	31	PT-020.015	1	
Těsnění píst osa X	32	PT-020.013	1	
4HR těsnění	33	PT-020.014	1	
Těsnění pístnice osa X	34	PT-020.017	1	
Blok osy X	35	PT-P.001.010	1	

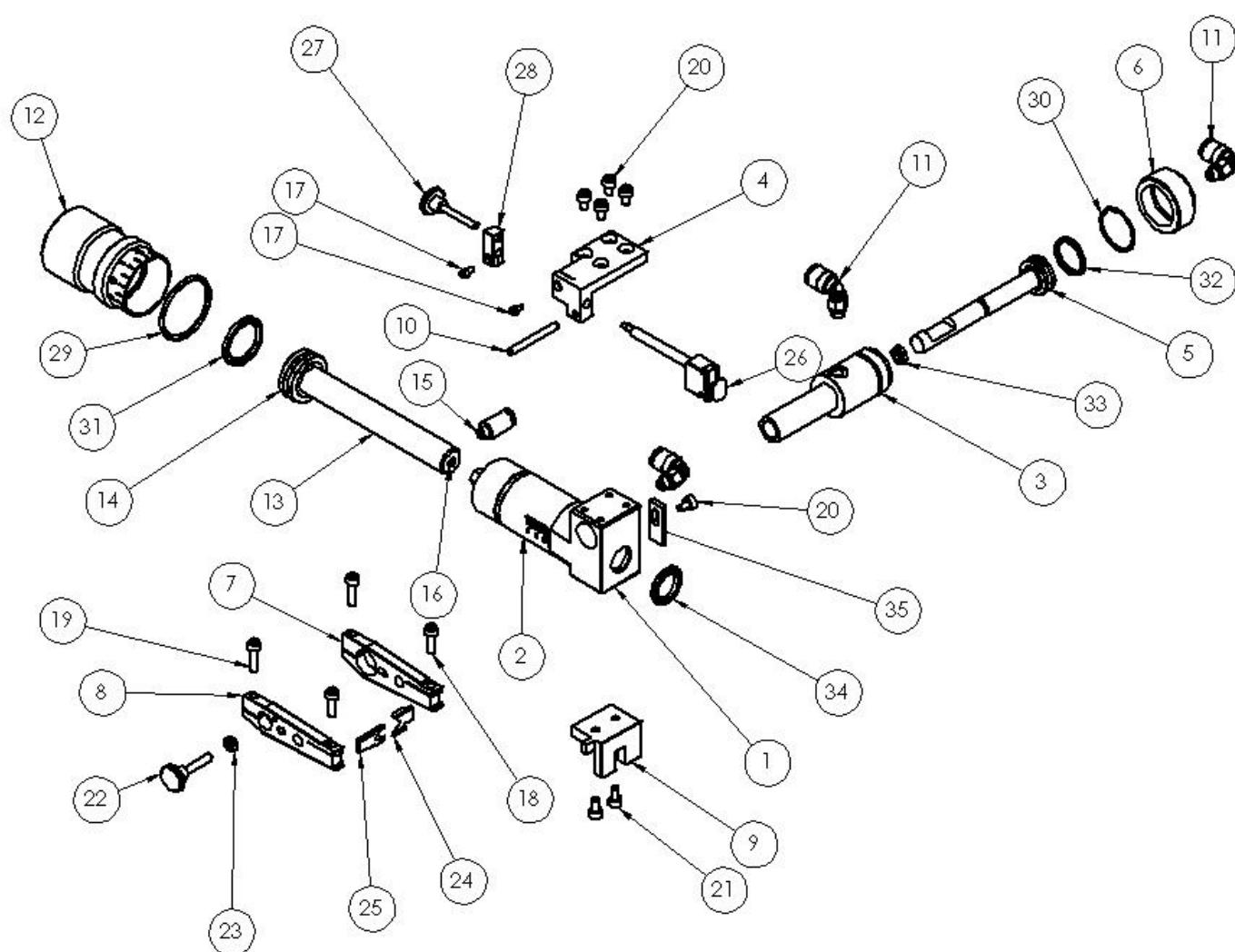
Stránka | 17

Quantity for the machine: assembly 1

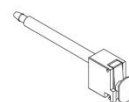
Insulating axis PT.001



Stránka | 18



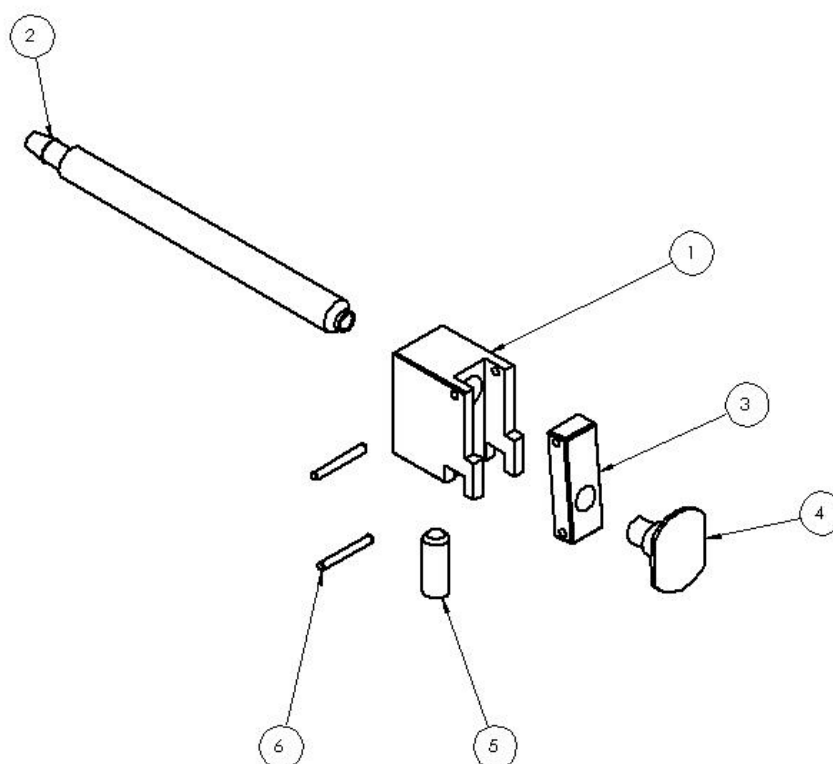
Target PT.002



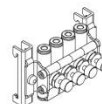
Name of the part	Item number	Ordering number	Quantity	Note
Kostka terčik	1	PT-P.003.001	1	
Vzduch terčik	2	PT-P.003.004	1	
Závěra terčik	3	PT-P.003.002	1	
Terčik	4	PT-P.003.003	1	
Červ M3x8	5		1	
Kolík 1x8	6	PT-020.071	2	

