

Mechlift Pro 100

Pneumatic

Original instructions EN
2015-11-01
CE



LIFT-O-FLEX

MOBI-Crane  Voyager

Table of contents

1.	Safety	4
2.	Technical data.....	6
2.1	Overview.....	6
2.2	Stroke.....	7
2.3	Build height BH.....	8
3.	Sub-assemblies.....	9
3.1	Cross units.....	9
3.2	Pillar units.....	12
3.3	Suspensions.....	17
3.4	Tool adapters.....	20
4.	Accessories.....	24
4.1	Rotation brake.....	24
4.2	Manual pressure release.....	25
4.3	Stroke limiter.....	26
5.	Pneumatic configurations.....	27
5.1	Pneumatics: 2-weight.....	28
5.2	Pneumatics: 2-weight automotive.....	30
5.3	Pneumatics: 2-weight with slow speed function.....	32
5.4	Pneumatics: 2-weight automotive with slow speed function.....	34
5.5	Pneumatics: 3-weight.....	36
5.6	Pneumatics: 3-weight automotive.....	38
5.7	Pneumatics: 3-weight with slow speed function.....	40
5.8	Pneumatics: 3-weight automotive with slow speed function.....	42
5.9	Pneumatics: pilot control.....	44
5.10	Pneumatics: pilot control with slow speed function.....	46
5.11	Air preparation unit.....	48
5.12	Control unit: Throttle handle.....	49
5.13	Control unit: Load cell (parallelogram).....	50
6.	Installation and commissioning.....	51
6.1	Mechanical installation.....	51
6.2	Pneumatic installation.....	51
7.	User instructions.....	52
8.	Service, maintenance & running.....	53
8.1	Recommended spare parts / wear parts.....	54
8.2	Service record — Mechlift Pro 100 pneumatic.....	55
8.3	Replacement of O rings.....	56
8.4	Setting of balance function in throttle handle.....	57
8.5	Setting of balance function in load cell (parallelogram).....	58
8.6	Troubleshooting.....	60
9.	EC certificate.....	61
10.	Revisions.....	62

Although the greatest care was taken regarding the information in this catalogue, we assume no responsibility for any errors. We reserve the right to make changes. The illustrations in the catalogue represent the described products, but the delivered goods may differ in some respects from the illustrations. The right is reserved to make changes in design and dimensions compared with the information in the catalogue in order not to prevent development of designs, material and manufacturing methods.

The customer is reminded that in the purchase of RonI's products for application on the job or elsewhere, there is supplementary, current information that could not be included in the catalogue in terms of recommendations on each product's suitability regarding different combinations of Movomech's comprehensive product line. All relevant information must be provided to the persons who are responsible for the application of the product.

1. Safety

Movomech's equipment is manufactured in accordance with the latest technological advances, and according to the latest applicable European standards and directions. The aim of this documentation is to provide the user with practical instructions for safe operation and simple maintenance of the equipment.

Anyone who deals with the installation of the equipment (including related equipment), operational procedure, use, maintenance, and/or repair functions must have read and understood:

- the instruction manual,
- the safety regulations, and
- the safety instructions for each individual section.

In order to avoid misuse and to ensure the reliable operation of the products, we recommend that the instruction manual is always available to the user/operator.

Intended usage

The equipment is intended exclusively for transportation, lifting and lowering of load. Any other use, including the towing of a load and the transportation of passengers, is prohibited (see below for more examples). RonI does not accept responsibility for damage caused by such use. All risks are the sole responsibility of the user.

The equipment may only be used in perfect technical condition by trained staff, and in accordance with current safety and work protection regulations. Furthermore, the user must observe operational and maintenance conditions contained in the instruction manual. Severe personal injury and damage to equipment can be caused by:

- removal of covers and casings,
- non-professional installation of equipment,
- incorrect usage, or
- insufficient maintenance.

Prohibited usage

Certain types of activities and operations are prohibited, as in specific circumstances they can cause personal injury as well as permanent damage to the construction. For example:

- It is prohibited to convey passengers using the equipment.
- Never transport suspended loads above anyone's head.
- Never drop a suspended load, and make sure it is lifted in a straight line.
- Never loosen secured or fastened loads by using the equipment.
- Do not overload.
- Do not leave a suspended load unattended.

General safety aspects

The instruction manual should always be kept within easy reach of the equipment. It contains important safety information and sections that relate to guidelines, norms, and regulations. Failure to follow the safety regulations in this instruction manual may result in personal injury or death.

In addition to the instruction manual, generally applicable regulations and rules must be followed and adhered to in order to avoid accidents and protect the environment. This also applies to regulations relating to the handling of products dangerous to the environment and the use of personal safety equipment.

As regards all work associated directly or indirectly with the equipment, the user must follow and adhere to all the above regulations as well as current work protection and safety regulations. In spite of this, a life-threatening risk still prevails in cases where the equipment is used and operated by non-trained or non-instructed staff in a non-professional or non-intended way.

The user should supplement the instruction manual with instructions that consider the nature of the operation, e.g. company organisation, work procedures, and number of staff.

The members of staff who are assigned to work with the equipment must have read the instruction manual prior to undertaking any work, and he/she should pay particular attention to the chapters containing safety instructions. It is too late once work has commenced. This applies in particular to members of staff who are working with the equipment on a temporary basis, e.g. for maintenance purposes.

When convenient, the staff should be tested on their knowledge of the manual's contents that relate to safety and accident awareness.

The user is responsible for ensuring that the equipment is used only when it is in perfect condition and that all applicable and relevant safety regulations and requirements are followed.

The equipment should be taken out of operation immediately if functional damage or defects are discovered.

Personal safety equipment should be used as and when necessary, or when required by regulations.

Safety and warning devices, such as signs, stickers and labels must not be removed or made illegible.

All safety and warning devices on or adjacent to the equipment should be complete and maintained in a legible/functional condition.

All changes, extensions or reconstruction that may affect safety are forbidden without written permission from RonI. This also applies to assembly and adjustment of safety equipment and welding of structural parts.

Spare parts must comply with Movomech's stated technical requirements. This compliance is guaranteed when original spare parts are used. The intervals prescribed or stated in the instruction manual for regular testing/inspection must be adhered to!

Staff selection and qualifications

Reliable staff must carry out work with/on the equipment. Regulations that apply to under-age persons must be followed.

The user is responsible for supplying necessary training and instructions to those that he/she employs, including professionals and/or apprentices.

It is recommended that the user draws up instructions and guidelines relating to the causes of errors, communicates these to the relevant staff, and posts directions on appropriate and clearly visible places.

It is recommended that the user makes sure that the knowledge of the staff is adequate as regards the following points, prior to the operation of the construction:

- knowledge of the contents of the instruction manual,
- knowledge of the safety and user regulations contained therein,
- and knowledge of applicable work protection regulations.

Only trained and instructed staff should be permitted to work with the equipment. Parameters relating to use, maintenance, and installation should be clarified.

Safety instructions for usage

The only persons allowed to work on the electrical equipment are competent staff members who work in accordance with regulations and standards for high-voltage equipment.

No persons under the influence of drugs, alcohol or medication which affects their ability to react, are allowed to use, maintain, or repair the construction.

All stated actions and instructions relating to work protection and issues relating to general safety and protection of workers that should be carried out or studied prior to, during or following operation must be followed to the letter. Failure to do so may result in fatal accidents.

The equipment should be stopped or taken out of operation at the time of detection of faults relating to work protection and operational accessibility.

Safety equipment must not be deactivated, altered or used in a way that conflicts with applicable regulations.

Appropriate actions must be taken to ensure safe operation and functional conditions for the user.

The equipment should only be used when all protective and safety equipment, such as detachable guards and emergency stop devices, are in place and in working order.

Any type of modification and alteration of the equipment is prohibited. However, this does not apply to lesser changes that do not affect the strength, operational safety or work protection, or to actions which promote an increased level of safety.

The fundamental responsibility for these changes lies with the user. If in doubt, contact RonI for written approval of the actions prior to implementation.

The equipment should be stopped and locked immediately when functional faults occur. Faults should be corrected immediately!

Following an "emergency stop" the user has to wait for the cause of the disruption to be repaired and for an assurance that there is no further danger before he/she reconnects the equipment and resumes operation.

The equipment should be disconnected immediately in the following cases:

- when electrical equipment, cables and/or insulation material is damaged, or
- when work protection equipment is damaged.

Specific local circumstances or applications may lead to situations that were unknown at the time of writing this document. In such cases, the user must ensure safe operation and disconnect the equipment until measures to maintain safe operation have been carried out in conjunction with RonI or other authorised party.

Ensure that no one can become injured when they use the equipment prior to connecting/activating the equipment.

If the user notices the presence of persons who may become injured during operation, the operation should be discontinued immediately and must not be resumed until these persons have left the dangerous area.

The user must make sure that the equipment is in a perfect and operationally safe condition prior to all operations using the equipment.

The user should carry out all prescribed safety measures and make sure that automated procedures are completed when the equipment is disconnected (e.g. when there are deficiencies as regards operational and personal safety, an emergency situation exists, repair or maintenance is being carried out, damage is noticed or at the completion of work).

Work with the equipment is only allowed when the operator has been instructed to do so by his superior, and if the operator has knowledge of the equipment and its function.



2. Technical data

Flexible lifting unit

Pneumatic Mechlif Pro 100 is an ergonomically designed moment absorbing lifter which can be used for many lifting solutions. It can be fitted with standardised or customized grippers, and with accessories such as rotation units, brake unites and tooling fixtures.

Several pneumatic versions

Mechlif Pro 100 can be counterbalanced for handling various loads, or be equipped with a balancing function for one or more loads up to 100 kg. In cases when it is always one and the same load handled, a sensor switch can be built into the tool so that the lifter automatically switches between load and no load.

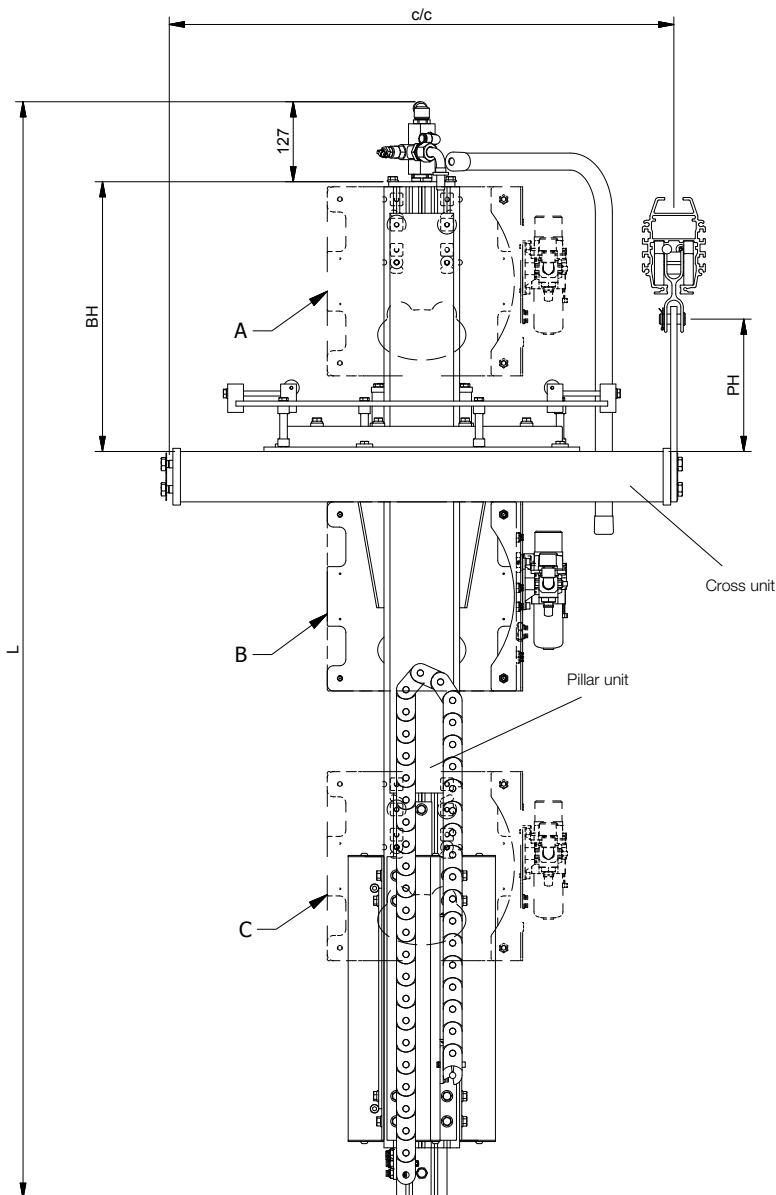
Moment absorbing

Pneumatic Mechlif Pro 100 consists of telescoping aluminium profiles that are anodized and thereby completely maintenance free. In the outer profile are torque-absorbing wheels, which enables load outside the lifter's vertical lift shaft.

Many application areas

Typical application areas for pneumatic Mechlif Pro are handling of cable rolls, mat rolls, tanks, doors, windows, and various types of automotive parts such as vehicle doors, sunroofs, seats, windshields, hoods, etc.

2.1 Overview



Technical data		Mechlif Pro 100
Max load	kg	70 ¹ /100
Max moment	Nm	500
Tare weight	kg	57-127 ²
Stroke SL	mm	500-1500
Length L	mm	SL+740
Rotation	°	0-310/360 ³
Lifting speed	m/min	0-40
Inner profile	-	MP80C
Outer profile	-	MP120
Width c/c	mm	800/1000
Height PH	mm	50-490

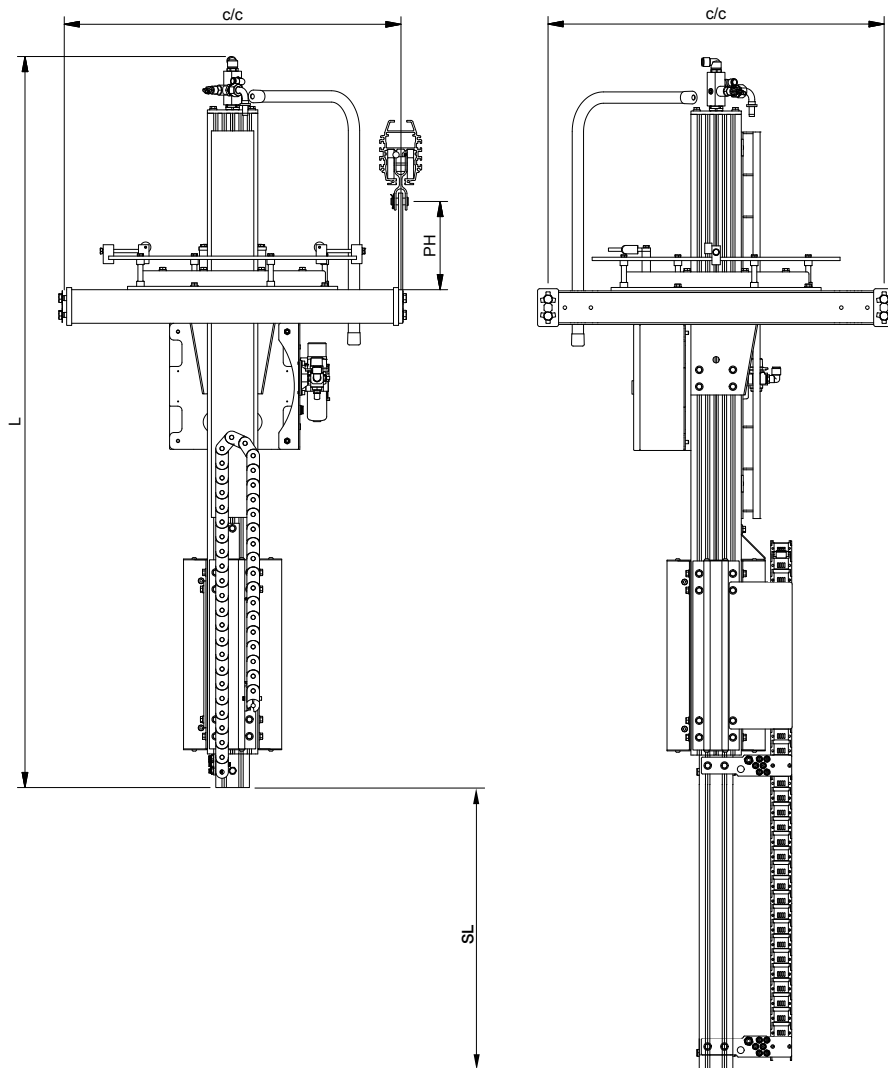
- ¹ Using parallelogram
- ² Depends on configuration
- ³ By removing rotation stops

Media & Environment		Mechlif Pro 100
Medium		air, non-lubricated (40 µm) ¹
Work pressure	bar	5,5-7
Air consumption	l _v /m _{sl}	18,7 (at 6 bar)
Work temperature	°C	5-40 (indoor use)
Noise level	dB (A)	<70

¹ To Mechlif Pro: 0,3 µm, FRL unit is included

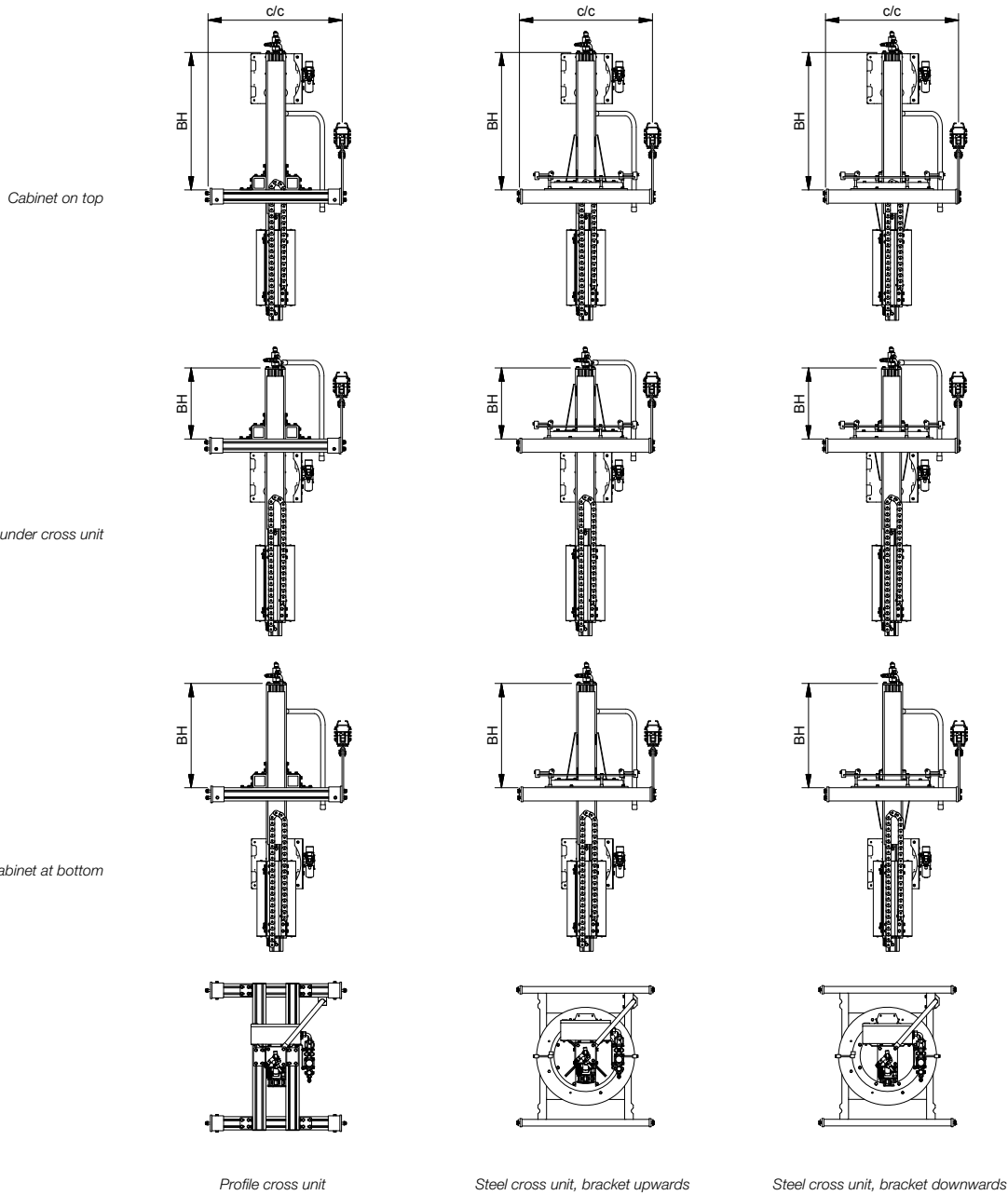
Position of pneumatic cabinet		Mechlif Pro 100
On top	-	A
Below cross unit	-	B
At bottom	-	C