Stránka | 19

Quantity for the machine: assembly 1



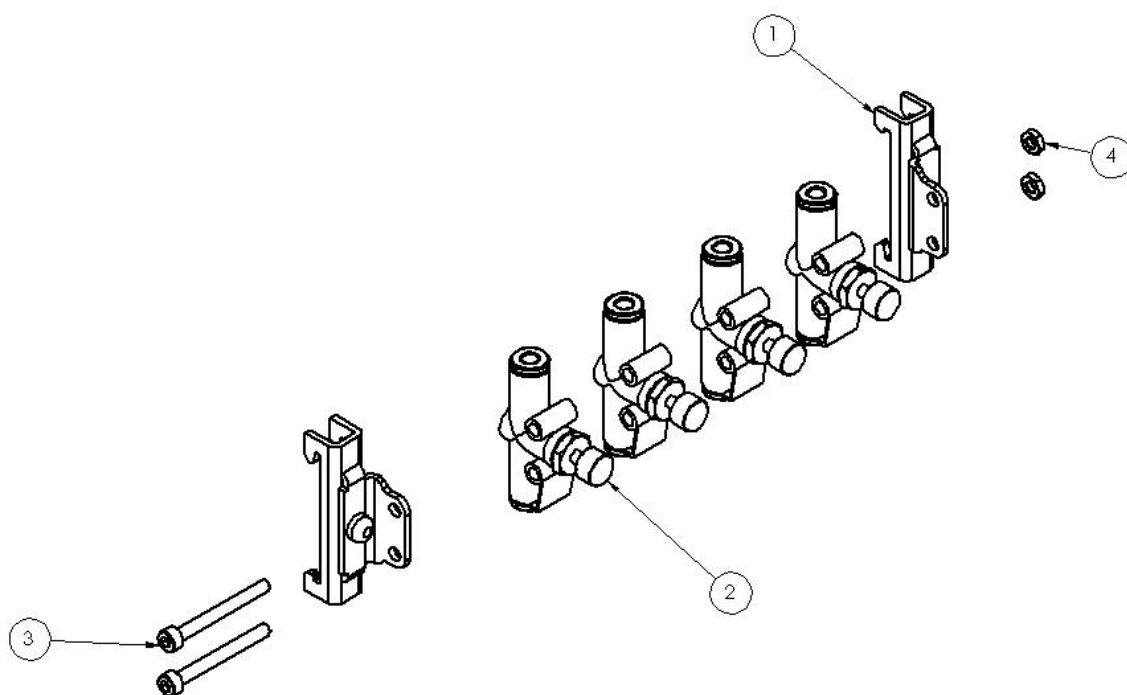
Block throttling valves PT.003



Name of the part	Item number	Ordering number	Quantity	Note
Konzola	1	PT-020.066	2	
Škrťací ventil	2	PT-020.067	4	
Šroub M3x55	3		2	
Matice M3	4		2	

Stránka | 20

Quantity for the machine: assembly 1



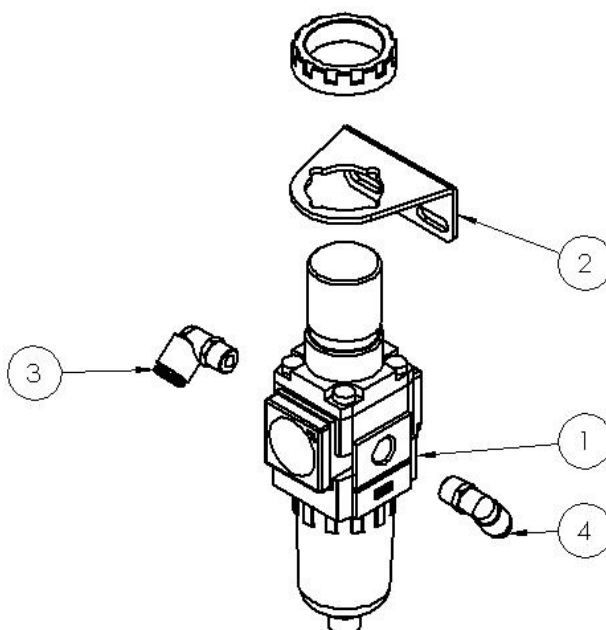
Air regulator PT.004



Name of the part	Item number	Ordering number	Quantity	Note
Regulátor	1	PT-020.070	1	
Konzola regulátoru	2	PT-020.064	1	
Úhlové šroubení	3	PT-020.065	1	
Úhlové šroubení	4	PT-020.063	1	

Stránka | 21

Quantity for the machine: assembly 1



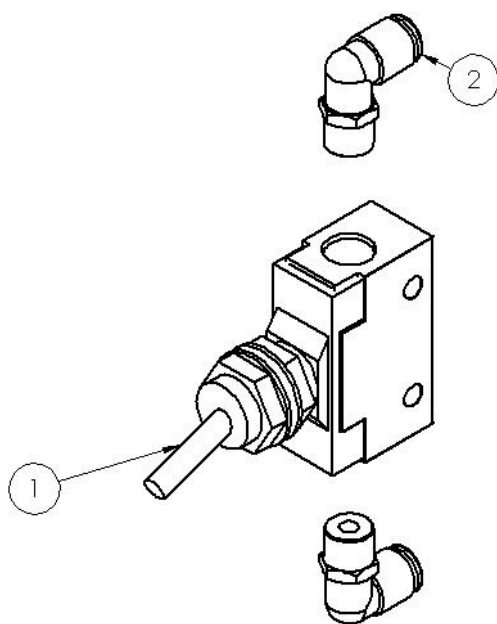
Manual valve PT.005



Name of the part	Item number	Ordering number	Quantity	Note
Ruční ventil	1	PT-020.062	1	
Úhlové šroubení	2	PT-020.063	2	

Stránka | 22

Quantity for the machine: assembly 1



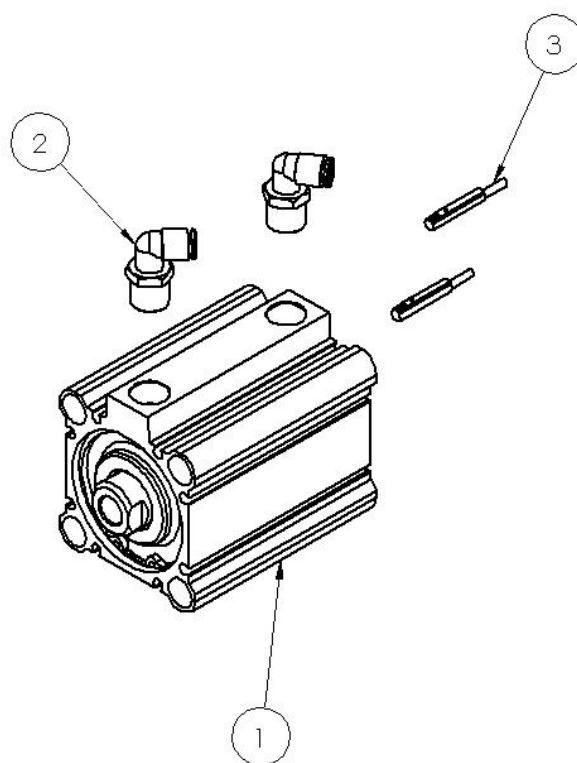
Cylinder V1 PT.006



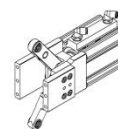
Name of the part	Item number	Ordering number	Quantity	Note
Válec V1	1	PT-020.059	1	
Úhlové šroubení	2	PT-020.060	2	
Snímač	3	PT-020.061	2	

Stránka | 23

Quantity for the machine: assembly 1



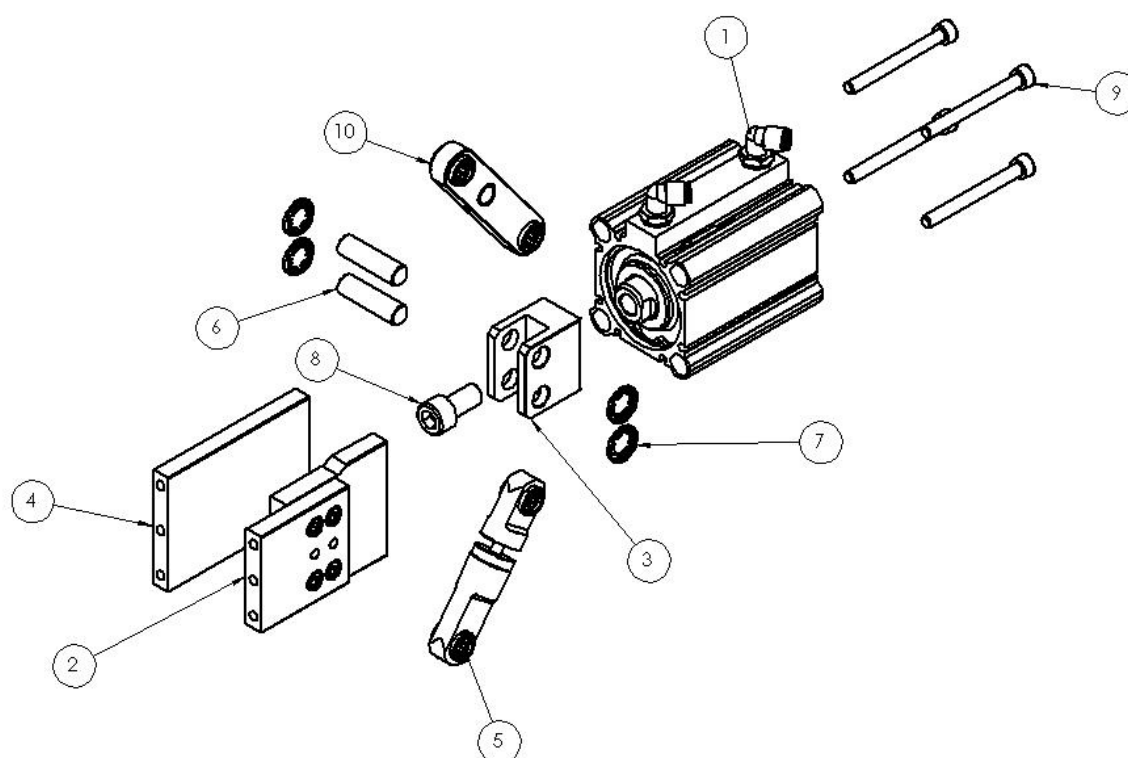
Crimping axis PT.007



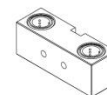
Name of the part	Item number	Ordering number	Quantity	Note
Válec V1-sestava	1	PT.006	1	
Konzola pneuválce P	2	PT.009	1	
Kostka páky	3	PT-004.001.009	1	
Konzola pneuválce L	4	PT-004.001.006	1	
Páka SLE	5	PT.011	1	
Kolík 25	6	PT-004.001.022	2	
Starlock 10	7		4	
Šroub M10x20	8		1	
Šroub M6x90	9		4	
Páka s kolíkem	10	PT.010	1	

Stránka | 24

Quantity for the machine: assembly 1



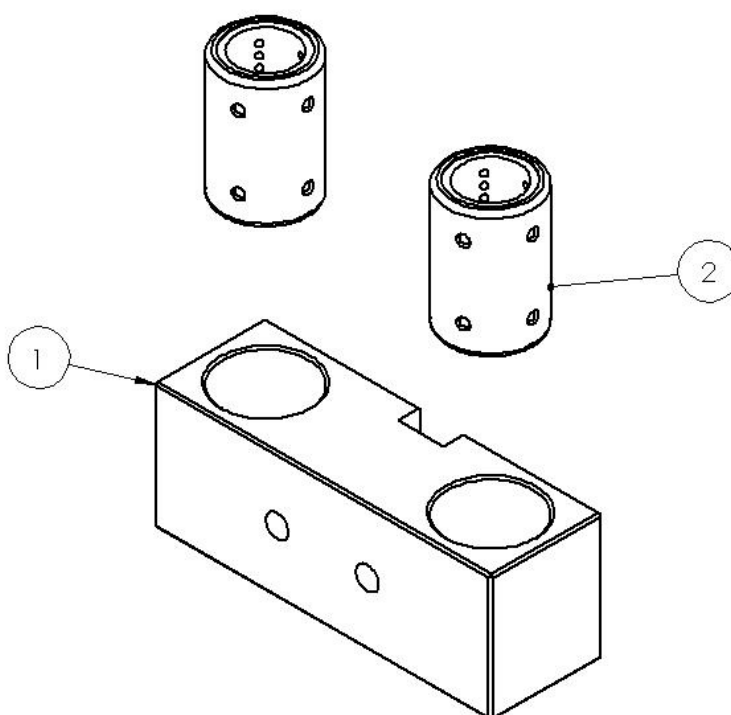
Block of vertical axis PT.008



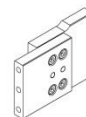
Name of the part	Item number	Ordering number	Quantity	Note
Blok svislé osy	1	PT-004.001.001	1	
Pouzdro	2	PT-020.031	2	

Stránka | 25

Quantity for the machine: assembly 2



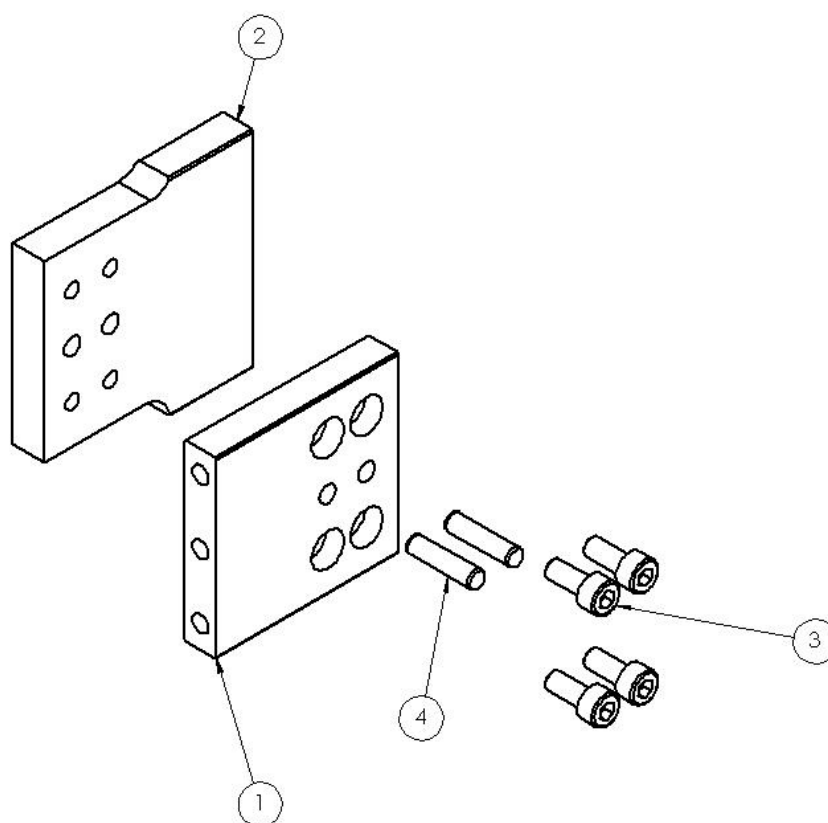
Console of pneumatic P PT.009



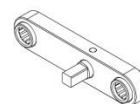
Name of the part	Item number	Ordering number	Quantity	Note
Konzola pneuválce P2	1	PT-004.001.008	1	
Konzola pneuválce P	2	PT-004.001.007	1	
Šroub M5x12	3		4	
Kolík 5x20	4		2	