2.2 Stroke



Pillar unit		740965	740966	740967	740968	740969	740970
Stroke SL	mm	500	750	1000	1250	1500	500-1500
Length L	mm	1240	1490	1740	1990	2240	SL+740

2.3 Build height BH



Cross unit	c/c 800	c/c 1000
Profile unit	740973	740976
Steel unit, up	740975	740978
Steel unit, down	740974	740977

Build height BH	SL	Build height BH				
		500	750	1000	1250	1500
Cabinet on top						
Profile unit	mm	350 - 485	350 - 735	350 - 985	350 - 1235	350 - 1485
Steel unit, up	mm	380 - 558	380 - 683	380 - 808	380 - 933	380 - 1058
Steel unit, down	mm	-	380 - 571	380 - 821	380 - 1071	380 - 1321
Cabinet below cross unit						
Profile unit	mm	165 - 400 (285*)	165 - 650 (410*)	165 - 900 (535*)	165 - 1150 (660*)	165 - 1400 (785*)
Steel unit, up	mm	338 - 558 (445*)	338 - 683 (505*)	338 - 808 (570*)	338 - 933 (630*)	338 - 1058 (695*)
Steel unit, down	mm	40 - 321 (185*)	40 - 571 (310*)	40 - 821 (435*)	40 - 1071 (560*)	40 - 1321 (685*)
Cabinet at bottom						
Profile unit	mm	165 - 400	165 - 650	165 - 900	165 - 1150	165 - 1400
Steel unit, up	mm	338 - 558	338 - 683	338 - 808	338 - 933	338 - 1058
Steel unit, down	mm	40 - 321	40 - 571	40 - 821	40 - 1071	40 - 1321

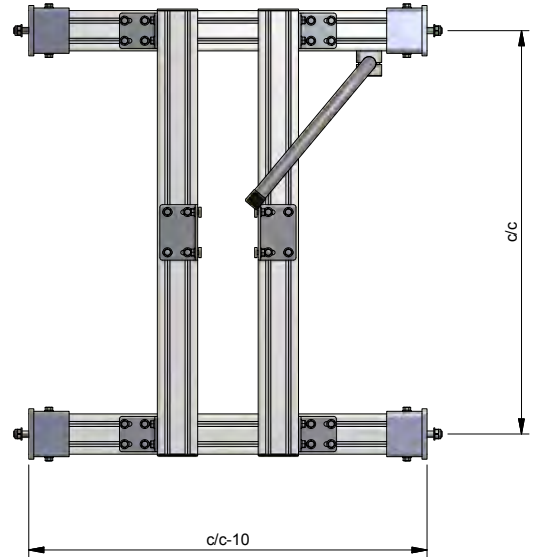
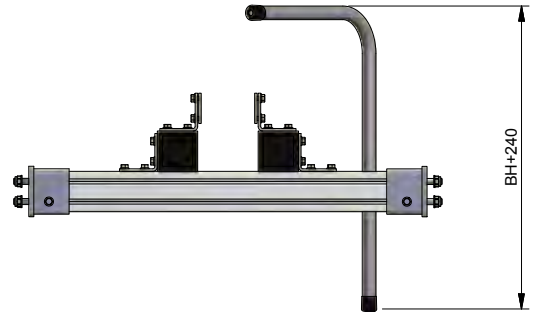
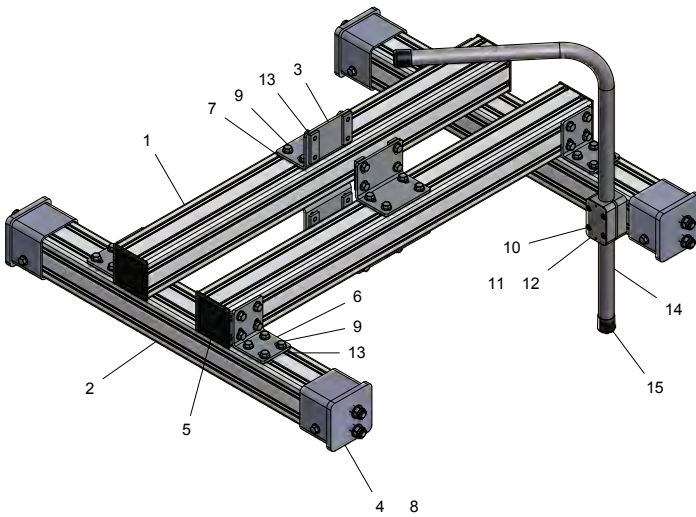
* Position and build height BH unless otherwise specified when ordering.

3. Sub-assemblies

3.1 Cross units

740973/-6 Cross unit profile MP120

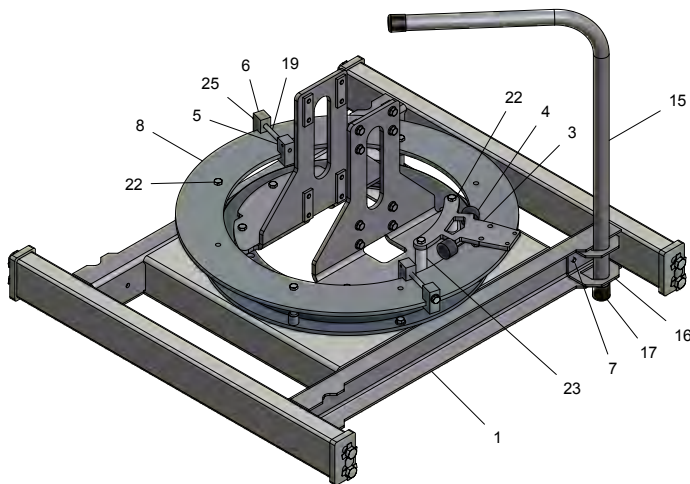
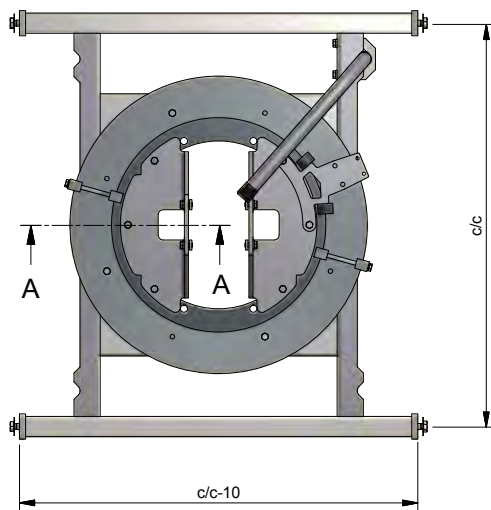
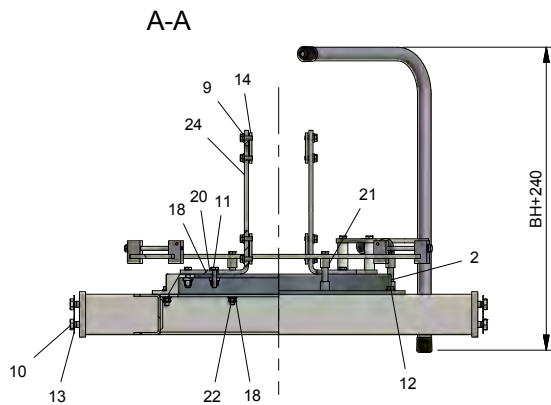
#	Article nr.	Designation	Quantity
1	*1	Profile MP80, L=L1 mm	2
2	*2	Profile MP80, L=L2 mm	2
3	730111	Mounting angle MVL120	4
4	731306	Gable suspension for MP80	4
5	730167	End cover MA80	4
6	730182	Mounting angle MVL80	4
7	730659	MM2x8 t-slot nut double c/c 80	8
8	730115	MM8 t-slot nut single	2
9	730216	Screw M6SZ M8x12	64
10	731675	Screw MC6S M6x35	4
11	735511	Screw MF6S M8x18	2
12	736452	Clamp D=27 L=80 two-part	1
13	740500	MM2x8 t-slot nut double c/c 40	24
14	740979	Hose conduit	1
15	740981	End seal for tube	2



Cross unit	740973	740976
c/c mm	800	1000
Article nr. *1	730104	731376
Length L1 mm	770	970
Article nr. *2	731377	731378
Length L2 mm	880	1080
Weight kg	26	29

740975/-8 Cross unit, bracket up

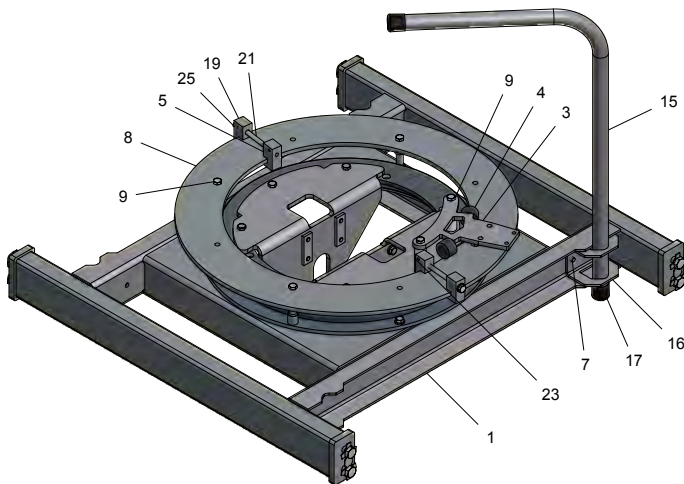
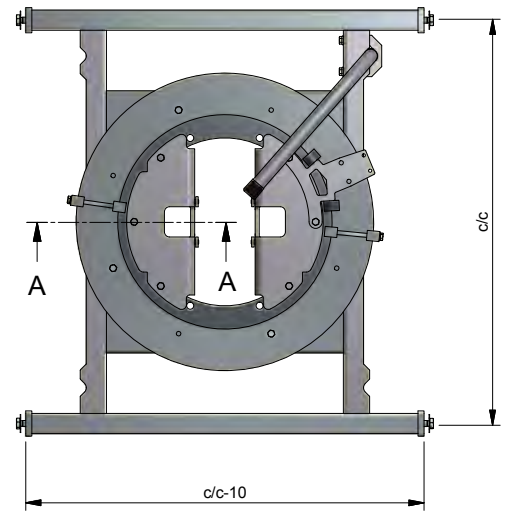
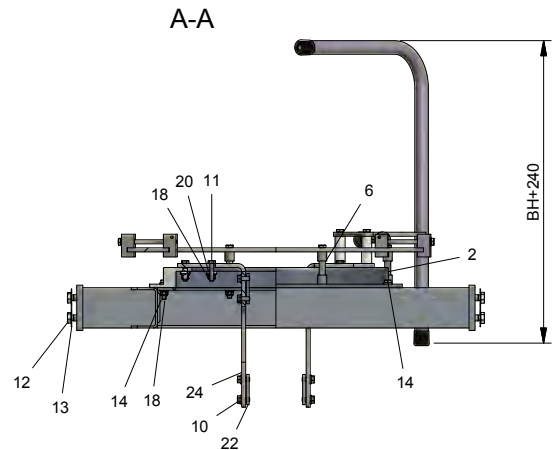
#	Article nr.	Designation	Quantity
1	*1	Cross unit, steel	1
2	741895	Swivel ring	1
3	742753	Bracket for brake caliper	1
4	730449	Rubber damper	2
5	731316	Clamp 45x25x20 M8	2
6	731317	Clamp 45x25x20 D=8.5	2
7	730219	Screw M6SZ M8x20	2
8	742750	Brake disc	1
9	730218	Screw M6SZ M8x16	16
10	731347	Screw M6S M12x25, full thread	8
11	731684	Screw M6S M8x35, full thread	4
12	732106	Screw M6SF M8x30	4
13	736170	Securing plate	4
14	740500	MM2x8 t-slot nut double c/c 40	8
15	740979	Hose conduit	1
16	740980	Pipe bracket	1
17	740981	End seal for tube	2
18	741071	Nut M6MF M8 Nyloc	14
19	731322	Screw M6S M8x90, half thread	2
20	741896	Adapter ring	6
21	741899	Distance sleeve 18/9	4
22	731323	Screw M6S M8x100, half thread	6
23	742751	Distance sleeve 20/8.5x54	2
24	742752	Bracket for swivel ring	2
25	730308	Washer BRB 8.4x16x1.5	2



Cross unit		740975	740978
c/c	mm	800	1000
Article nr.	*1	731345	731346
Weight	kg	53	58

740974/-7 Cross unit, bracket down

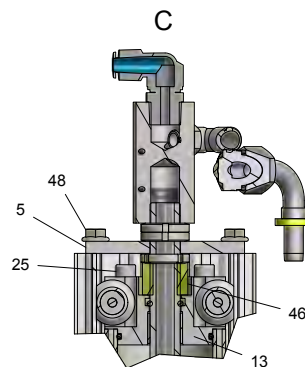
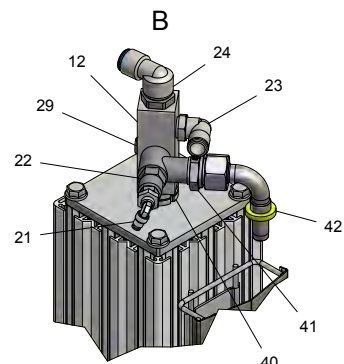
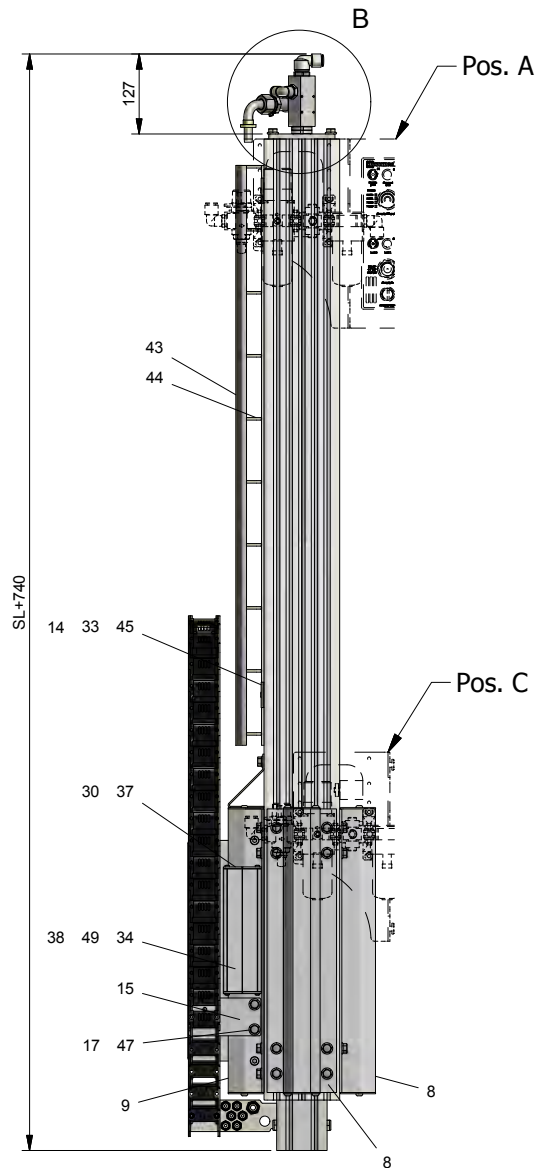
#	Article nr.	Designation	Quantity
1	*1	Cross unit, steel	1
2	741895	Swivel ring	1
3	742753	Bracket for brake caliper	1
4	730449	Rubber damper	2
5	731316	Clamp 45x25x20 M8	2
6	741899	Distance sleeve 18/9	4
7	730219	Screw M6SZ M8x20	2
8	742750	Brake disc	1
9	731323	Screw M6S M8x100, half thread	6
10	730218	Screw M6SZ M8x16	16
11	731684	Screw M6S M8x35, full thread	4
12	731347	Screw M6S M12x25, full thread	8
13	736170	Securing plate	4
14	732106	Screw M6SF M8x30	4
15	740979	Hose conduit	1
16	740980	Pipe bracket	1
17	740981	End seal for tube	2
18	741071	Nut M6MF M8 Nyloc	14
19	731317	Clamp 45x25x20 D=8.5	2
20	741896	Adapter ring	6
21	731322	Screw M6S M8x90, half thread	2
22	740500	MM2x8 t-slot nut double c/c 40	8
23	742751	Distance sleeve 20/8.5x54	2
24	742752	Bracket for swivel ring	2
25	730308	Washer BRB 8.4x16x1.5	2