Stránka | 26

Quantity for the machine: assembly 1



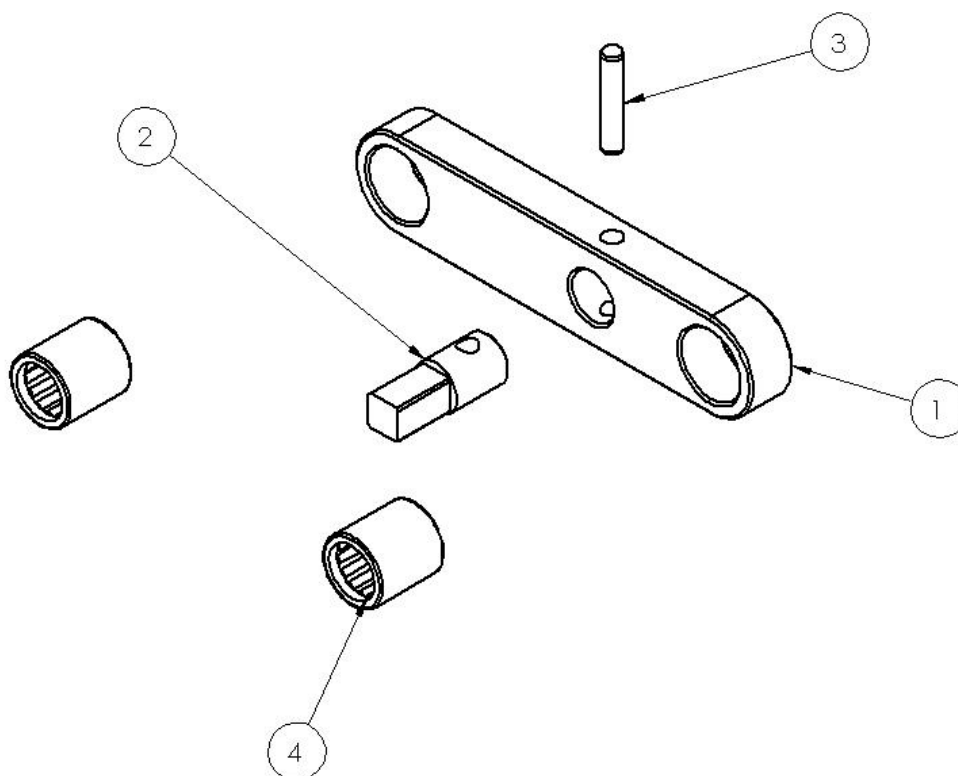
Lever with peg PT.010



Name of the part	Item number	Ordering number	Quantity	Note
Páka s kolíkem	1	PT-004.001.014	1	
Kolík čtyřhranný	2	PT-004.001.005	1	
Kolík 4x20	3		1	
Jehličkové pouzdro	4	PT-020.058	2	

Stránka | 27

Quantity for the machine: assembly 1



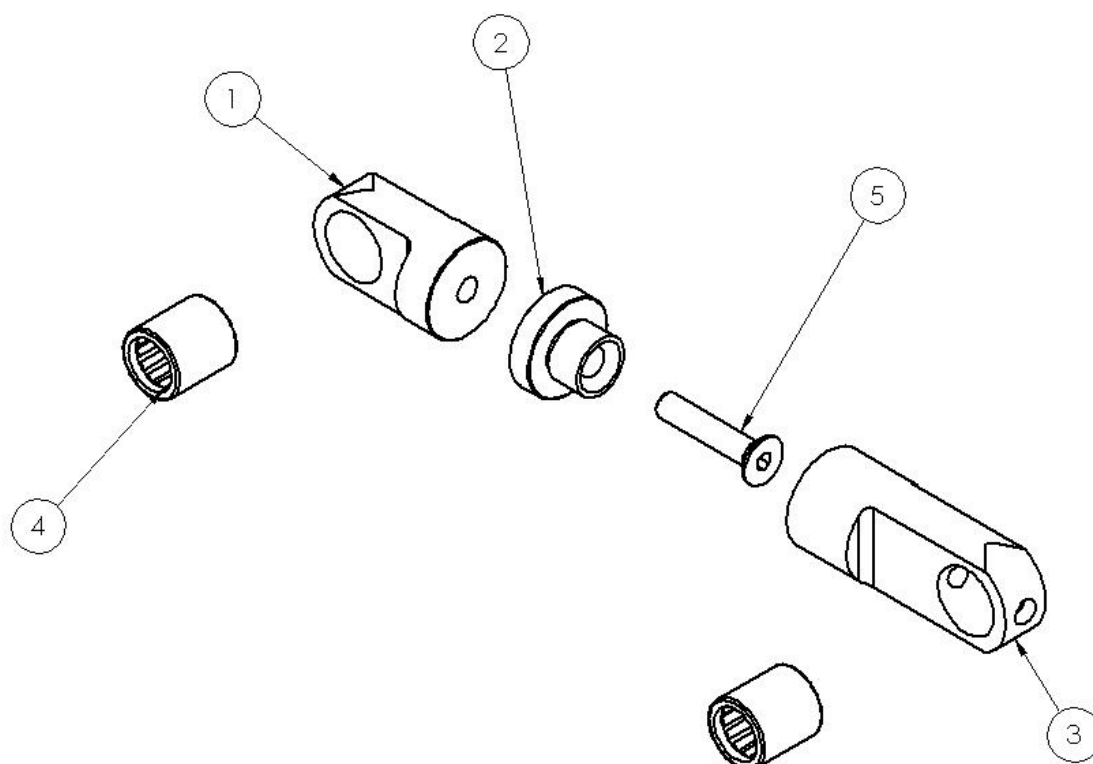
Lever of SLE PT.011



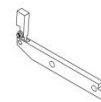
Name of the parts	Item number	Ordering number	Quantity	Note
Páka spodní SLE	1	PT-04.005.005	1	
Matice páky SLE	2	PT-04.005.010	1	
Páka horní SLE	3	PT-04.005.009	1	
Jehličkové pouzdro	4	PT-020.058	2	
Šroub M5x25 20N	5		1	

Stránka | 28

Quantity for the machine: assembly 1



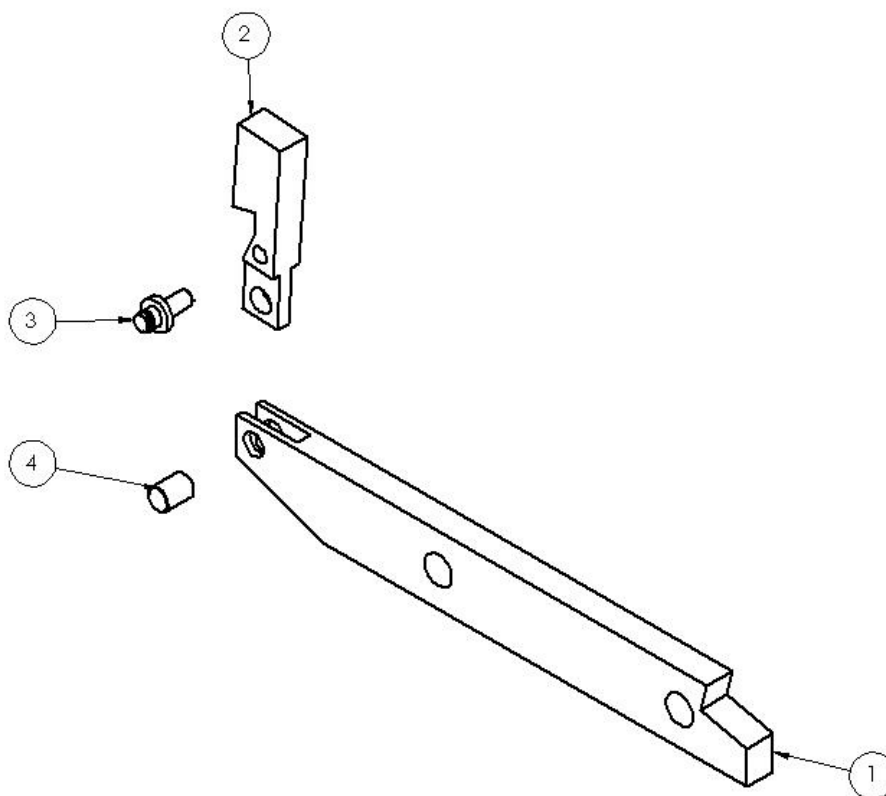
Lever of ejector PT.012



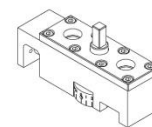
Name of the part	Item number	Ordering number	Quantity	Note
Páka vyhazovače	1	PT-04.002.004	1	
Háček	2	PT-04.002.002	1	
Čep vyhazovače	3	PT-04.002.008	1	
Kolík 3x4	4		1	