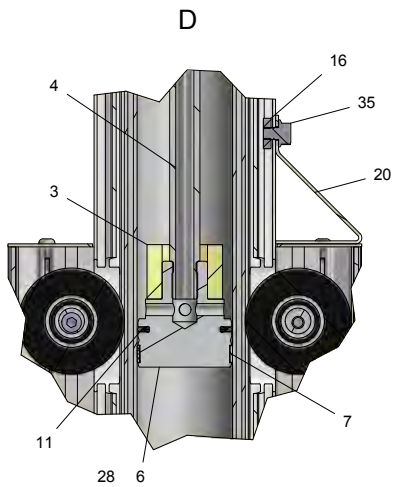
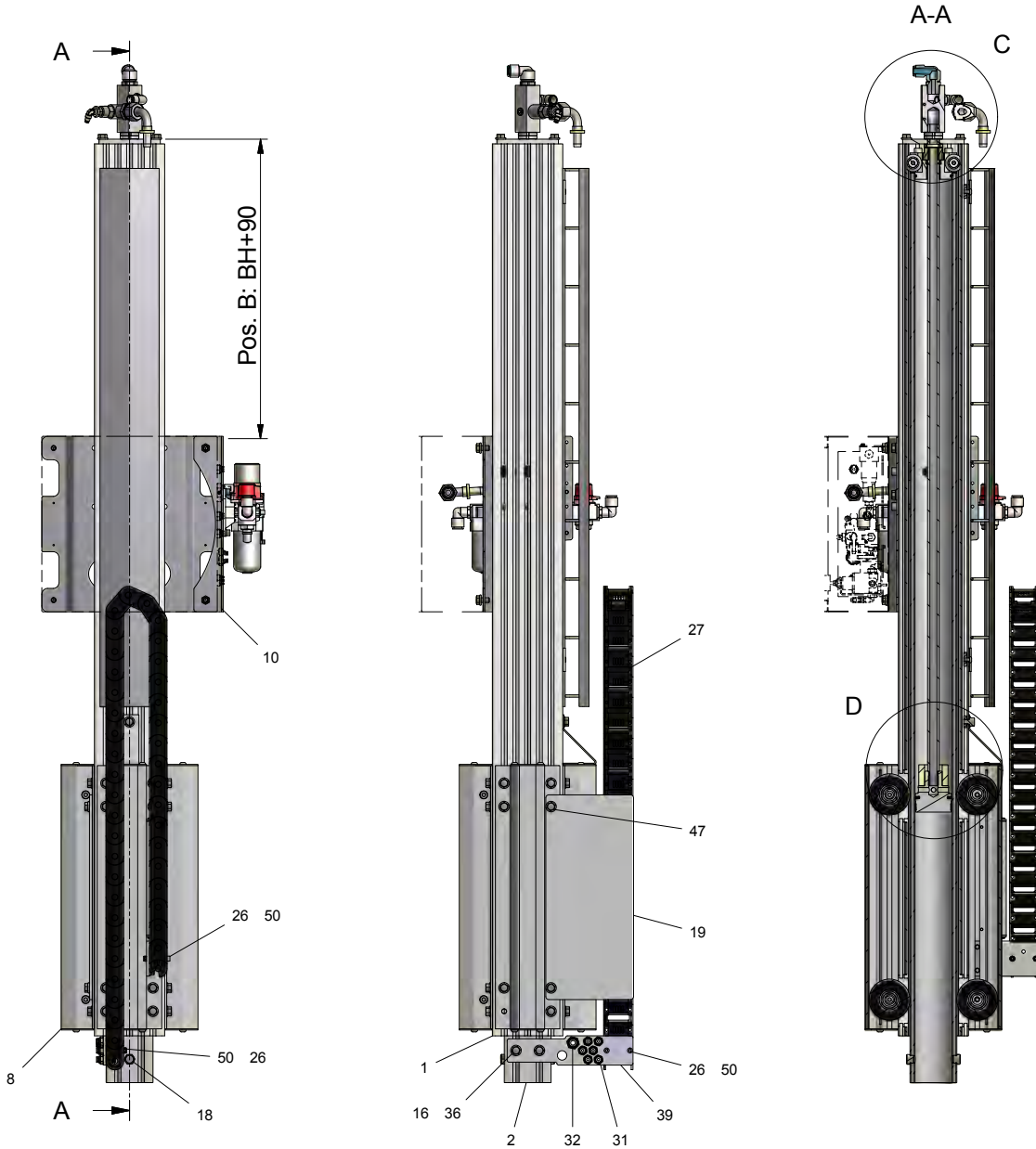


Cross unit		740974	741977
c/c	mm	800	1000
Article nr.	*1	731345	731346
Weight	kg	53	58

3.2 Pillar units

7409xx		Pillar unit	
#	Article nr.	Designation	Quantity
1	*1	Outer profile, MP120 L=L1	1
2	*2	Inner profile, MP80C L=L2	1
3	742113	Piston damper	1
4	*3	Piston rod L=L3	1
5	742112	Top cover	1
6	742111	Piston D=63	1
7	741893	Guide ring for piston	S 1
8	740957	Wheel guiding MP120	3
9	740958	Wheel guiding MP120, cable chain	1
10	740997	Mounting kit for pneumatics	1
11	740622	Piston seal	S 1
12	732715	Air connection	1
13	731048	Top guiding with wheels	1
14	731070	Screw K6S M6x10	2
15	731284	Bracket	1
16	730115	MM8 t-slot nut single	3
17	730116	MM2x8 t-slot nut double c/c 40	1
18	731364	Filter	R 2
19	731371	Support plate	1
20	731372	Sliding plate	1
21	731560	Push-in L-fitting rotatable 1/4"-4	1
22	731571	Non-return valve G3/8"	R 1
23	731584	Push-in L-fitting rotatable 1/4"-12	1
24	731636	Push-in L-fitting rotatable 1/2"-12	1
25	731719	Screw MC6S M8x55	4
26	730879	Screw MC6S M5x40	4
27	733239	Cable chain 10.0.40	R L4
28	733649	Screw MP6SS M5x6	1
29	734715	Plug 1/8", hex socket	1
30	737455	Screw RTS-Z ST3 5x13	4
31	739270	Push-in connector 4-4	6
32	739272	Push-in connector 8-8	1
33	730130	MM6 t-slot nut single	2
34	740847	Lid profile	0,195
35	730215	Screw M6SZ M8x10	1
36	730216	Screw M6SZ M8x12	2
37	740959	End cap, conduit profile	2
38	740960	Conduit profile	1
39	740962	Bracket	1
40	731039	Shaft nut KM 4	3
41	741749	Adapter 1/2"-3/8"	1
42	741801	Hose connector, elbow 1/2"-1/2"	2
43	741831	Lid, cable tray 100	L5
44	741833	Mesh cable tray 35x100	L5
45	741836	Joint	2
46	731047	Upper damper	1
47	730218	Screw M6SZ M8x16	4
48	730219	Screw M6SZ M8x20	4
49	730306	Screw MC6S M5x10	2
50	730309	Locking nut M5	4

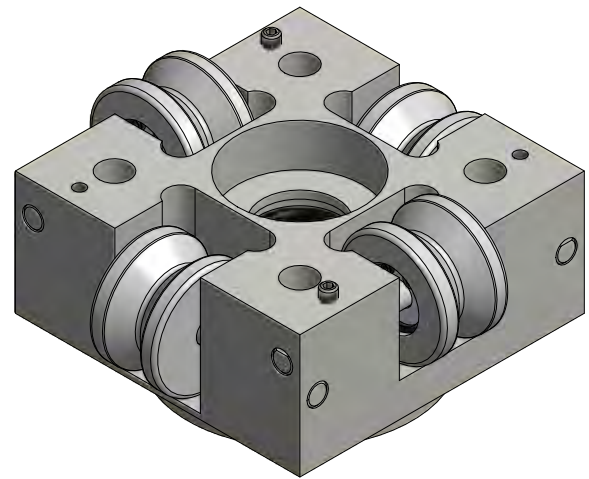
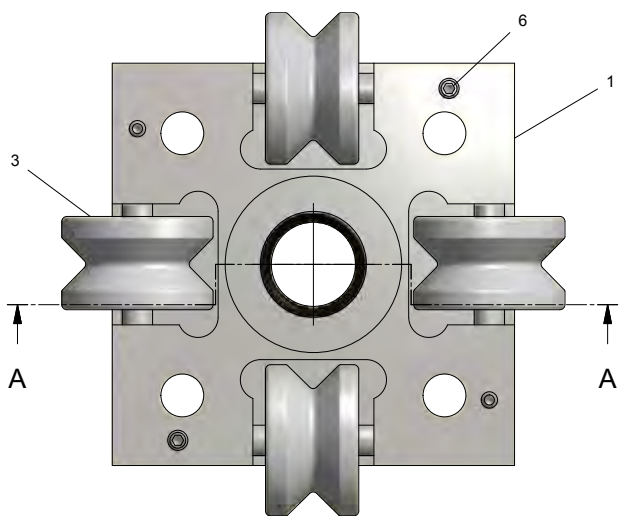
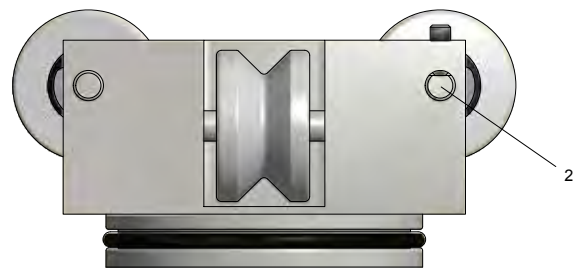
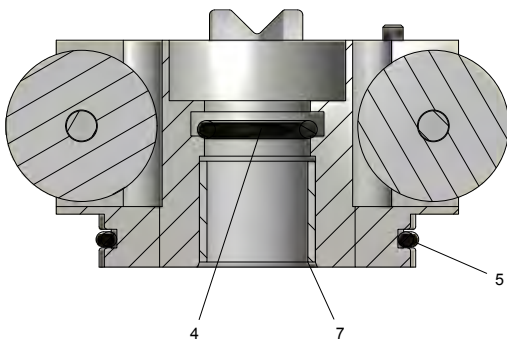




Pillar unit	740965	740966	740967	740968	740969	740970
Stroke SL mm	500	750	1000	1250	1500	500-1500
Article nr. *1	731349	731351	731352	731353	731354	731355
Length L1 mm	1025	1275	1525	1775	2025	SL+525
Article nr. *2	731356	731357	731358	731359	731360	731361
Length L2 mm	1055	1305	1555	1805	2055	SL+555
Article nr. *3	742114	742115	742116	742117	742118	742119
Length L3 mm	631	881	1131	1381	1631	SL+131
Length L4 mm	980	1260	1470	1750	1960	SL+ ca 500
Length L5 mm	420	670	920	1170	1420	SL-80
Weight kg	29	33	37	41	45	21+2SL/125

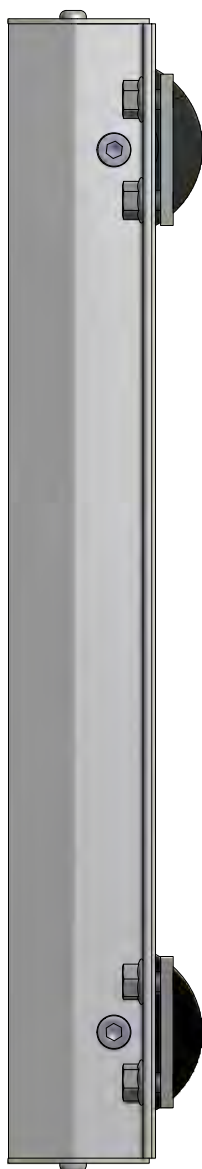
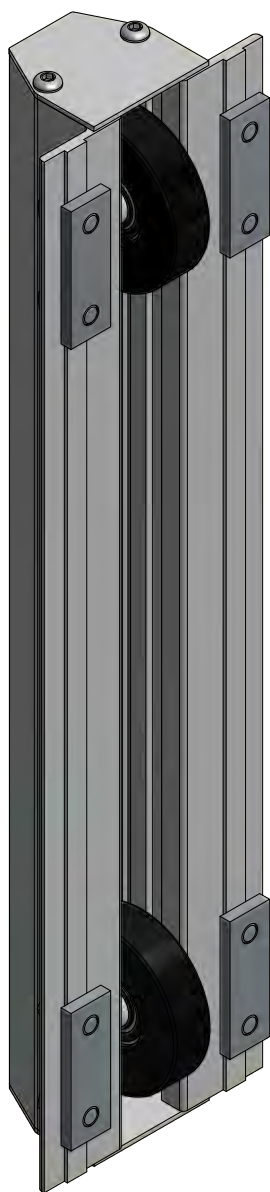
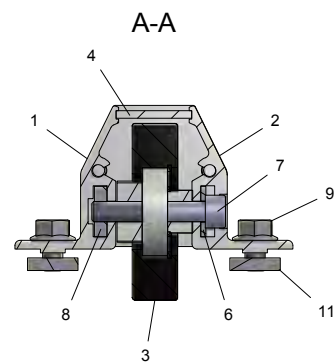
731048		Top guiding with wheels	
#	Article nr.	Designation	Quantity
1	731082	Top guiding	1
2	731073	Wheel shaft	4
3	731053	Wheel D=30, complete	R 4
4	731050	O ring	S 1
5	731049	O ring	S 1
6	731052	Screw MSK6SS M4x10	4
7	731051	Bushing 20x23x20	1

A-A

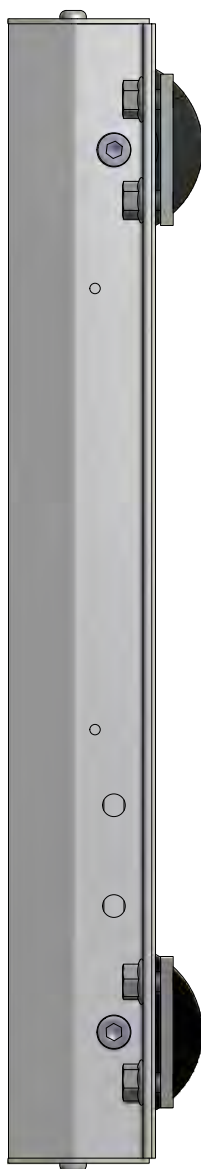


740957/-8 Wheel guiding MP120

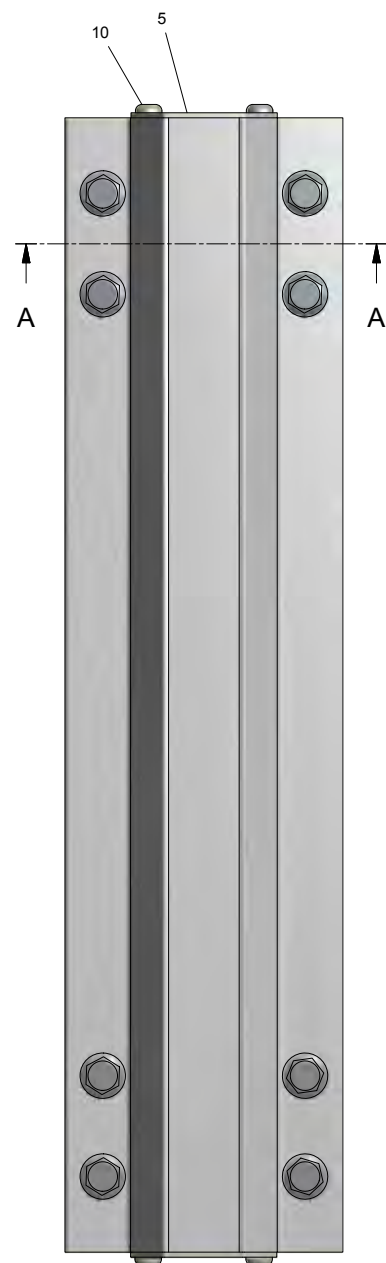
#	Article nr.	Designation	Quantity
1	731076	Wheel guiding profile	1
2	*1	Wheel guiding profile	1
3	731065	Wheel with shaft, complete	R 2
4	731078	Cover plate	1
5	731079	End cover	2
6	731068	Washer SRKB 8,4x20x2	2
7	731069	Screw MC6S M8x45	2
8	730115	MM8 t-slot nut single	2
9	730216	Screw M6SZ M8x12	8
10	732071	Screw K6S M6x10 A2	4
11	740500	MM2x8 t-slot nut double c/c 40	4



740957



740958



Wheel guiding

740957

740958

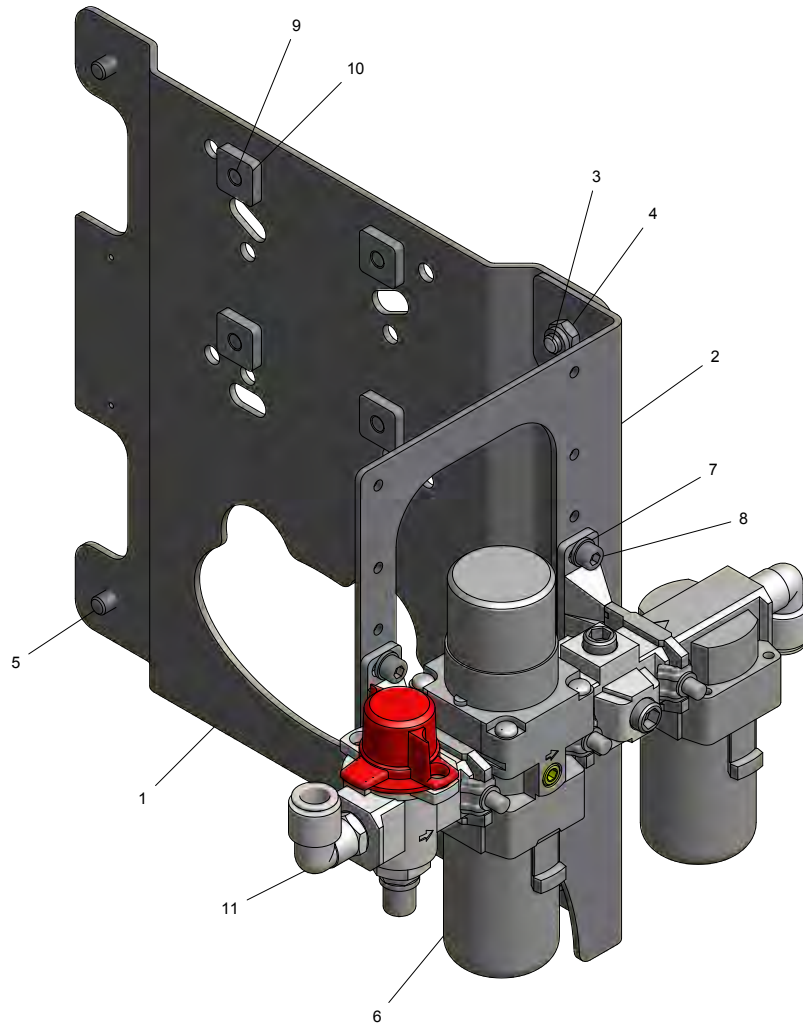
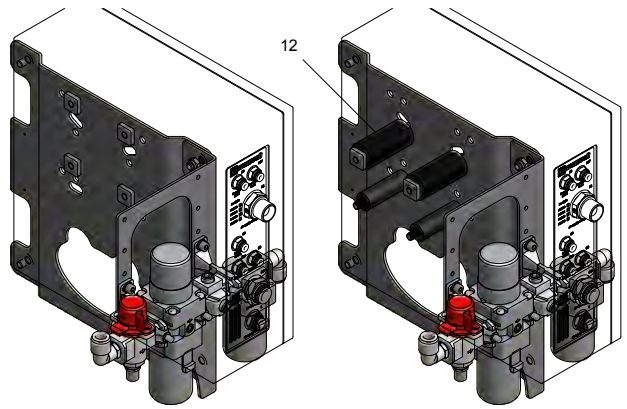
Article nr. mm

731075

740956

R: spare part S: wear part

740997		Mounting kit for pneumatics	
#	Article nr.	Designation	Quantity
1	740430	Bracket for cabinet	1
2	740936	Bracket for FRL unit	1
3	730219	Screw M6SZ M8x20	2
4	730117	Locking nut M8	2
5	730217	Screw M6SZ M8x14	2
6	740427	FRL unit (B)	1
7	730268	Washer BRB 6,4x12x1,5	4
8	731331	Screw MC6S M6x10	4
9	730215	Screw M6SZ M8x10	4
10	730115	MM8 t-slot nut single	4
11	731617	Push-in L-fitting G3/8"-12	2
12	740998	Kit for mounting on wheel guiding	1*

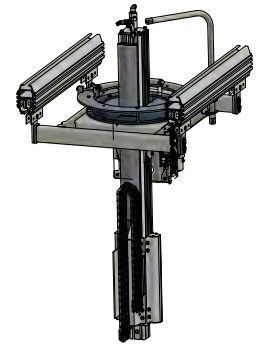
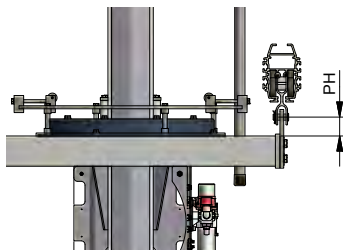
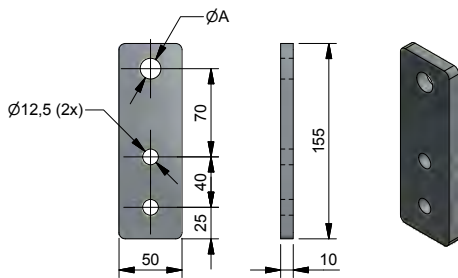


* Used when mounting the pneumatic cabinet outside the wheel guiding.

R: spare part S: wear part

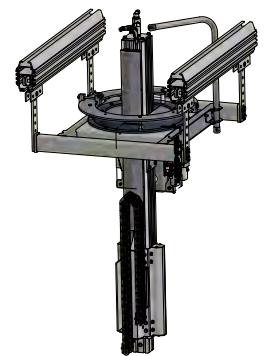
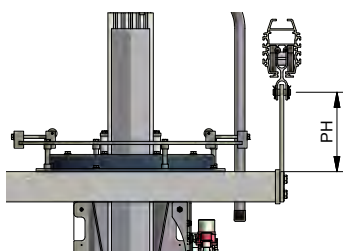
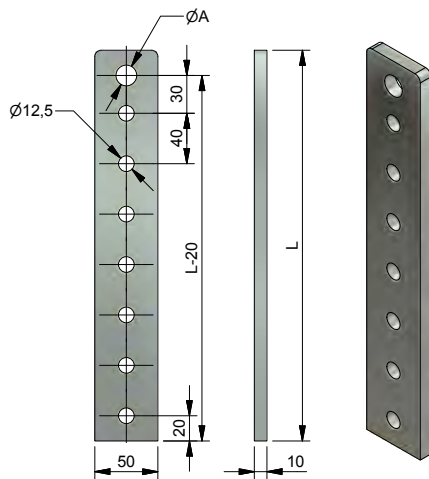
3.3 Suspensions

73383x Pendulum PH 50



Suspension	733833	733835	733837
ØA mm	12,5	16,5	20,5
Fits trolley	LHB	AHB1.1-2	AHB3
Weight/pc kg	0,6	0,6	0,6

74xxxx Suspension PH 90-210

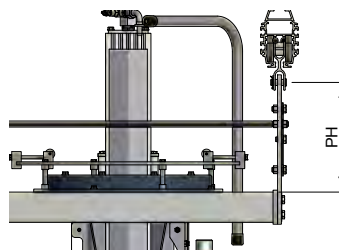
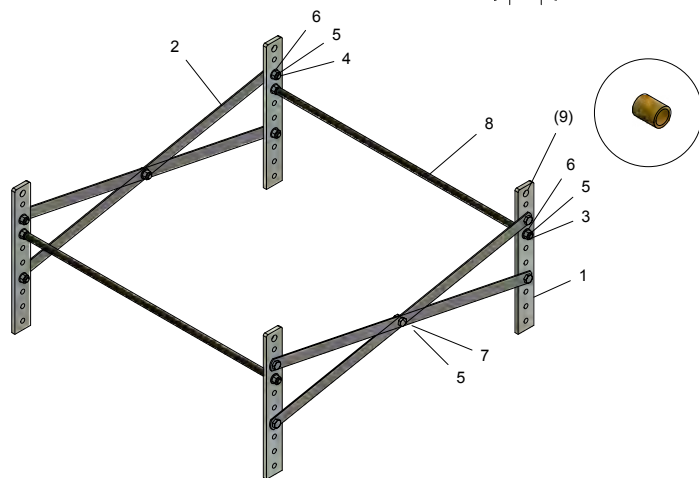
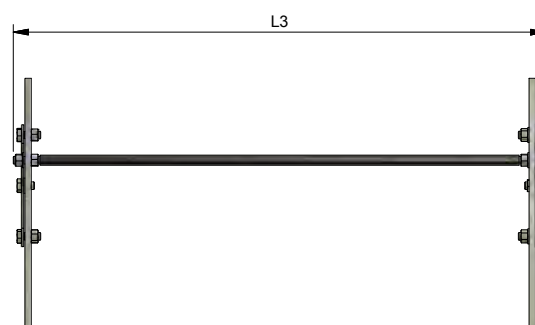
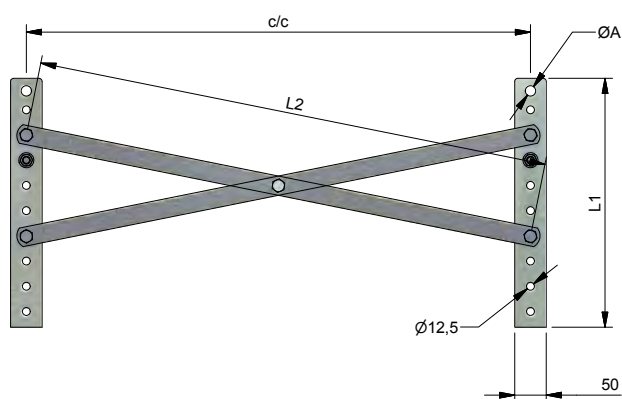
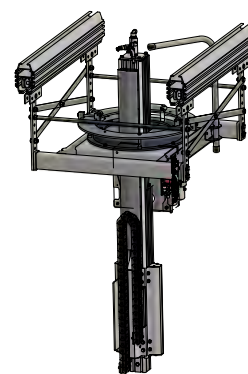


Suspension	742402	740940	740941
ØA mm	12,5	16,5	20,5
Fits trolley	LHB	AHB1.1-2	AHB3
Weight/pc uncut kg	1,1	1,1	1,1

Height PH	90	130	170	210
Length L mm	195	235	275	310

R: spare part S: wear part

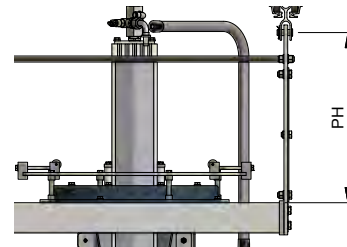
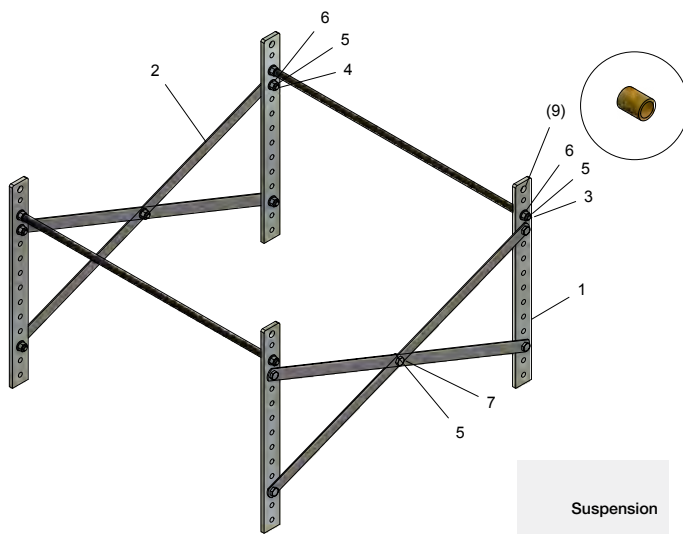
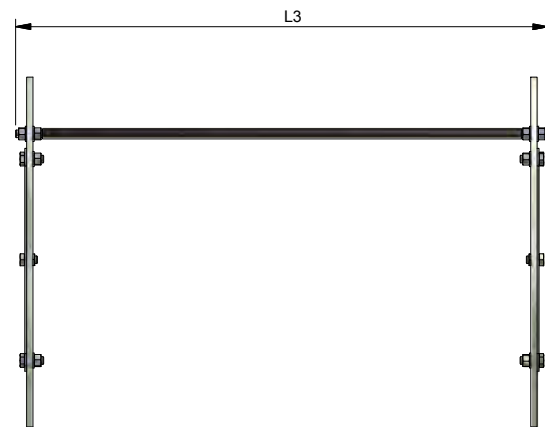
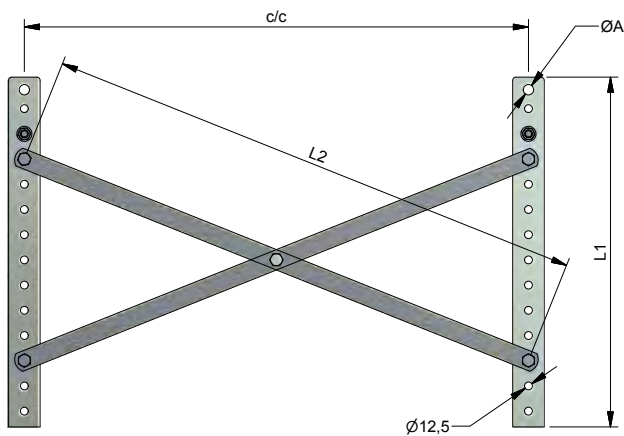
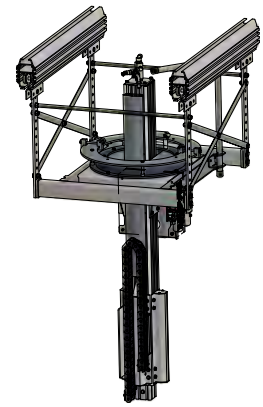
74xxxx		Pendulum 4x PH 250-370	
#	Article nr.	Designation	Quantity
1	*1	Pendulum 90-490 D=ØA L=L1	4
2	*2	Cross brace c/c=L2	4
3	*3	Threaded bar M12 L=L3	2
4	730255	Screw M6S M12x30, full thread	8
5	730726	Nut M6M M12	18
6	730244	Washer BRB 13x24x2	18
7	730484	Screw M6S M12x20, full thread	2
8	732267	Cable protection hose L=L3	2
9	732504	Bushing 12/16x20	N1



Suspension		742403	742405	740942	740943	740944	740945
c/c	mm	800	1000	800	1000	800	1000
ØA	mm	12,5 (16,5)	12,5 (16,5)	16,5	16,5	20,5	20,5
Fits trolley		LHB	LHB	AHB1.1-2	AHB1.1-2	AHB3	AHB3
Article nr.	*1	740938	740938	740938	740938	740939	740939
Article nr.	*2	740950	740951	740950	740951	740950	740951
Length L2	mm	816	1013	816	1013	816	1013
Article nr.	*3	740954	740955	740954	740955	740954	740955
Length L3	mm	845	1045	845	1045	845	1045
Quantity N1		4	4	0	0	0	0
Weight uncut	kg	10	11	10	11	10	11

Height PH		250	290	330	370
Length L1	mm	355	395	435	475

74xxxx		Pendulum 4x PH 410-490	
#	Article nr.	Designation	Quantity
1	*1	Pendulum 90-490 D=ØA L=L1	4
2	*2	Cross brace c/c=L2	4
3	*3	Threaded bar M12 L=L3	2
4	730255	Screw M6S M12x30, full thread	8
5	730726	Nut M6M M12	18
6	730244	Washer BRB 13x24x2	18
7	730484	Screw M6S M12x20, full thread	2
8	732267	Cable protection hose L=L3	2
9	732504	Bushing 12/16x20	N1

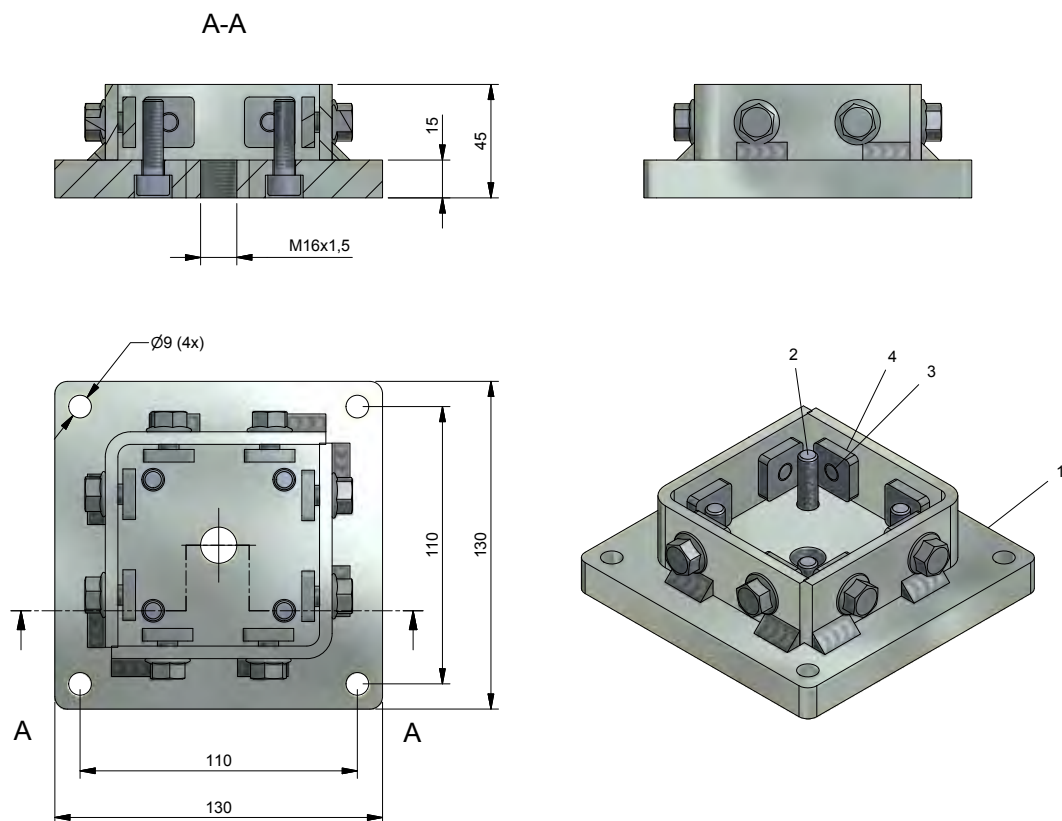


Suspension	742404	742406	740946	740947	740948	740949
c/c mm	800	1000	800	1000	800	1000
ØA mm	12,5 (16,5)	12,5 (16,5)	16,5	16,5	20,5	20,5
Fits trolley	LHB	LHB	AHB1.1-2	AHB1.1-2	AHB3	AHB3
Article nr. *1	740938	740938	740938	740938	740939	740939
Article nr. *2	740950	740951	740950	740951	740950	740951
Length L2 mm	861,5	1050	861,5	1050	861,5	1050
Article nr. *3	740954	740955	740954	740955	740954	740955
Length L3 mm	845	1045	845	1045	845	1045
Quantity N1	4	4	0	0	0	0
Weight uncut	12	13	12	13	12	13

Height PH	410	450	490
Length L1 mm	515	555	595

3.4 Tool adapters

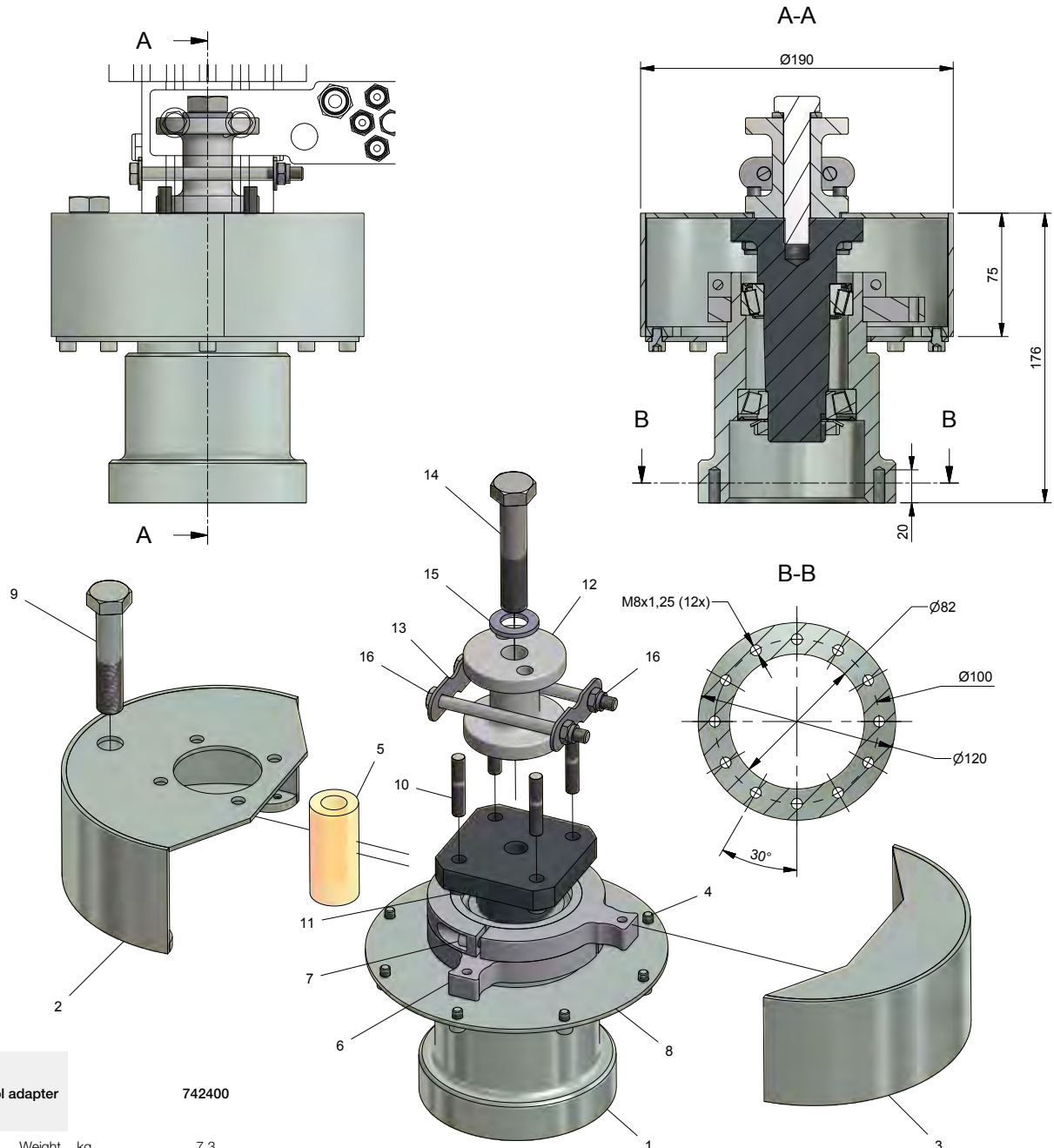
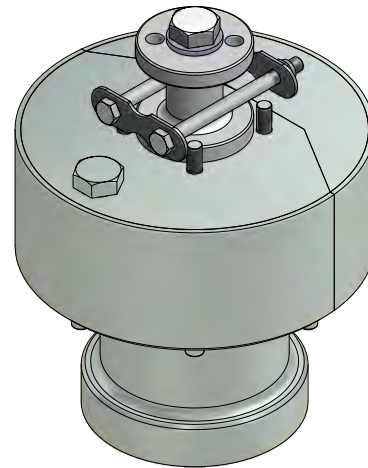
731500		Tool adapter MP80	
#	Article nr.	Designation	Quantity
1	731498	Bracket MP80	1
2	731333	Screw MC6S M8x30	4
3	730216	Screw M6SZ M8x12	8
4	730115	MM8 t-slot nut single	8