Stránka | 29

Quantity for the machine: assembly 1



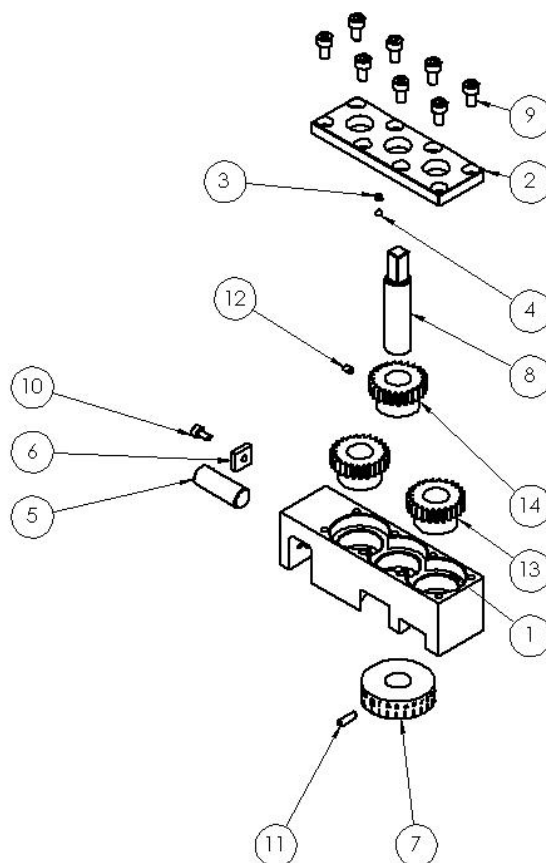
Transfer cube PT.013



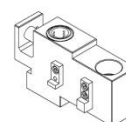
Name of the part	Item number	Ordering number	Quantity	Note
Převodová kostka	1	PT-04.001.016	1	
Převodová kostka-víko	2	PT-04.001.017	1	
Převodová kostka-pružina	3		1	
Kulička	4	PT-020.070	1	
Kolík	5	PT-04.001.004	1	
Pojistka	6	PT-04.001.015	1	
Kolečko se stupnicí	7	PT-04.003.007	1	
Čep	8	PT-04.001.003	1	
Šroub M4x8	9		8	
Šroub M3x6	10		1	
Červ M3x10	11		1	
Červ M3x4	12		1	
Ozubené kolo M12x1L	13	PT-04.003.019	2	
Ozubené kolo 10H7	14	PT-04.003.018	1	

Stránka | 30

Quantity for the machine: assembly 1



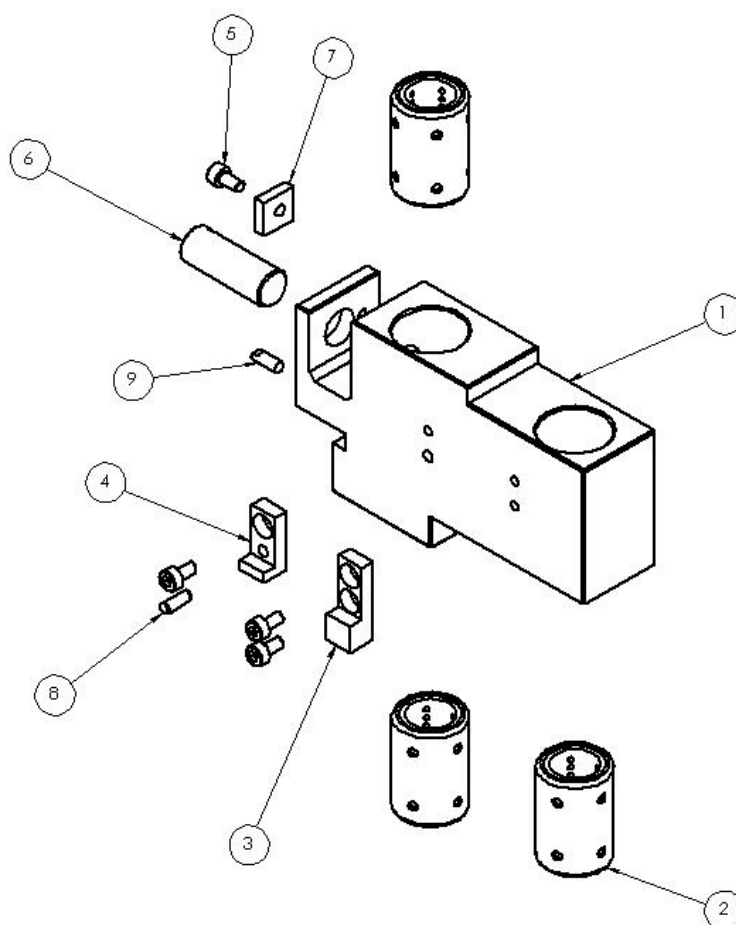
Lower cube PT.014



Name of the part	Item number	Ordering number	Quantity	Note
Spodní kostka	1	PT-04.001.018	1	
Pouzdro	2	PT-020.031	3	
Nabíječ pravý	3	PT-04.001.012	1	
Nabíječ levý	4	PT-04.001.011	1	
Šroub M3x6	5		4	
Kolík	6	PT-04.001.004	1	
Pojistka	7	PT-04.001.015	1	
Kolík 3x8	8		1	
Kolík nástroje	9	PT-020.056	1	

Stránka | 31

Quantity for the machine: assembly 1



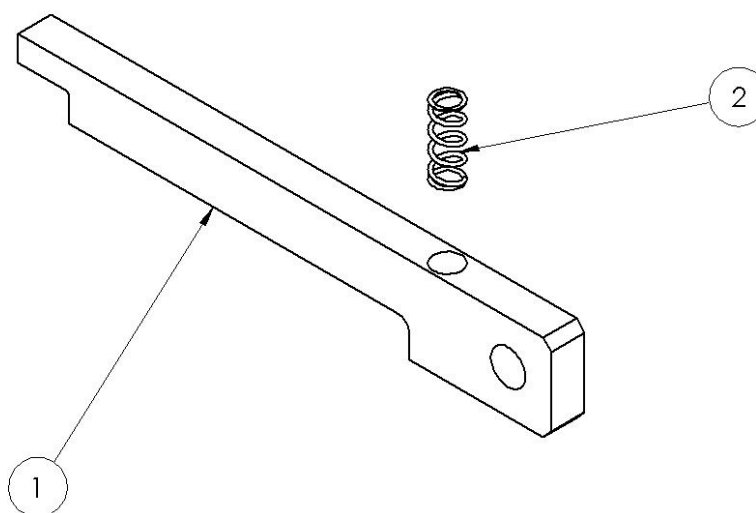
Trigger of ejector PT.015



Name of the part	Item number	Ordering number	Quantity	Note
Spouštěč vyhazovače	1	PT-04.002.005	1	
Spouštěč vyhazovače-pružina	2	PT-020.005	1	

Stránka | 32

Quantity for the machine: assembly 1



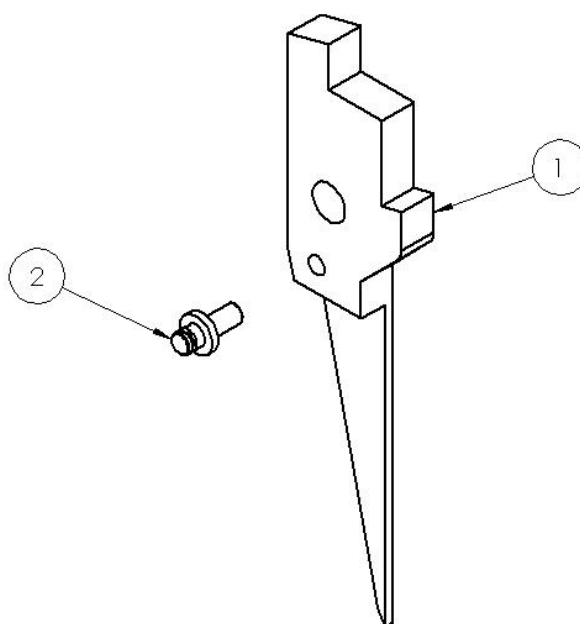
Ejector PT.016



Name of the part	Item number	Ordering number	Quantity	Note
Vyhazovač	1	PT-04.002.007	1	
Čep vyhazovače	2	PT-04.002.008	1	

Stránka | 33

Quantity for the machine: assembly 1



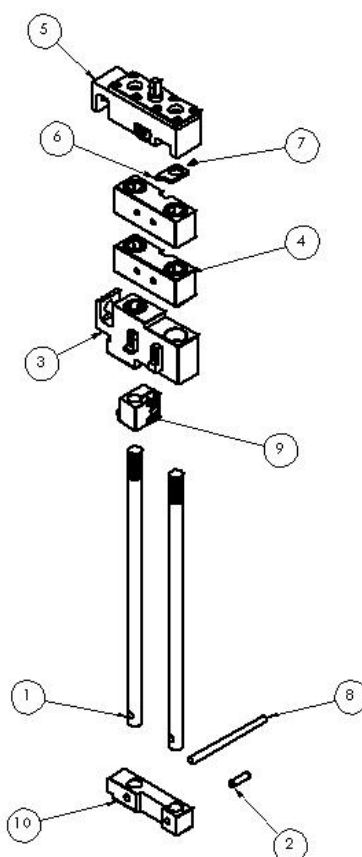
Vertical axis PT.017



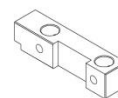
Name of the part	Item number	Ordering number	Quantity	Note
Vedení	1	PT-04.001.020	2	
Kolík 6x20	2		1	
Spodní kostka	3	PT.014	1	
Blok svislé osy	4	PT.008	1	
Převodová kostka	5	PT.013	1	
Ukazatel	6	PT-04.001.019	1	
Šroub M2x4	7		1	
Vodící tyč 6x90	8	PT-020.057	1	
Konzola odizolovávací osy	9	PT.030	1	
Kostka vedení	10	PT.018	1	

Stránka | 34

Quantity for the machine: assembly 1



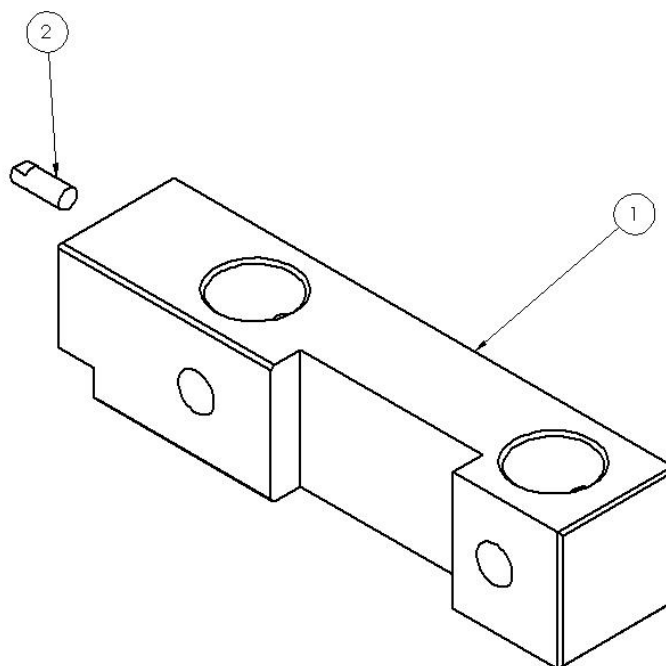
Cube of wiring PT.018



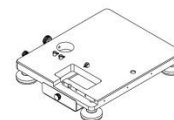
Name of the spar	Item number	Ordering number	Quantity	Note
Kostka vedení	1	PT-04.001.010	1	
Kolík nástroje	2	PT-020.056	1	

Stránka | 35

Quantity for the machine: assembly 1



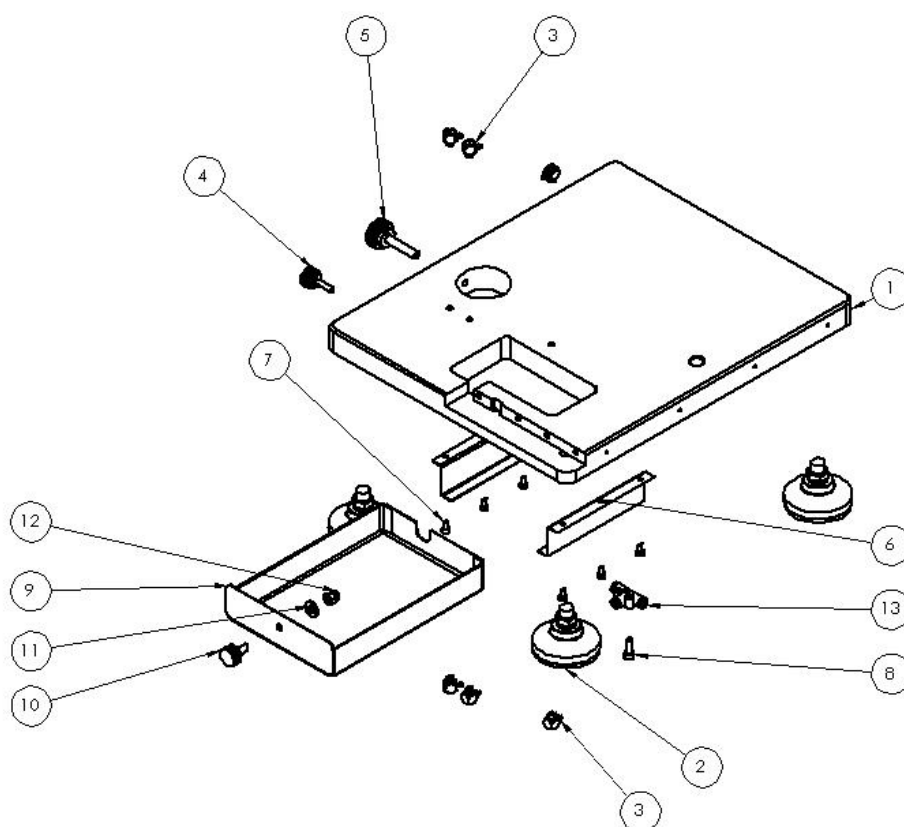
Base plate PT.019



Name of the part	Item number	Ordering number	Quantity	Note
Základní deska	1	PT-04.001.001	1	
Stavěcí noha	2	PT-020.053	4	
Úhlové šroubení	3	PT-020.034	6	
Ovládací kolečko M4x16	4	PT-020.054	1	
Ovládací kolečko M6x30	5	PT-020.046	1	
Lyžina	6	PT-04.001.002	2	
Šroub M3x6	7		6	
Šroub M4x12	8		1	
Zásuvka na odpad	9	PT-04.001.003	1	
Ovládací kolečko M5x10	10	PT-020.045	1	
Podložka M5	11		1	
Uzavřená matice M5	12		1	
Těčko spojka	13	PT-020.055	1	