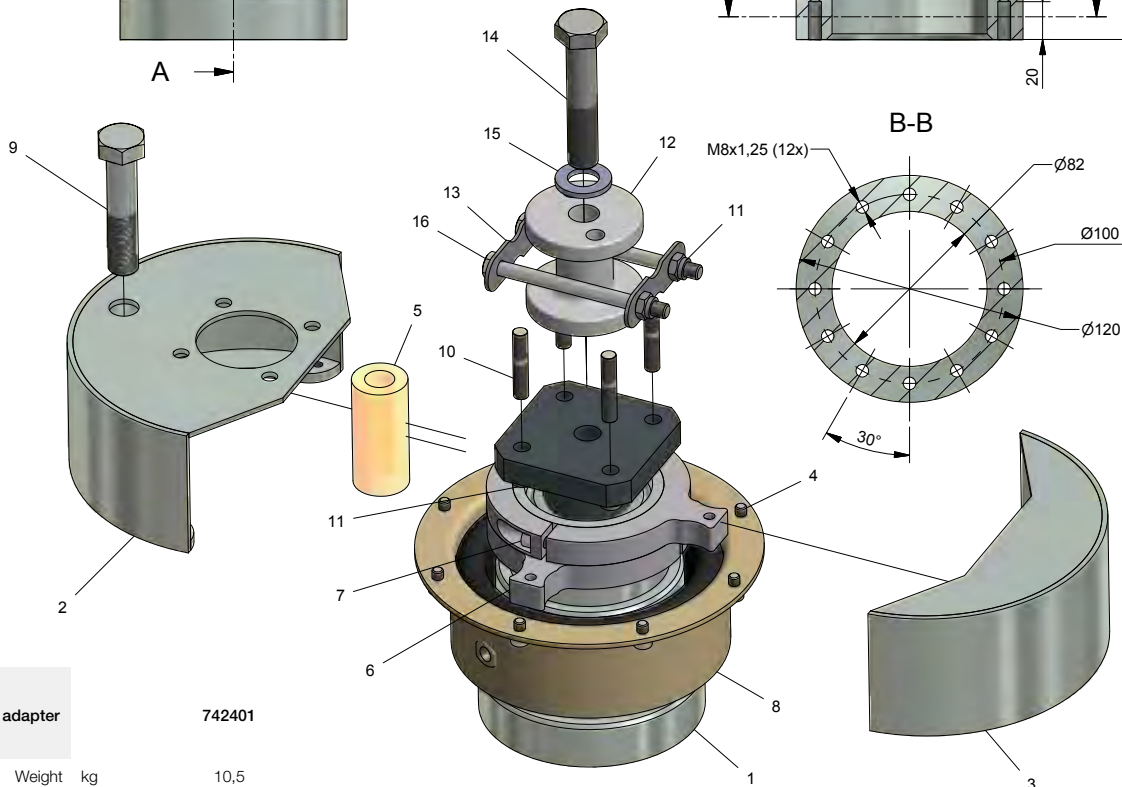
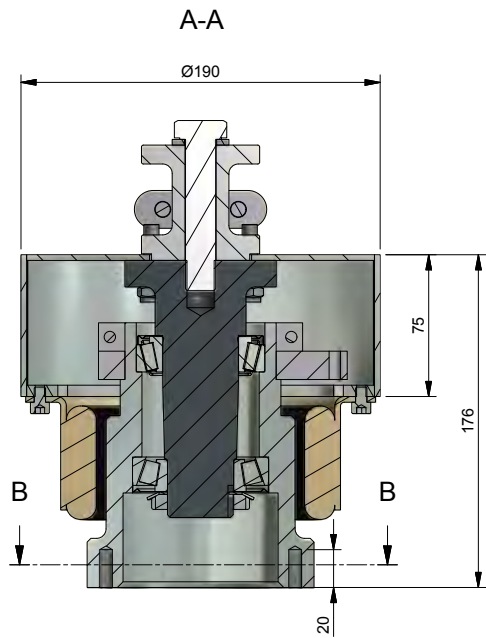
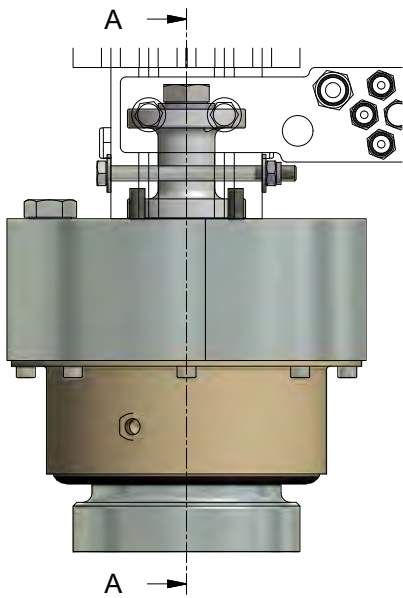
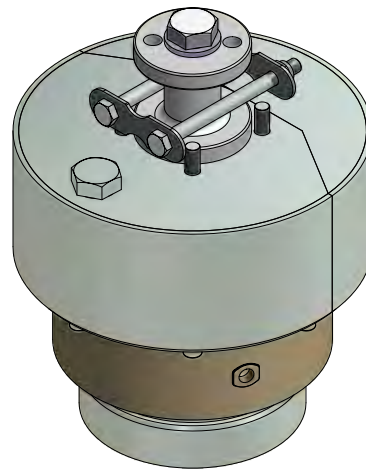
Tool adapter	731500
Weight kg	2,5

R: spare part S: wear part

742400		Rotation unit MP80	
#	Article nr.	Designation	Quantity
1	739857	Shaft bearing assembly	1
2	732253	Cover, part 1/2	1
3	732254	Cover, part 2/2	1
4	731486	Screw MC6S M6x8	8
5	731492	Damper	1
6	739073	Rotation limiter (2 parts)	2
7	730280	Screw MC6S M6x20	4
8	731493	Protection cap	1
9	731488	Screw M6S M16x75, half thread	1
10	741744	Stud bolt M8x25	4
11	730117	Locking nut M8	6
12	741742	Screw support MP80	1
13	741743	Screw plate	2
14	741741	Screw M6S M16x1,5x80, fine thread	1
15	730441	Washer BRB 17x30x3	1
16	731323	Screw M6S M8x100, half thread	2



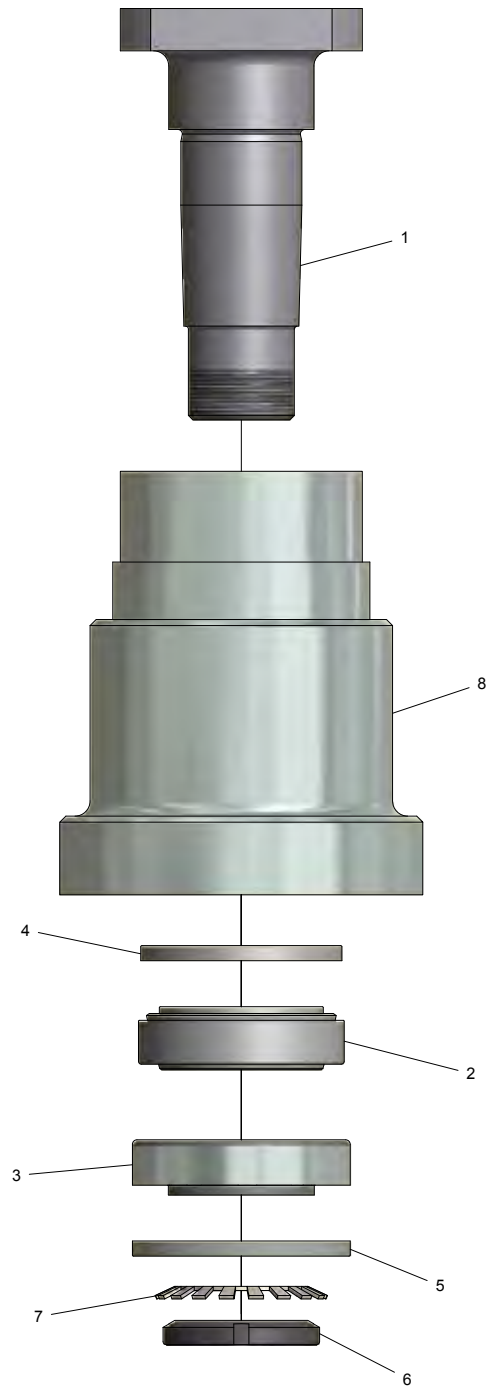
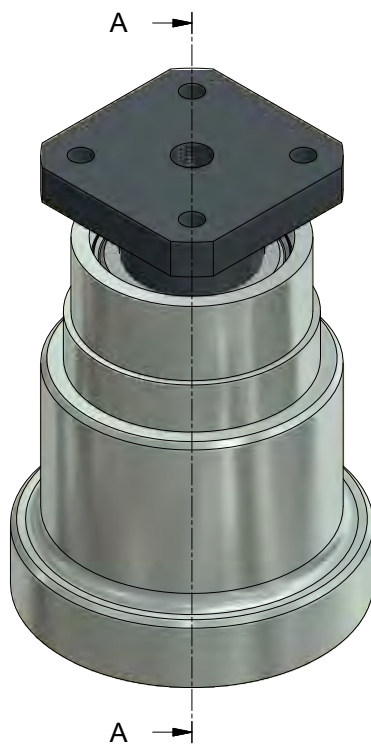
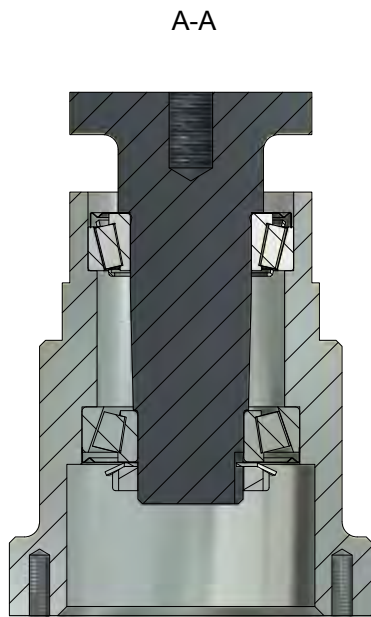
742401		Rotation unit MP80 with brake	
#	Article nr.	Designation	Quantity
1	739857	Shaft bearing assembly	1
2	732253	Cover, part 1/2	1
3	732254	Cover, part 2/2	1
4	731486	Screw MC6S M6x8	8
5	731492	Damper	1
6	739073	Rotation limiter (2 parts)	2
7	730280	Screw MC6S M6x20	4
8	731494	Brake unit	1
9	731488	Screw M6S M16x75, half thread	1
10	741744	Stud bolt M8x25	4
11	730117	Locking nut M8	6
12	741742	Screw support MP80	1
13	741743	Screw plate	2
14	741741	Screw M6S M16x1,5x80, fine thread	1
15	730441	Washer BRB 17x30x3	1
16	731323	Screw M6S M8x100, half thread	2



Tool adapter	742401
Weight	kg 10,5

739857 Shaft bearing assembly

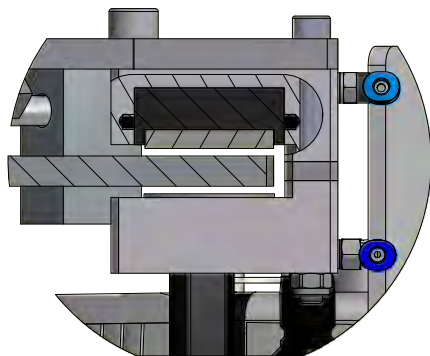
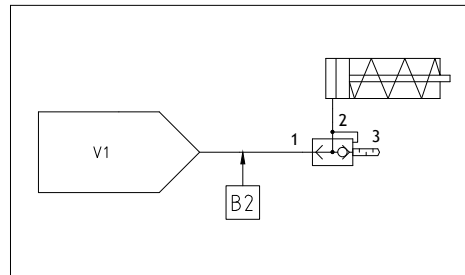
#	Article nr.	Designation	Quantity
1	739855	Turned shaft with flange	1
2	731434	Conical roller bearing	1
3	731436	Conical roller bearing	1
4	731435	Sealing	1
5	731437	Sealing	1
6	731439	Shaft nut KM 7	1
7	731438	Locking washer MB 7	1
8	739854	Bearing housing with flange	1



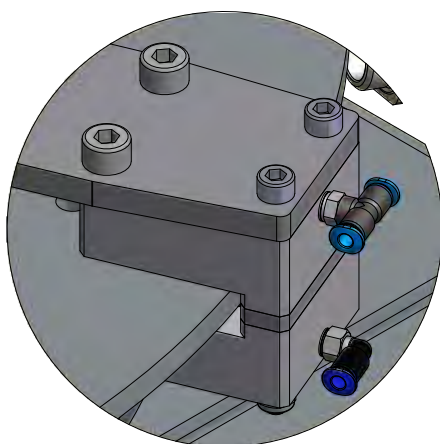
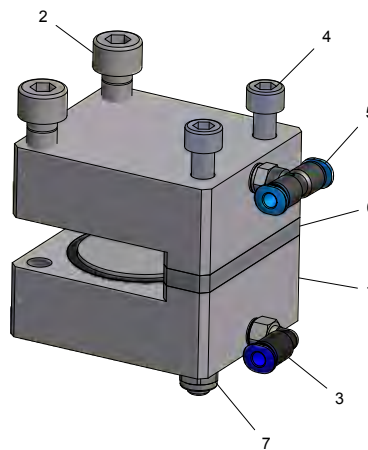
4. Accessories

4.1 Rotation brake

742708		Brake unit	
#	Artikelnr.	Beskrivning	Quantitet
1	742709	Brakeskivjetter-sats klassy	R 2
2	730727	Skriv M6x25	2
3	732373	Fästskruv M5x4	1
4	735501	Skriv M6x70	2
5	741361	Fästskruv M5x4	1
6	741898	Shimsvecker	1
7	730273	Låsning M6	2



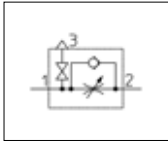
A



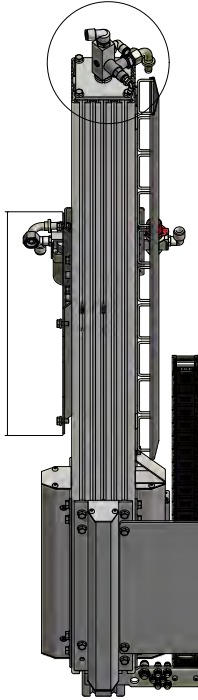
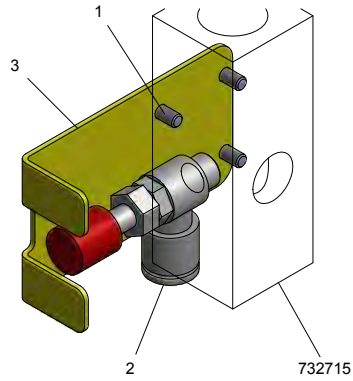
Brake unit	731505
Weight kg	4,0

4.2 Manual pressure release

741843 Manual pressure release kit			
#	Article nr.	Designation	Quantity
1	730275	Screw MC6S M4x8	4
2	741807	Speed control valve with pressure release S	1
3	741844	Protection plate	1

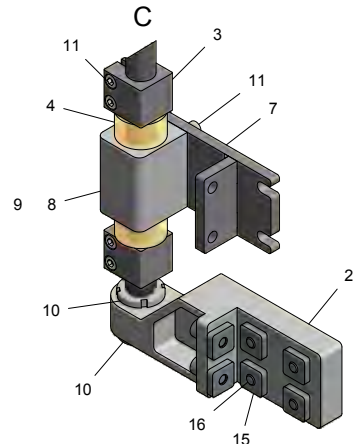
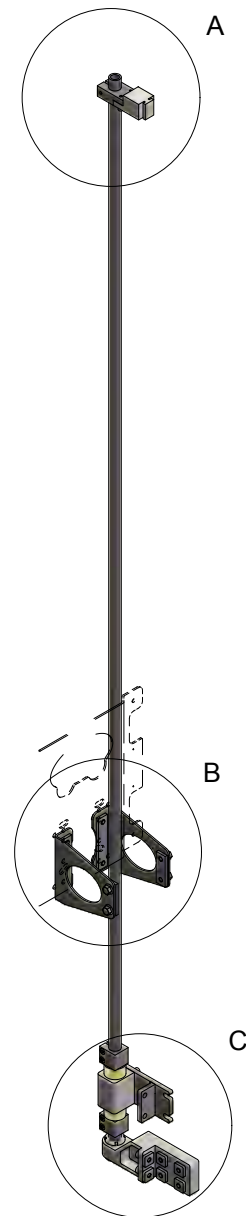
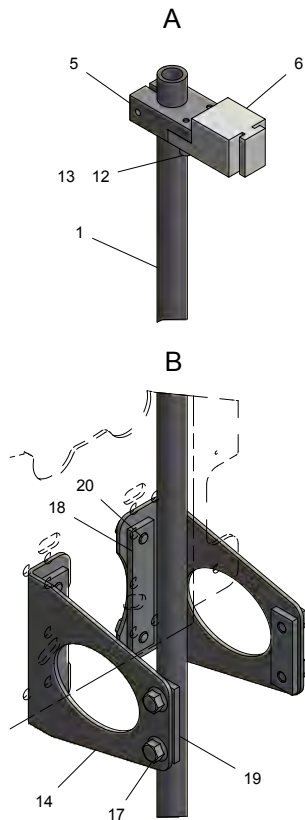
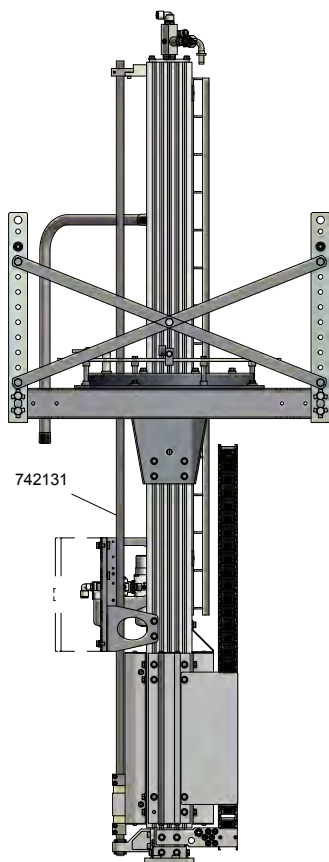


- Optional kit for the pillar unit.
- Facilitates venting of Mechlift Pro prior to repair and maintenance work.



4.3 Stroke limiter

742131		Stroke limiter	
#	Article nr.	Designation	Quantity
1	742134	Tube Ø20 L=L1	1
2	742135	Lower bracket	1
3	742136	Adjustable stop	S 2
4	742137	Shock absorber	2
5	742142	Support for guide	1
6	742140	Guide	1
7	742145	Upper bracket	1
8	742138	Bushing housing	1
9	742146	Slide bearing 25/28-50	1
10	731039	Shaft nut KM 4	2
11	730280	Screw MC6S M6x20	9
12	735571	Screw MC6S M5x20	2
13	730307	Washer BRB 5,3x10x1	2
14	742147	Cabinet bracket extender	2
15	730115	MM8 t-slot nut single	6
16	731800	Screw MC6S M8x16	6
17	730215	Screw M6SZ M8x10	4
18	730659	MM2x8 t-slot nut double c/c 80	2
19	730116	MM2x8 t-slot nut double c/c 40	2
20	730216	Screw M6SZ M8x12	4



Adapted for pillar unit		740965	740966	740967	740968	740969	740970
Stroke SL	mm	500	750	1000	1250	1500	500-1500
Length L1	mm	1100	1350	1600	1850	2100	SL+600
Weight	kg	4,1	4,4	4,7	5,1	5,5	3,5+3SL/2500

5. Pneumatic configurations

Overview

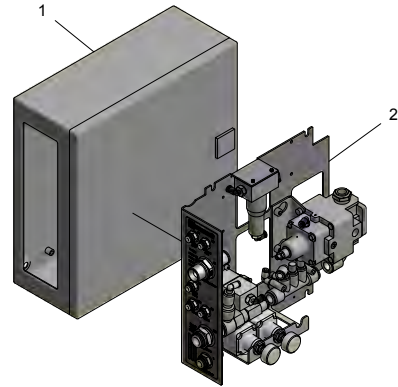
5.1	Pneumatics: 2-weight	28
5.2	Pneumatics: 2-weight automotive	30
5.3	Pneumatics: 2-weight with slow speed function	32
5.4	Pneumatics: 2-weight automotive with slow speed function	34
5.5	Pneumatics: 3-weight	36
5.6	Pneumatics: 3-weight automotive	38
5.7	Pneumatics: 3-weight with slow speed function	40
5.8	Pneumatics: 3-weight automotive with slow speed function	42
5.9	Pneumatics: pilot control.....	44
5.10	Pneumatics: pilot control with slow speed function.....	46
5.11	Air preparation unit.....	48
5.12	Control unit: Throttle handle	49
5.13	Control unit: Load cell (parallelogram).....	50

5.1 Pneumatics: 2-weight

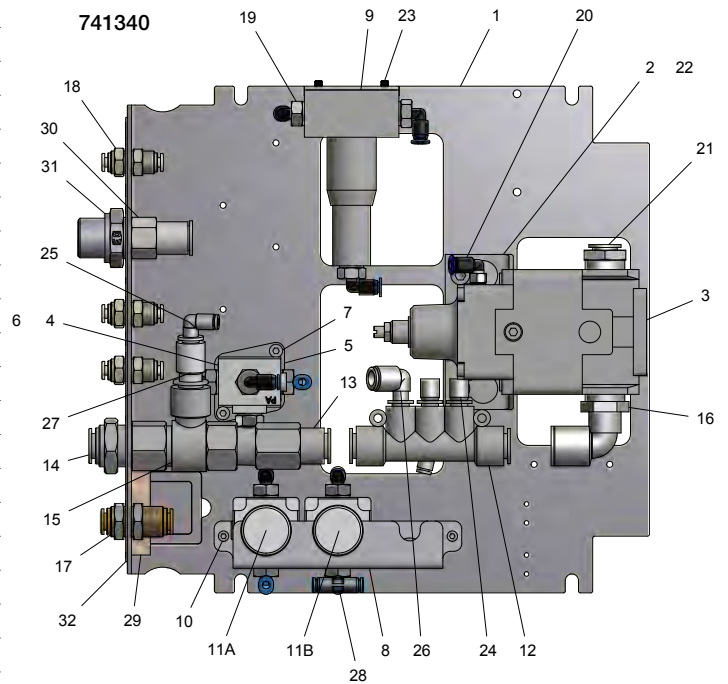
741330		2-weight	
#	Article nr.	Designation	Quantity
1	741324	Pneumatic cabinet	1
2	741340	2-weight, pre-mounted	1

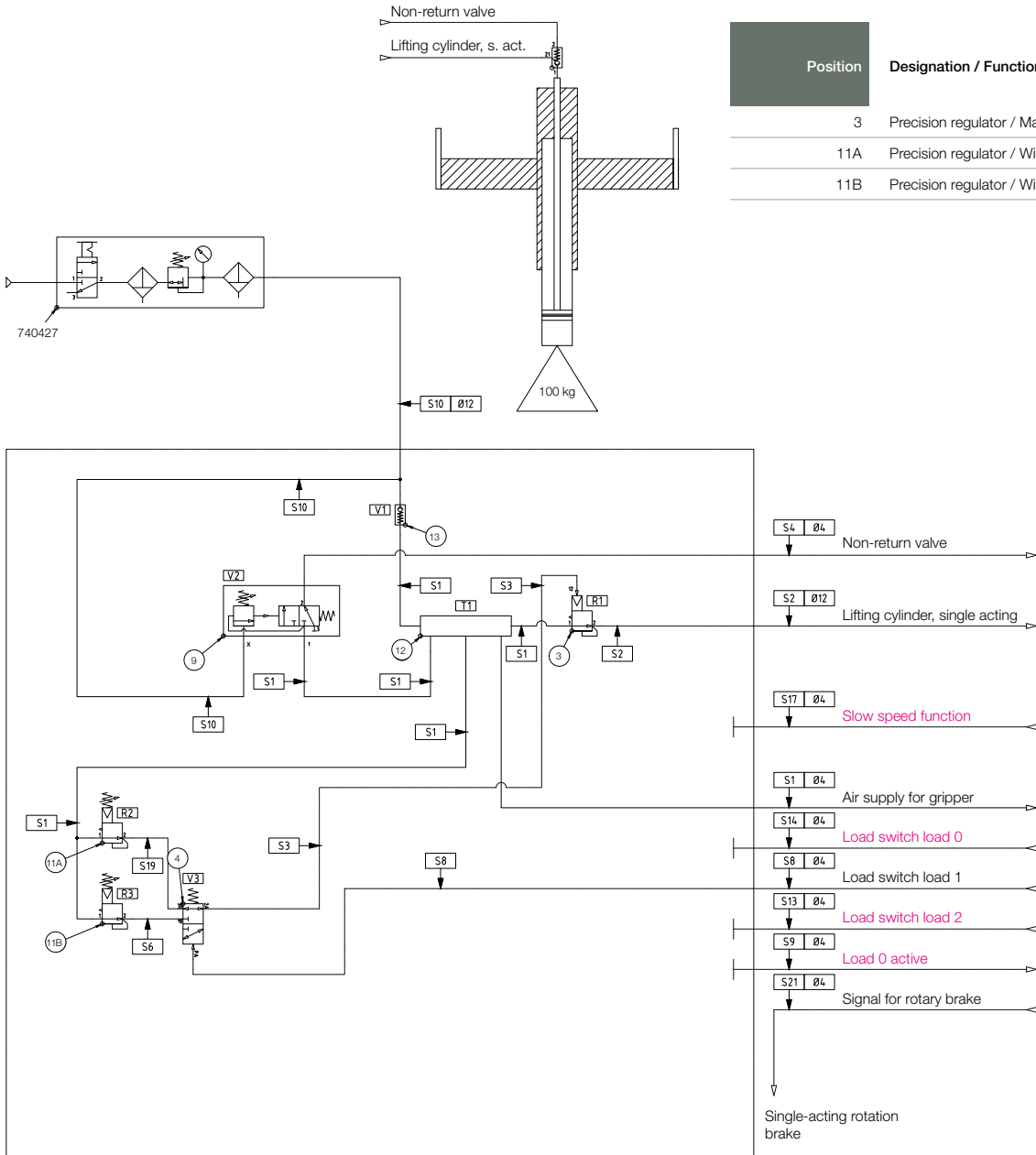
741340		2-weight, pre-mounted	
#	Article nr.	Designation	Quantity
1	741311	Mounting plate	1
2	741346	Bracket	1
3	737067	Precision regulator	R 1
4	738125	3/2 valve monostable	R 1
5	741310	Bracket	1
6	730820	Screw MF6S M5x12	2
7	730528	Screw MC6S M4x10	2
8	739776	Bracket	1
9	739553	Pressure guard	R 1
10	733679	Screw MC6S M3x10	2
11	738124	Precision regulator	R 2
12	739592	Manifold fitting	1
13	739597	Non-return valve	R 1
14	740798	Push-in connector 12-12	1
15	740799	L-fitting female Ø12	1
16	741348	Push-in L-fitting Ø12	1
17	739272	Push-in connector 8-8	1
18	739270	Push-in connector 4-4	5
19	739513	Push-in L-fitting G1/8"-4	11
20	732373	Push-in L-fitting M5-4	1
21	741349	Straight push-in fitting Ø12	1
22	731331	Screw MC6S M6x10	2
23	735595	Screw MC6S M4x25	2
24	741350	Blanking plug Ø8	3
25	741351	Push-in L-fitting Ø8-4	3
26	741352	Push-in L-fitting Ø8-8	1
27	741353	Straight push-in fitting Ø12-8	1
28	741355	Push-in T-fitting Ø4	1
29	741390	Air filter	S 1
30	741800	Straight push-in fitting G3/8"-12	1
31	741749	Adapter 1/2"-3/8"	1
32	741326	Sign plate 2-weight	1

741330



741340





- Two different load levels can be handled by activating "load 0" or "load 1".
- The first load level ("load 0") is adjusted for counterbalancing the mobile part of the lifter incl. gripper tool.

Pneumatics	741330
Weight kg	4,3

R: spare part S: wear part

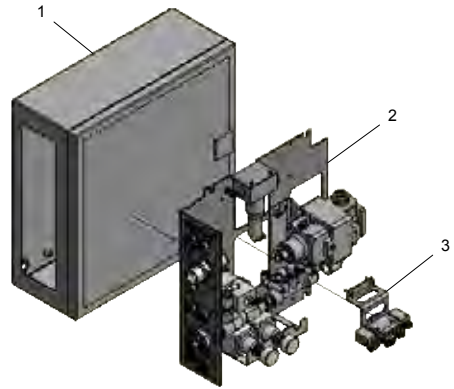
5.2 Pneumatics: 2-weight automotive

741331 2-weight AM			
#	Article nr.	Designation	Quantity
1	741324	Pneumatic cabinet	1
2	741340	2-weight, pre-mounted	1
3	741343	Automotive 2-weight	1

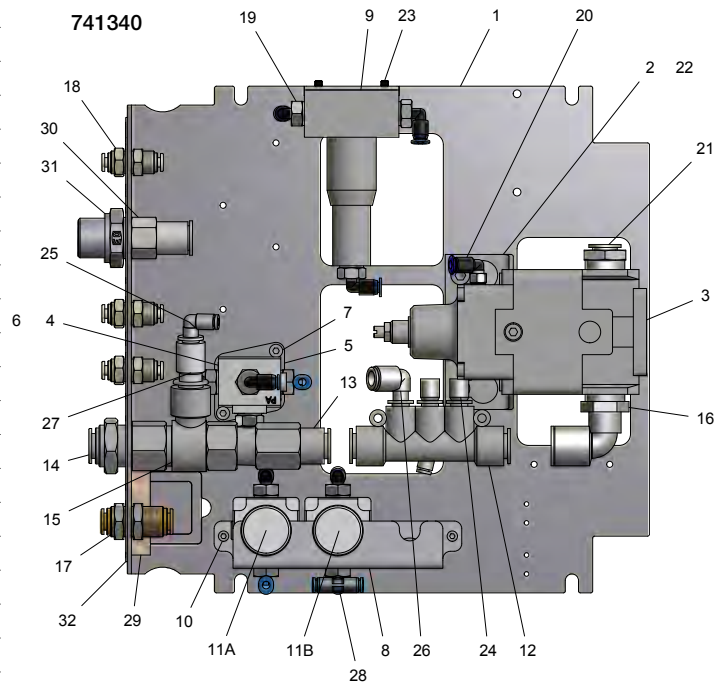
741340 2-weight, pre-mounted			
#	Article nr.	Designation	Quantity
1	741311	Mounting plate	1
2	741346	Bracket	1
3	737067	Precision regulator	R 1
4	738125	3/2 valve monostable	R 1
5	741310	Bracket	1
6	730820	Screw MF6S M5x12	2
7	730528	Screw MC6S M4x10	2
8	739776	Bracket	1
9	739553	Pressure guard	R 1
10	733679	Screw MC6S M3x10	2
11	738124	Precision regulator	R 2
12	739592	Manifold fitting	1
13	739597	Non-return valve	R 1
14	740798	Push-in connector 12-12	1
15	740799	L-fitting female Ø12	1
16	741348	Push-in L-fitting Ø12	1
17	739272	Push-in connector 8-8	1
18	739270	Push-in connector 4-4	5
19	739513	Push-in L-fitting G1/8"-4	11
20	732373	Push-in L-fitting M5-4	1
21	741349	Straight push-in fitting Ø12	1
22	731331	Screw MC6S M6x10	2
23	735595	Screw MC6S M4x25	2
24	741350	Blanking plug Ø8	3
25	741351	Push-in L-fitting Ø8-4	3
26	741352	Push-in L-fitting Ø8-8	1
27	741353	Straight push-in fitting Ø12-8	1
28	741355	Push-in T-fitting Ø4	1
29	741390	Air filter	S 1
30	741800	Straight push-in fitting G3/8"-12	1
31	741749	Adapter 1/2"-3/8"	1
32	741326	Sign plate 2-weight	1

741343 Automotive 2-weight			
#	Article nr.	Designation	Quantity
40	741345	Bracket	1
41	741359	5/2 valve, bistable	R 1
42	730528	Screw MC6S M4x10	2
43	739513	Push-in L-fitting G1/8"-4	3
45	732373	Push-in L-fitting M5-4	2

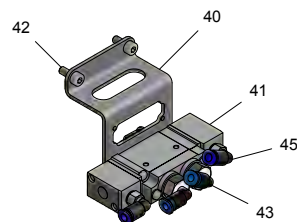
741331

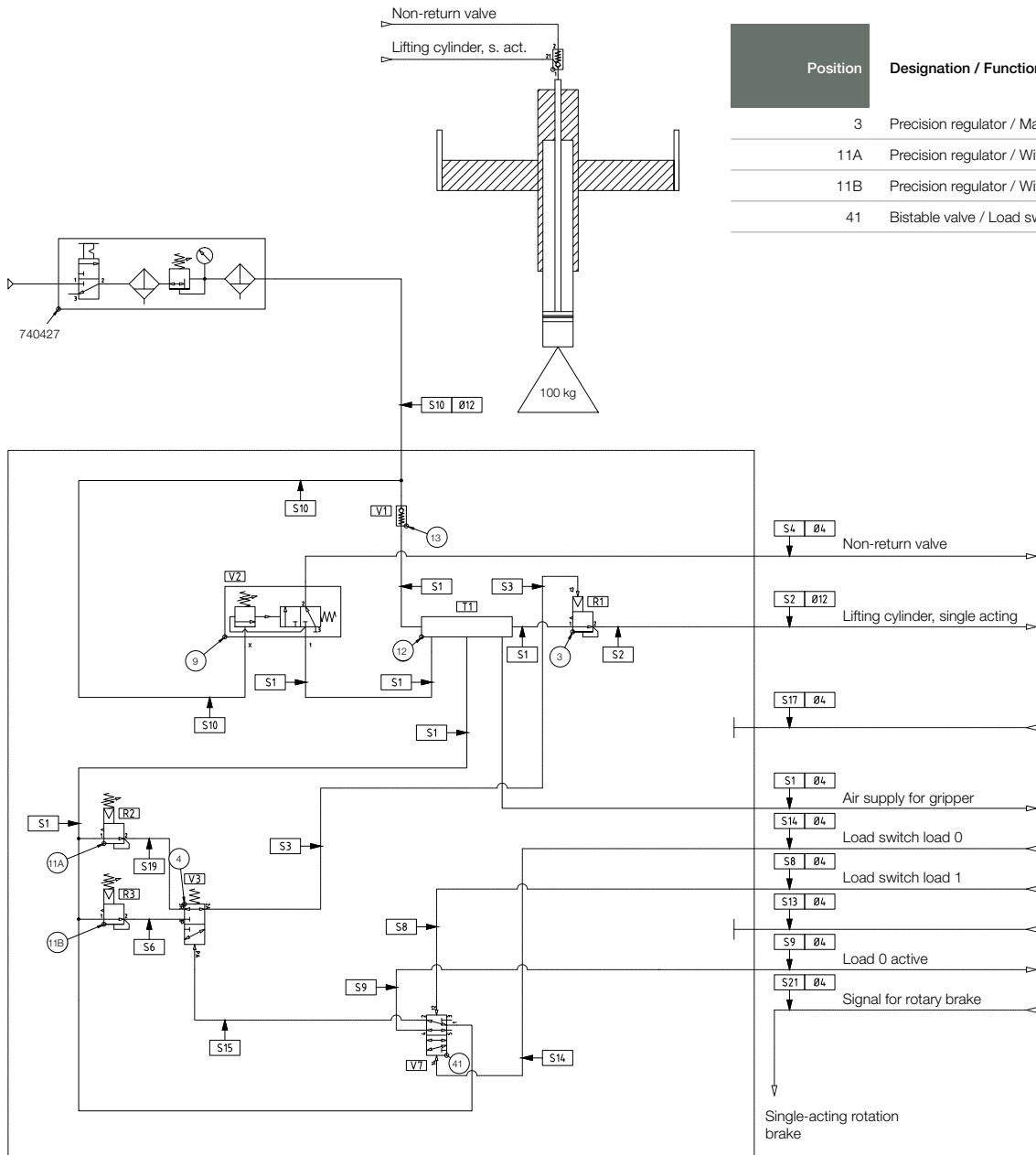


741340



741343





Position	Designation / Function
3	Precision regulator / Main regulator
11A	Precision regulator / Without load
11B	Precision regulator / With load
41	Bistable valve / Load switch

- Two different load levels can be handled by activating "load 0" or "load 1".
- The first load level ("load 0") is adjusted for counterbalancing the mobile part of the lifter incl. gripper tool.
- The load is switched by a bistable valve, ie. load alternation is done by impulse signals.