Stránka | 36

Quantity for the machine: assembly 1



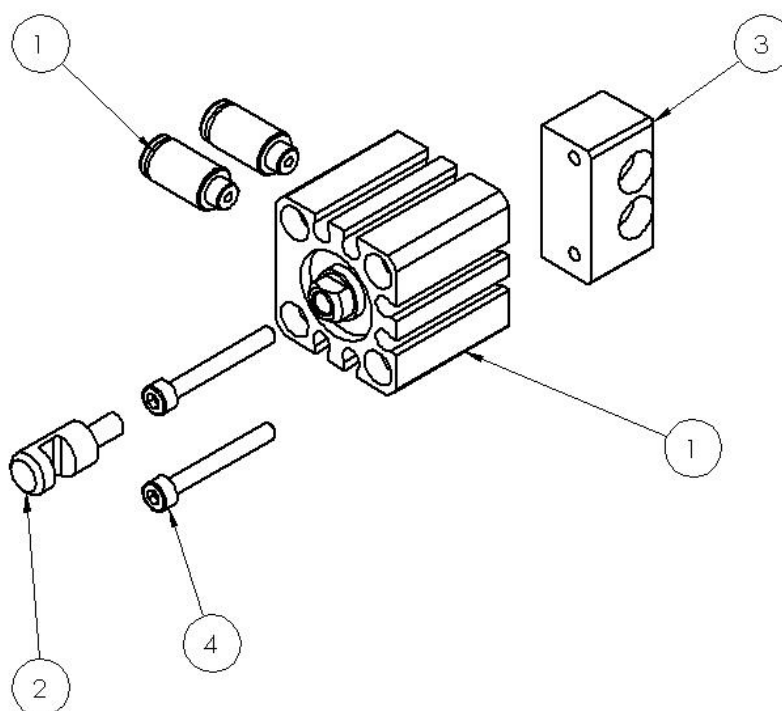
Cylinder V3 PT.020



Name of the part	Item number	Ordering number	Quantity	Note
Válec V3	1	PT-020.052	1	
Píst	2	PT-04.002.015	1	
Kostka pneuválce	3	PT-04.003.004	1	
Šroub M3x30	4		2	

Stránka | 37

Quantity for the machine: assembly 1



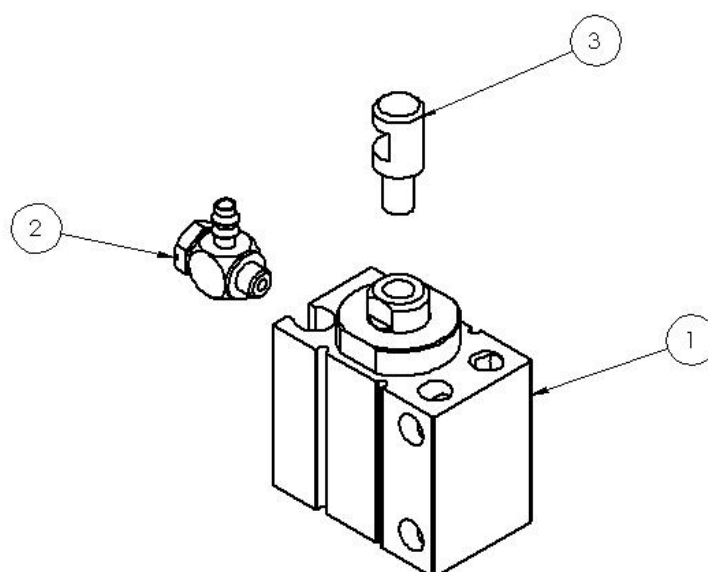
Cylinder V4 PT.021



Name of the part	Item number	Ordering number	Quantity	Note
Válec V4	1	PT-020.051	1	
Úhlové šroubení	2	PT-020.047	1	
Píst střížného nože	3	PT-04.002.015/2	1	

Stránka | 38

Quantity for the machine: assembly 1



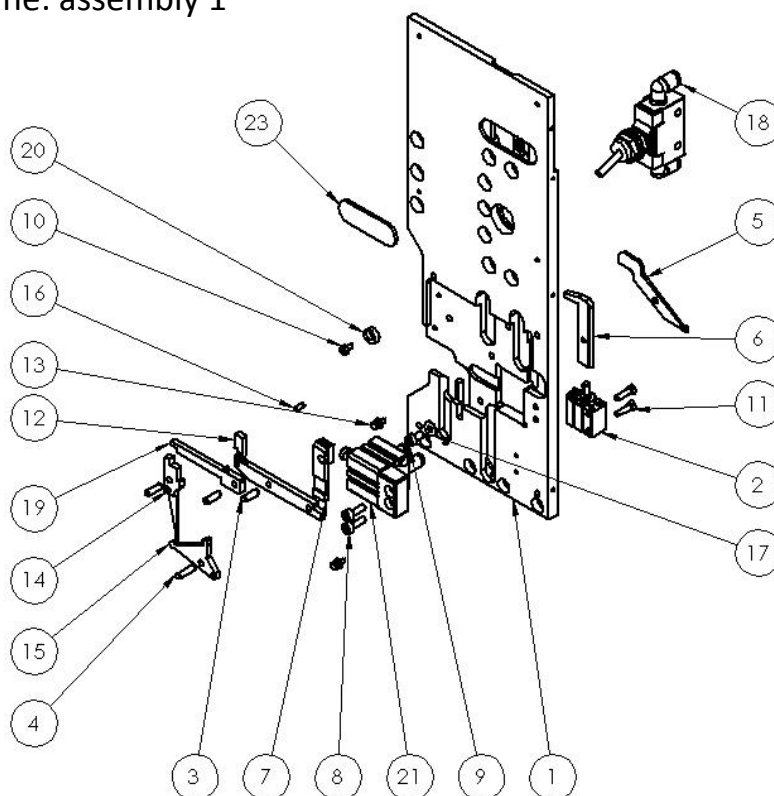
Front PT.022



Name of the part	Item number	Ordering number	Quantity	Note
Čelo	1	PT-04.002.001	1	
Válec V4	2	PT.021	1	
Kolík 4x12	3		3	
Kolík 4x14	4		1	
Střížný nůž	5	PT-04.002.006/2	1	
Horní čelist	6	PT-04.002.011	1	
Spodní čelist	7	PT-04.002.009	1	
Šroub M4x12	8		2	
Šroub M4x8	9		1	
Šroub M3x5	10		1	
Šroub M3x12	11		2	
Páka vyhazovače	12	PT.012	1	
Pružinový čep	13	PT-04.002.002	2	
Vyhazovač	14	PT.016	1	
Vačka čelisti	15	PT-04.002.006	1	
Kolík 3x6	16		1	
Podložka M4	17		1	
Ruční ventil	18	PT.005	1	
Spouštěč vyhazovače	19	PT.015	1	
Vačka	20	PT-04.002.005	1	
Válec V3	21	PT.020	1	
Sklíčko	23	PT-04.002.019	1	