Pneumatics	741331
Weight kg	4,4

R: spare part S: wear part

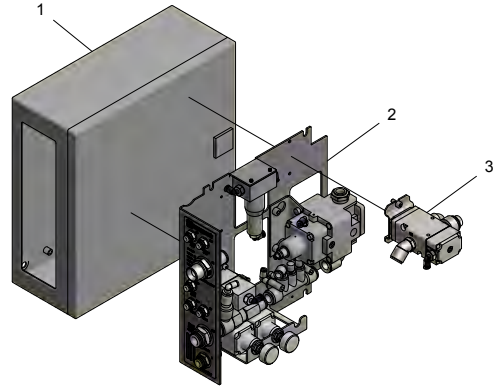
5.3 Pneumatics: 2-weight with slow speed function

741332		2-weight slow speed function	
#	Article nr.	Designation	Quantity
1	741324	Pneumatic cabinet	1
2	741340	2-weight, pre-mounted	1
3	741323	Slow speed function	1

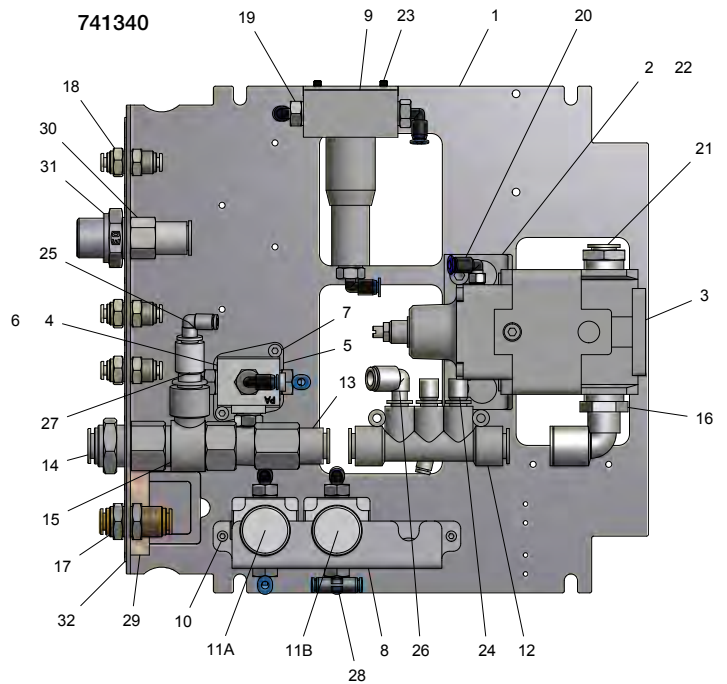
741340		2-weight, pre-mounted	
#	Article nr.	Designation	Quantity
1	741311	Mounting plate	1
2	741346	Bracket	1
3	737067	Precision regulator	R 1
4	738125	3/2 valve monostable	R 1
5	741310	Bracket	1
6	730820	Screw MF6S M5x12	2
7	730528	Screw MC6S M4x10	2
8	739776	Bracket	1
9	739553	Pressure guard	R 1
10	733679	Screw MC6S M3x10	2
11	738124	Precision regulator	R 2
12	739592	Manifold fitting	1
13	739597	Non-return valve	R 1
14	740798	Push-in connector 12-12	1
15	740799	L-fitting female Ø12	1
16	741348	Push-in L-fitting Ø12	1
17	739272	Push-in connector 8-8	1
18	739270	Push-in connector 4-4	5
19	739513	Push-in L-fitting G1/8"-4	11
20	732373	Push-in L-fitting M5-4	1
21	741349	Straight push-in fitting Ø12	1
22	731331	Screw MC6S M6x10	2
23	735595	Screw MC6S M4x25	2
24	741350	Blanking plug Ø8	3
25	741351	Push-in L-fitting Ø8-4	3
26	741352	Push-in L-fitting Ø8-8	1
27	741353	Straight push-in fitting Ø12-8	1
28	741355	Push-in T-fitting Ø4	1
29	741390	Air filter	S 1
30	741800	Straight push-in fitting G3/8"-12	1
31	741749	Adapter 1/2"-3/8"	1
32	741326	Sign plate 2-weight	1

741323		Slow speed function	
#	Article nr.	Designation	Quantity
50	741360	Bracket	1
51	739551	3/2 valve NC	R 1
52	741356	Push-in L-fitting Ø12	1
53	741357	Push-in elbow fitting Ø12-45°	1
54	730306	Screw MC6S M5x10	2
55	739513	Push-in L-fitting G1/8"-4	1
56	741358	Metering valve with silencer 3/8"	R 1

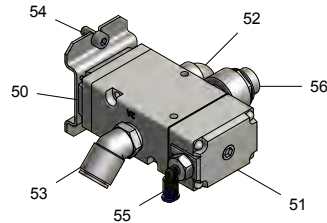
741332

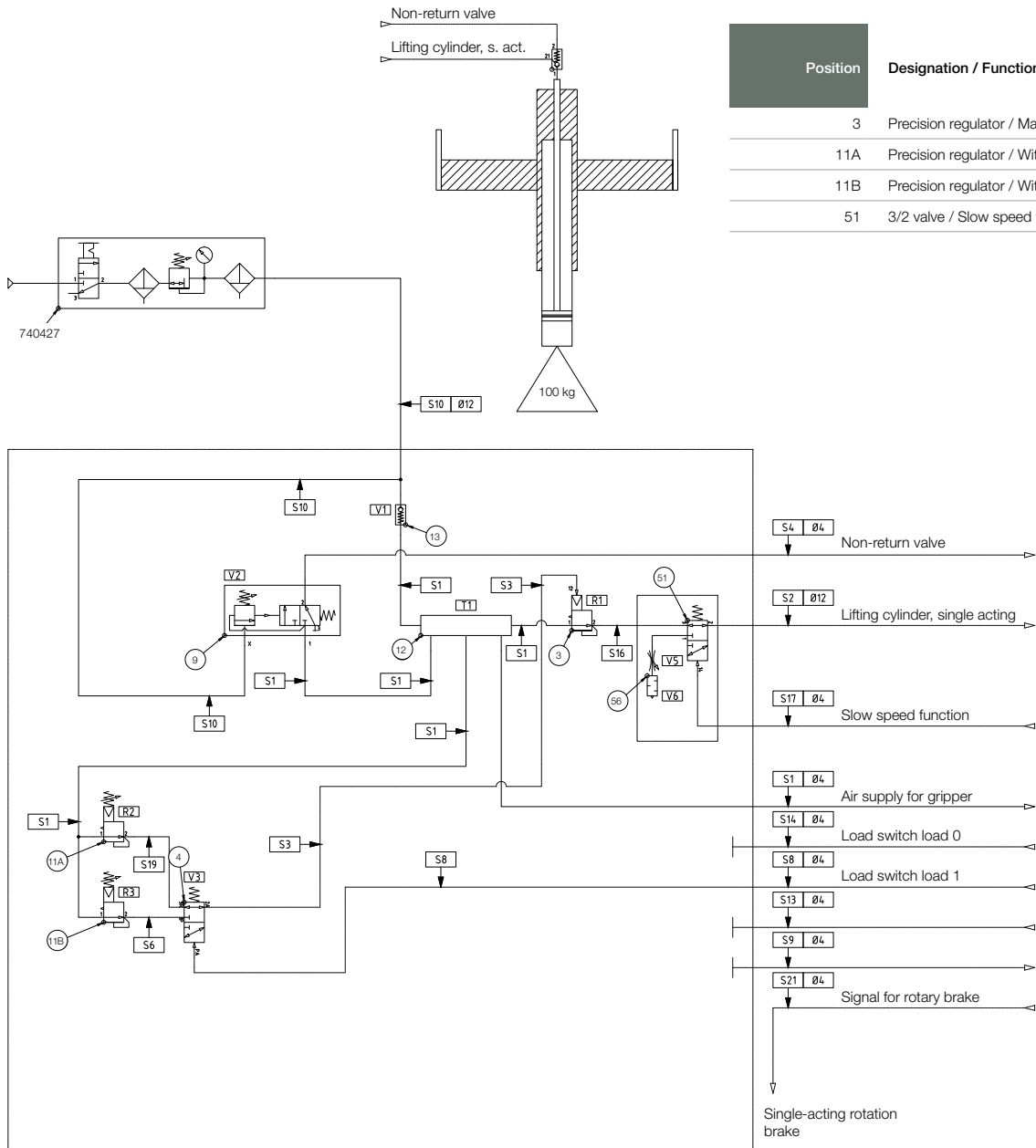


741340



741323





- Two different load levels can be handled by activating "load 0" or "load 1".
- The first load level ("load 0") is adjusted for counterbalancing the mobile part of the lifter incl. gripper tool.
- The system is equipped with lowering function for a controlled lowering. Functional conditions are configured by the customer, and depend on the specific application.

Pneumatics

741332

Weight kg

5,6

R: spare part S: wear part

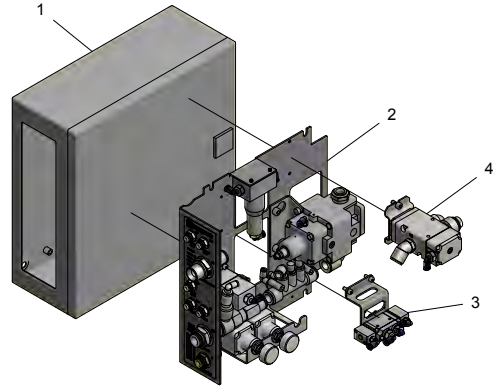
5.4 Pneumatics: 2-weight automotive with slow speed function

741333 2-weight AM slow speed function			
#	Article nr.	Designation	Quantity
1	741324	Pneumatic cabinet	1
2	741340	2-weight, pre-mounted	1
3	741343	Automotive 2-weight	1
4	741323	Slow speed function	1

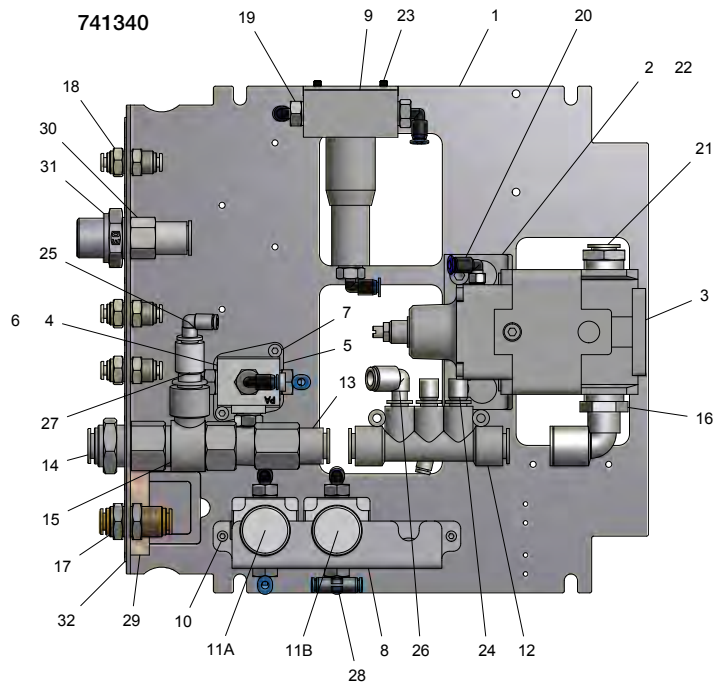
741340 2-weight, pre-mounted			
#	Article nr.	Designation	Quantity
1	741311	Mounting plate	1
2	741346	Bracket	1
3	737067	Precision regulator	R 1
4	738125	3/2 valve monostable	R 1
5	741310	Bracket	1
6	730820	Screw MF6S M5x12	2
7	730528	Screw MC6S M4x10	2
8	739776	Bracket	1
9	739553	Pressure guard	R 1
10	733679	Screw MC6S M3x10	2
11	738124	Precision regulator	R 2
12	739592	Manifold fitting	1
13	739597	Non-return valve	R 1
14	740798	Push-in connector 12-12	1
15	740799	L-fitting female Ø12	1
16	741348	Push-in L-fitting Ø12	1
17	739272	Push-in connector 8-8	1
18	739270	Push-in connector 4-4	5
19	739513	Push-in L-fitting G1/8"-4	11
20	732373	Push-in L-fitting M5-4	1
21	741349	Straight push-in fitting Ø12	1
22	731331	Screw MC6S M6x10	2
23	735595	Screw MC6S M4x25	2
24	741350	Blanking plug Ø8	3
25	741351	Push-in L-fitting Ø8-4	3
26	741352	Push-in L-fitting Ø8-8	1
27	741353	Straight push-in fitting Ø12-8	1
28	741355	Push-in T-fitting Ø4	1
29	741390	Air filter	S 1
30	741800	Straight push-in fitting G3/8"-12	1
31	741749	Adapter 1/2"-3/8"	1
32	741326	Sign plate 2-weight	1

741323 Slow speed function			
#	Article nr.	Designation	Quantity
50	741360	Bracket	1
51	739551	3/2 valve NC	R 1
52	741356	Push-in L-fitting Ø12	1
53	741357	Push-in elbow fitting Ø12-45°	1
54	730306	Screw MC6S M5x10	2
55	739513	Push-in L-fitting G1/8"-4	1
56	741358	Metering valve with silencer 3/8"	R 1

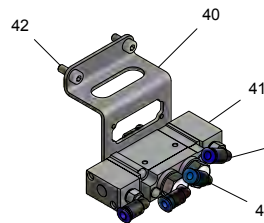
741333



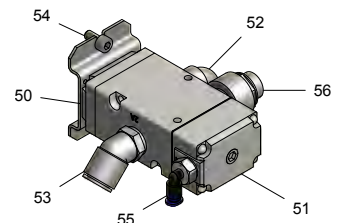
741340



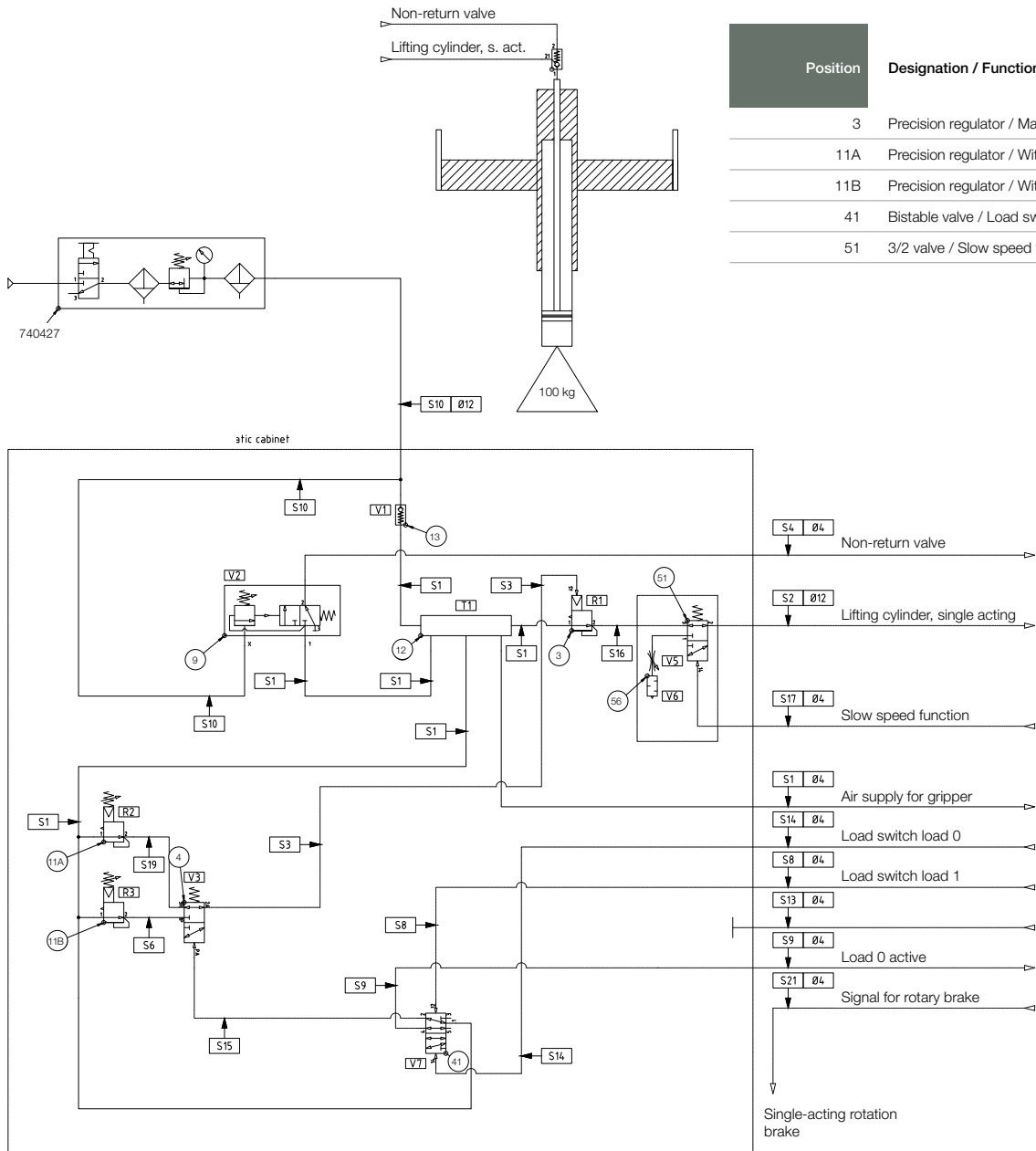
741343



741323



741343 Automotive 2-weight			
#	Article nr.	Designation	Quantity
40	741345	Bracket	1
41	741359	5/2 valve, bistable	R 1
42	730528	Screw MC6S M4x10	2
43	739513	Push-in L-fitting G1/8"-4	3
45	732373	Push-in L-fitting M5-4	2



- Two different load levels can be handled by activating "load 0" or "load 1".
- The first load level ("load 0") is adjusted for counterbalancing the mobile part of the lifter incl. gripper tool.
- The load is switched by a bistable valve, ie. load alternation is done by impulse signals.
- The system is equipped with lowering function for a controlled lowering. Functional conditions are configured by the customer, and depend on the specific application.