Stránka | 39

Quantity for the machine: assembly 1



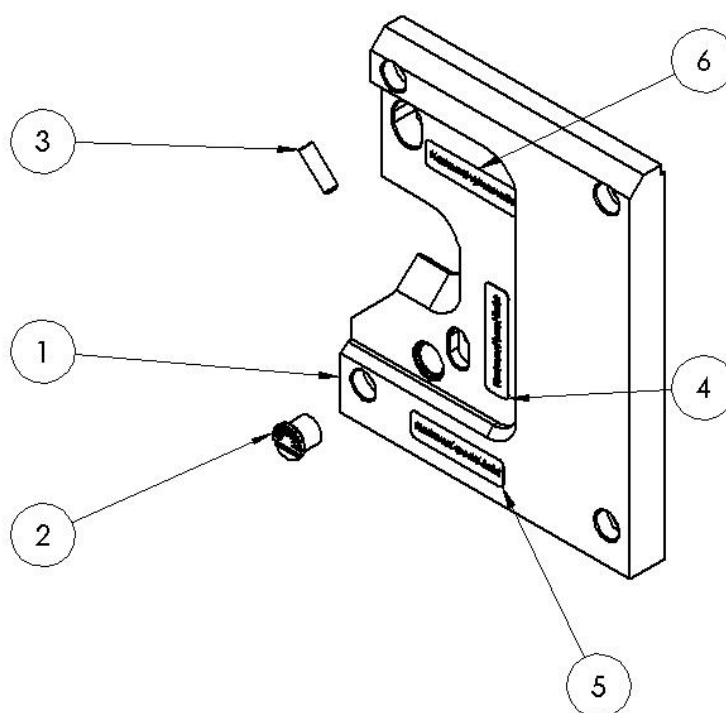
Front cover PT.023



Name of the part	Item number	Ordering number	Quantity	Note
Čelní kryt	1	PT-04.002.016	1	
Nastavení spodní čelisti	2	PT-04.002.017	1	
Červ M5x16	3		1	
Štítek nastavení horní čelist	4		1	
Štítek nastavení spodní čelist	5		1	
Štítek nastavení vyhazovače	6		1	

Stránka | 40

Quantity for the machine: assembly 1



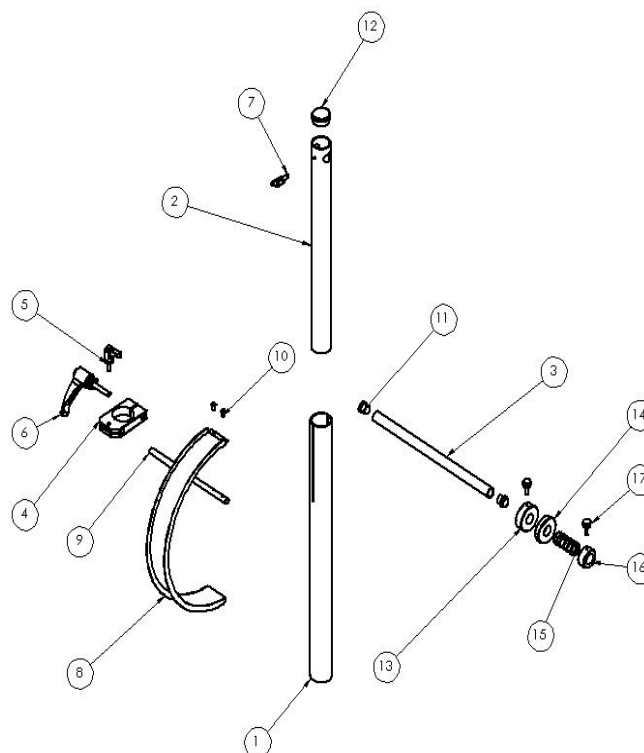
Pillar spool PT.024Stripping



Name of the part	Item number	Ordering number	Quantity	Note
Sloupek	1	PT-04.006.003	1	
Sloupek výsuvný	2	PT-04.006.004	1	
Rameno	3	PT-020.091	1	
Svorka	4	PT.009.097	1	
Páčka M6x20	5	PT-020.095	1	
Páčka M8x40	6	PT-020.050	1	
Křídlový šroub M6x16	7	PT-020.049	1	
Naváděcí plech boční	8	PT-004.009	1	
Konzola naváděcího plechu	9	PT-009.001	1	
Šroub M4x10	10	M4x10	2	
Koncovka 18	11	PT-020.093	2	
Koncovka 35	12	PT-020.094	1	
Zarážka 15	13	PT-04.009.003	1	
Zarážka 10	14	PT-04.009.002	1	
Pružina cívka	15	PT-020.048	1	
Zarážka krajní	16	PT-04.009.004	1	
Ovládací kolečko M4x16	17	PT-020.054	2	

Stránka | 41

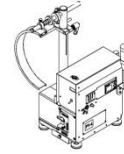
Quantity for the machine: assembly 1



Regular maintenance of the machine

Stránka | 42

Maintenance of mechanics under the front cover



The machine is designed to minimize the routine maintenance. Control pneumatic and electrical components are covered and separated from the workspace by a divider.

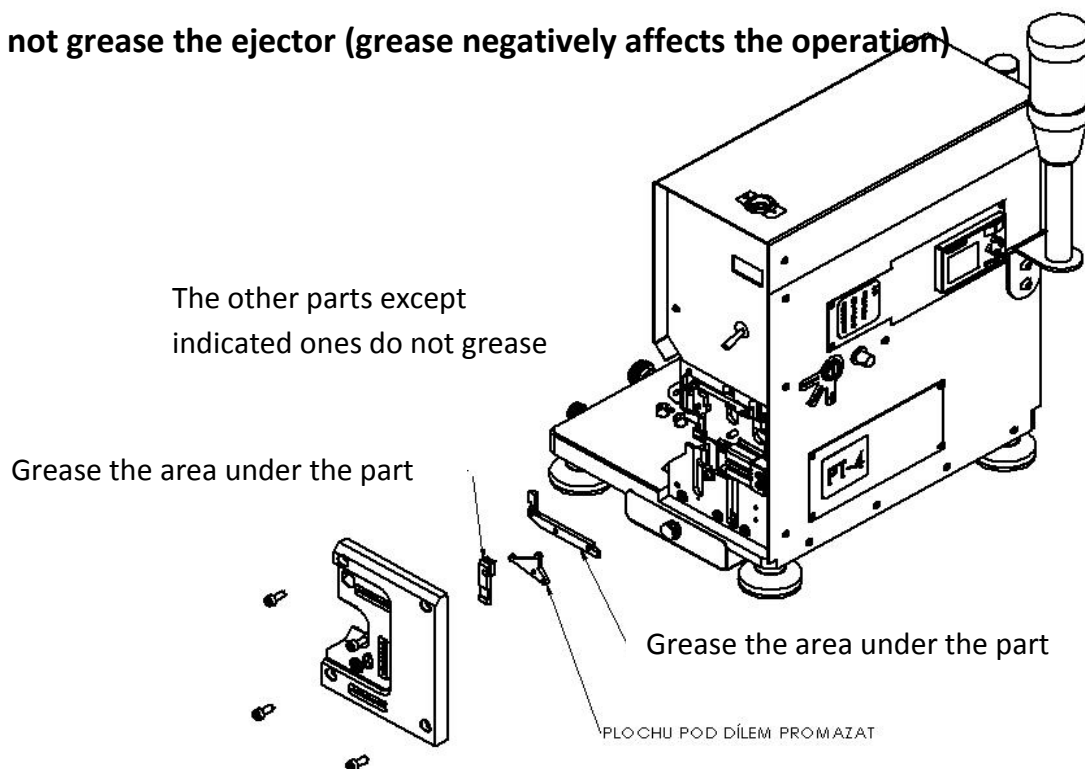
The mechanical parts of the guide rods are fitted with ball bushings filled by grease and are maintenance free.

Mechanics under the front cover is subject to regular maintenance. When the machine is working insulation from insulated cables gets into the space under the front cover.

These leftovers of insulation under the front cover must be eliminated by compressed air or a brush once in a month.

Clean the mechanics under the front cover once in a year and grease as illustrated with grease Shell Gadus S2 V220 2.

Do not grease the ejector (grease negatively affects the operation)



Grease the area under the part

Regular maintenance of the machine

Stránka | 43

Regular maintenance of the stripping unit