Pneumatics

741333

Weight kg

5,7

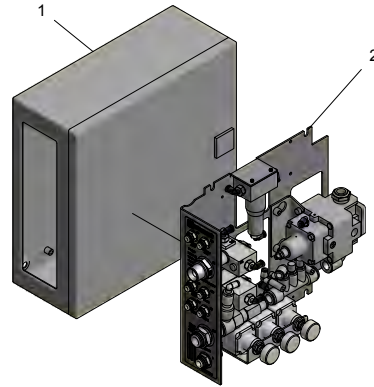
R: spare part S: wear part

5.5 Pneumatics: 3-weight

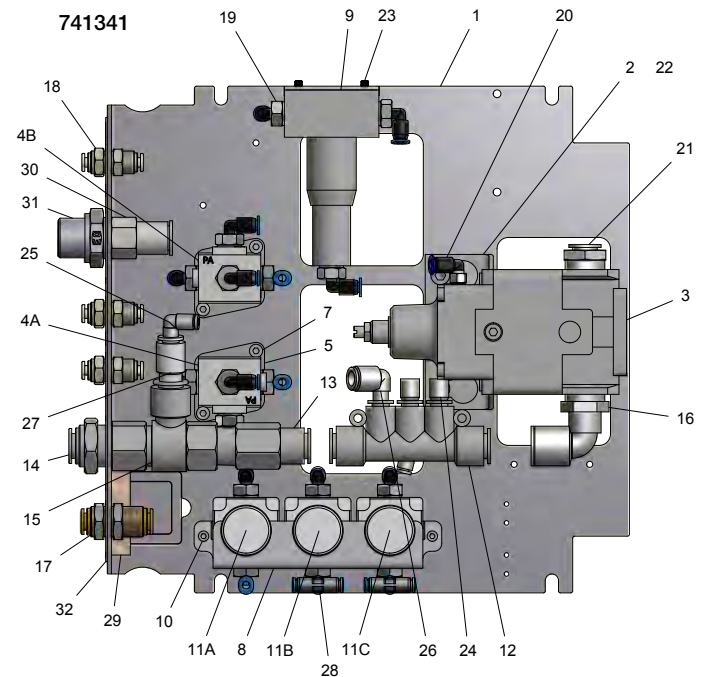
741334 3-weight			
#	Article nr.	Designation	Quantity
1	741324	Pneumatic cabinet	1
2	741341	3-weight, pre-mounted	1

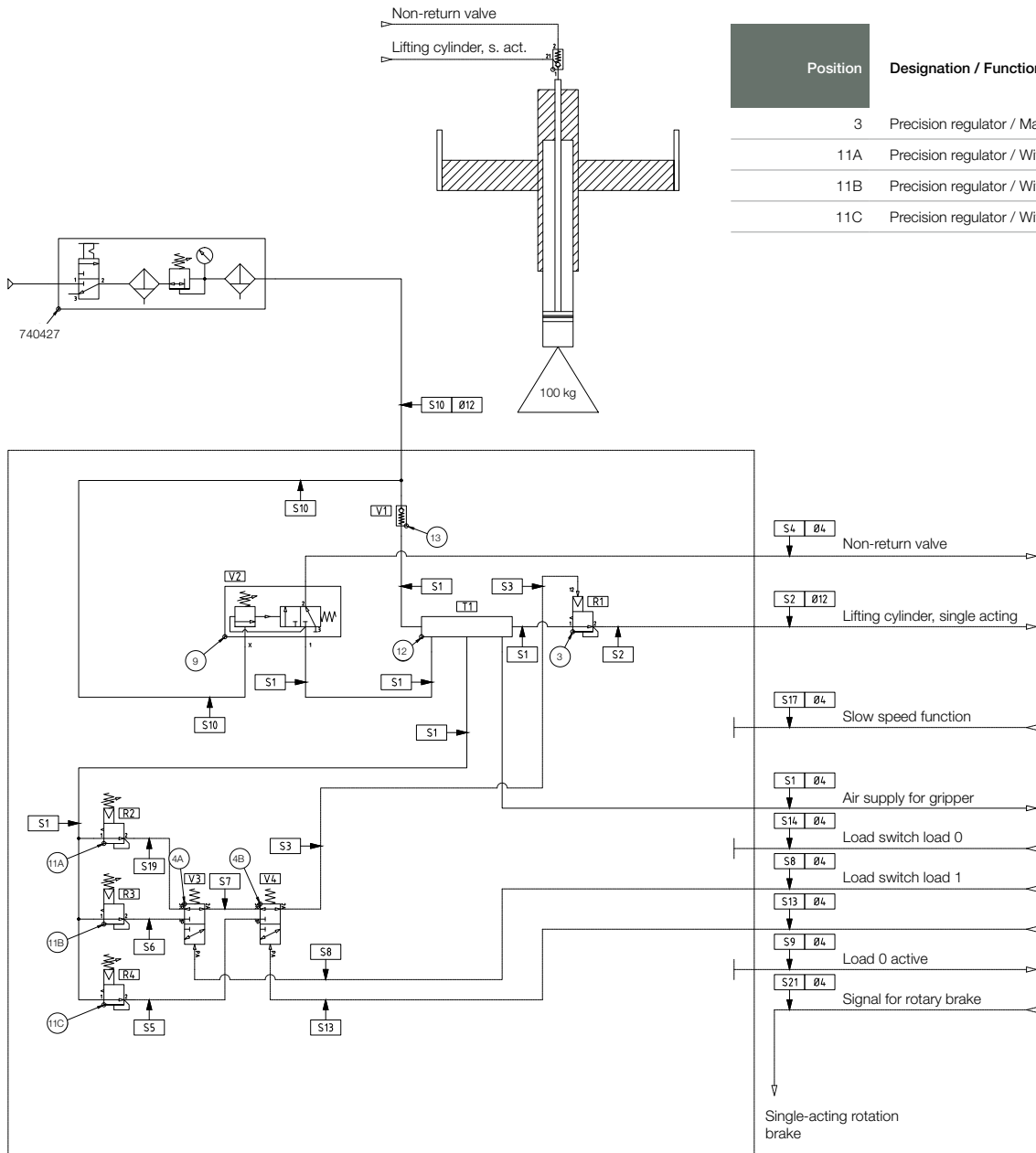
741341 3-weight, pre-mounted			
#	Article nr.	Designation	Quantity
1	741311	Mounting plate	1
2	741346	Bracket	1
3	737067	Precision regulator	R 1
4	738125	3/2 valve monostable	R 2
5	741310	Bracket	2
6	730820	Screw MF6S M5x12	4
7	730528	Screw MC6S M4x10	4
8	739776	Bracket	1
9	739553	Pressure guard	R 1
10	733679	Screw MC6S M3x10	2
11	738124	Precision regulator	R 3
12	739592	Manifold fitting	1
13	739597	Non-return valve	R 1
14	740798	Push-in connector 12-12	1
15	740799	L-fitting female Ø12	1
16	741348	Push-in L-fitting Ø12	1
17	739272	Push-in connector 8-8	1
18	739270	Push-in connector 4-4	6
19	739513	Push-in L-fitting G1/8"-4	17
20	732373	Push-in L-fitting M5-4	1
21	741349	Straight push-in fitting Ø12	1
22	731331	Screw MC6S M6x10	2
23	735595	Screw MC6S M4x25	2
24	741350	Blanking plug Ø8	3
25	741351	Push-in L-fitting Ø8-4	3
26	741352	Push-in L-fitting Ø8-8	1
27	741353	Straight push-in fitting Ø12-8	1
28	741355	Push-in T-fitting Ø4	2
29	741390	Air filter	S 1
30	741800	Straight push-in fitting G3/8"-12	1
31	741749	Adapter 1/2"-3/8"	1
32	741327	Sign plate 3-weight	1

741334



741341





Position	Designation / Function
3	Precision regulator / Main regulator
11A	Precision regulator / Without load
11B	Precision regulator / With load 1
11C	Precision regulator / With load 2

- Three different load levels can be handled by activating "load 0", "load 1" or "load 2".
- The first load level ("load 0") is adjusted for counterbalancing the mobile part of the lifter incl. gripper tool.

Pneumatics	741334
Weight kg	5,3

R: spare part S: wear part

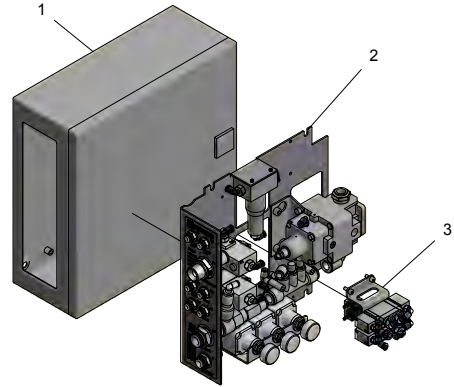
5.6 Pneumatics: 3-weight automotive

741335 3-weight AM			
#	Article nr.	Designation	Quantity
1	741324	Pneumatic cabinet	1
2	741341	3-weight, pre-mounted	1
3	741322	Automotive 3-weight	1

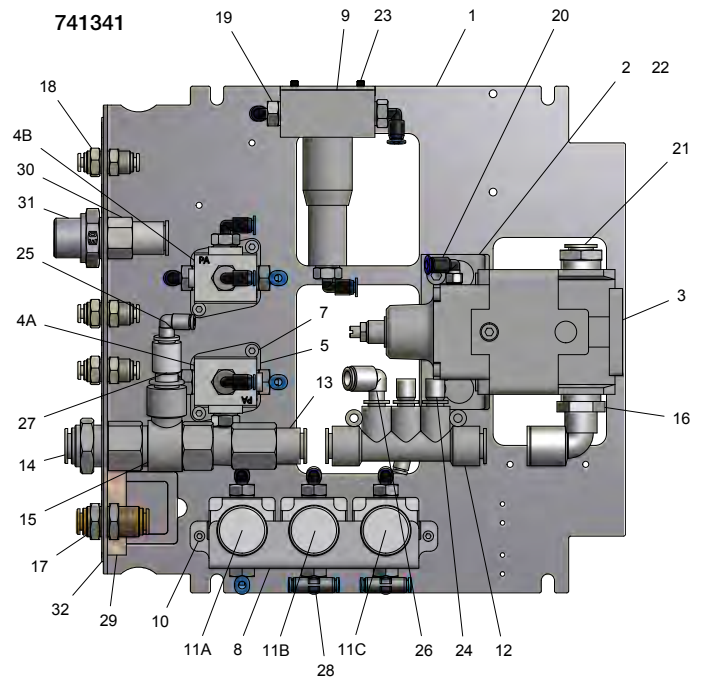
741341 3-weight, pre-mounted			
#	Article nr.	Designation	Quantity
1	741311	Mounting plate	1
2	741346	Bracket	1
3	737067	Precision regulator	R 1
4	738125	3/2 valve monostable	R 2
5	741310	Bracket	2
6	730820	Screw MF6S M5x12	4
7	730528	Screw MC6S M4x10	4
8	739776	Bracket	1
9	739553	Pressure guard	R 1
10	733679	Screw MC6S M3x10	2
11	738124	Precision regulator	R 3
12	739592	Manifold fitting	1
13	739597	Non-return valve	R 1
14	740798	Push-in connector 12-12	1
15	740799	L-fitting female Ø12	1
16	741348	Push-in L-fitting Ø12	1
17	739272	Push-in connector 8-8	1
18	739270	Push-in connector 4-4	6
19	739513	Push-in L-fitting G1/8"-4	17
20	732373	Push-in L-fitting M5-4	1
21	741349	Straight push-in fitting Ø12	1
22	731331	Screw MC6S M6x10	2
23	735595	Screw MC6S M4x25	2
24	741350	Blanking plug Ø8	3
25	741351	Push-in L-fitting Ø8-4	3
26	741352	Push-in L-fitting Ø8-8	1
27	741353	Straight push-in fitting Ø12-8	1
28	741355	Push-in T-fitting Ø4	2
29	741390	Air filter	S 1
30	741800	Straight push-in fitting G3/8"-12	1
31	741749	Adapter 1/2"-3/8"	1
32	741327	Sign plate 3-weight	1

741322 Automotive 3-weight			
#	Article nr.	Designation	Quantity
40	741345	Bracket	1
41	741359	5/2 valve, bistable	R 2
42	732669	OR gate	R 1
43	730528	Screw MC6S M4x10	2
44	739513	Push-in L fitting G1/8"-4	5
45	732373	Push-in L-fitting M5-4	2
46	734715	Plug 1/8", hex socket	1
47	739259	Push-in Y-fitting Ø4	2
48	739287	Push-in T-fitting M5-4	2

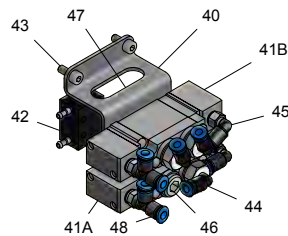
741335

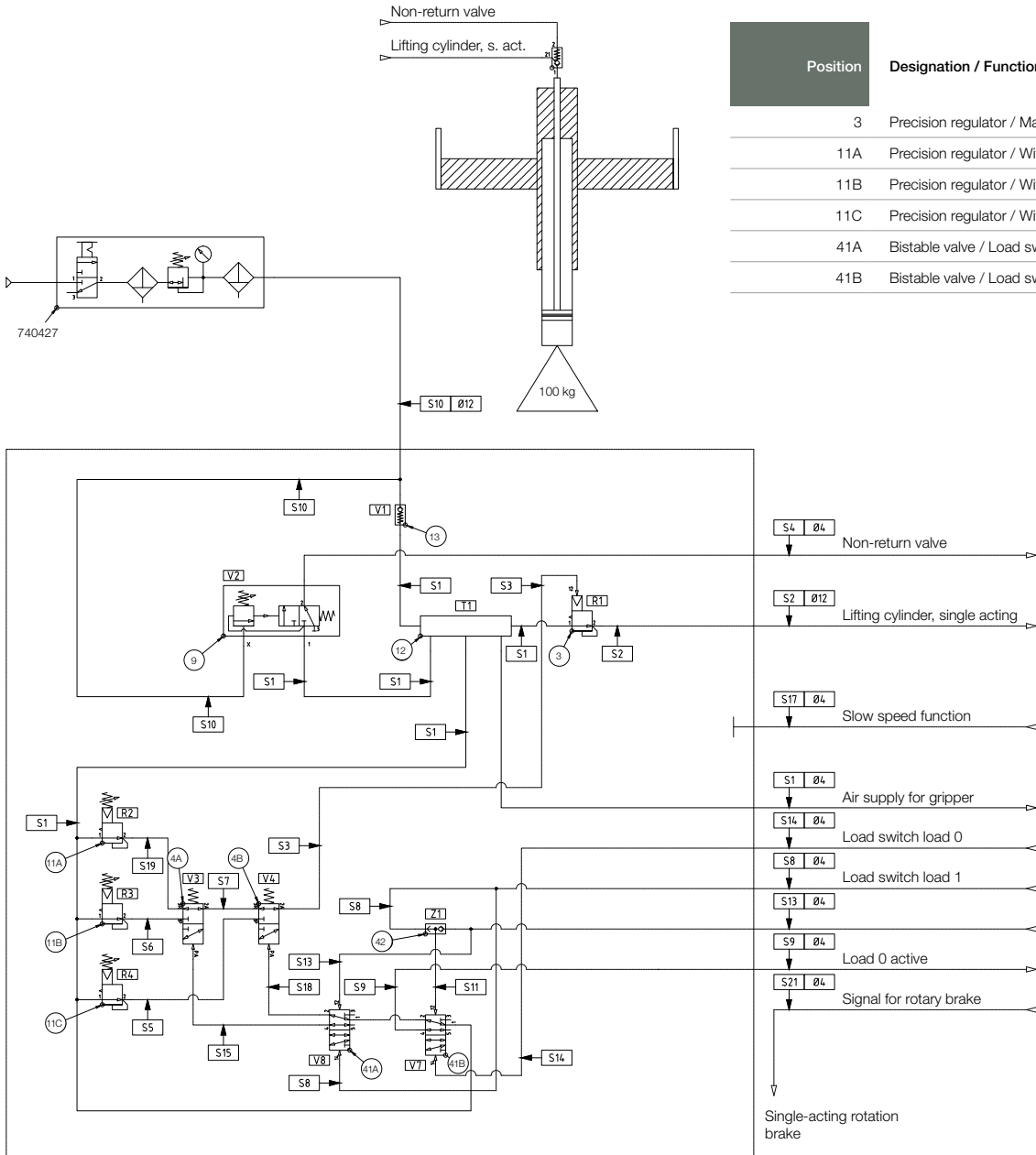


741341



741322





- Three different load levels can be handled by activating "load 0", "load 1" or "load 2".
- The first load level ("load 0") is adjusted for counterbalancing the mobile part of the lifter incl. gripper tool.
- The load is switched by bistable valves, ie. load alternation is done by impulse signals.

Pneumatics	741335
Weight kg	5,6

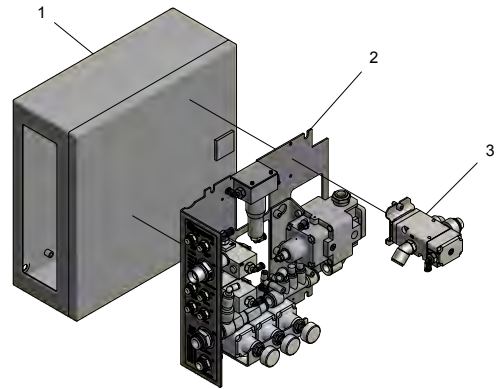
5.7 Pneumatics: 3-weight with slow speed function

741336 3-weight slow speed function			
#	Article nr.	Designation	Quantity
1	741324	Pneumatic cabinet	1
2	741341	3-weight, pre-mounted	1
3	741323	Slow speed function	1

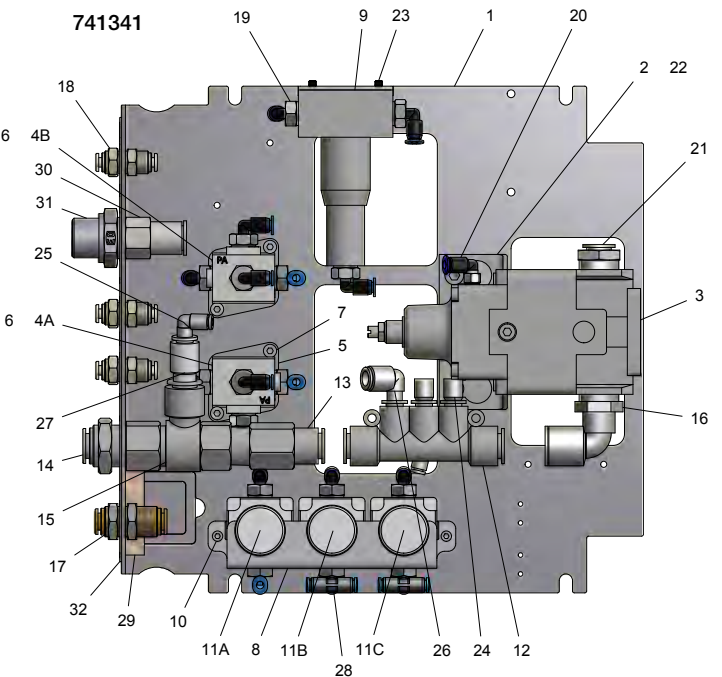
741341 3-weight, pre-mounted			
#	Article nr.	Designation	Quantity
1	741311	Mounting plate	1
2	741346	Bracket	1
3	737067	Precision regulator	R 1
4	738125	3/2 valve monostable	R 2
5	741310	Bracket	2
6	730820	Screw MF6S M5x12	4
7	730528	Screw MC6S M4x10	4
8	739776	Bracket	1
9	739553	Pressure guard	R 1
10	733679	Screw MC6S M3x10	2
11	738124	Precision regulator	R 3
12	739592	Manifold fitting	1
13	739597	Non-return valve	R 1
14	740798	Push-in connector 12-12	1
15	740799	L-fitting female Ø12	1
16	741348	Push-in L-fitting Ø12	1
17	739272	Push-in connector 8-8	1
18	739270	Push-in connector 4-4	6
19	739513	Push-in L-fitting G1/8"-4	17
20	732373	Push-in L-fitting M5-4	1
21	741349	Straight push-in fitting Ø12	1
22	731331	Screw MC6S M6x10	2
23	735595	Screw MC6S M4x25	2
24	741350	Blanking plug Ø8	3
25	741351	Push-in L-fitting Ø8-4	3
26	741352	Push-in L-fitting Ø8-8	1
27	741353	Straight push-in fitting Ø12-8	1
28	741355	Push-in T-fitting Ø4	2
29	741390	Air filter	S 1
30	741800	Straight push-in fitting G3/8"-12	1
31	741749	Adapter 1/2"-3/8"	1
32	741327	Sign plate 3-weight	1

741323 Slow speed function			
#	Article nr.	Designation	Quantity
50	741360	Bracket	1
51	739551	3/2 valve NC	R 1
52	741356	Push-in L-fitting Ø12	1
53	741357	Push-in elbow fitting Ø12-45°	1
54	730306	Screw MC6S M5x10	2
55	739513	Push-in L-fitting G1/8"-4	1
56	741358	Metering valve with silencer 3/8"	R 1

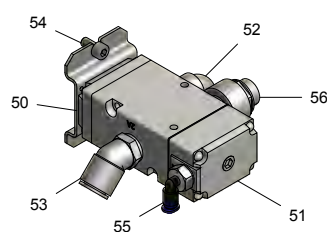
741336

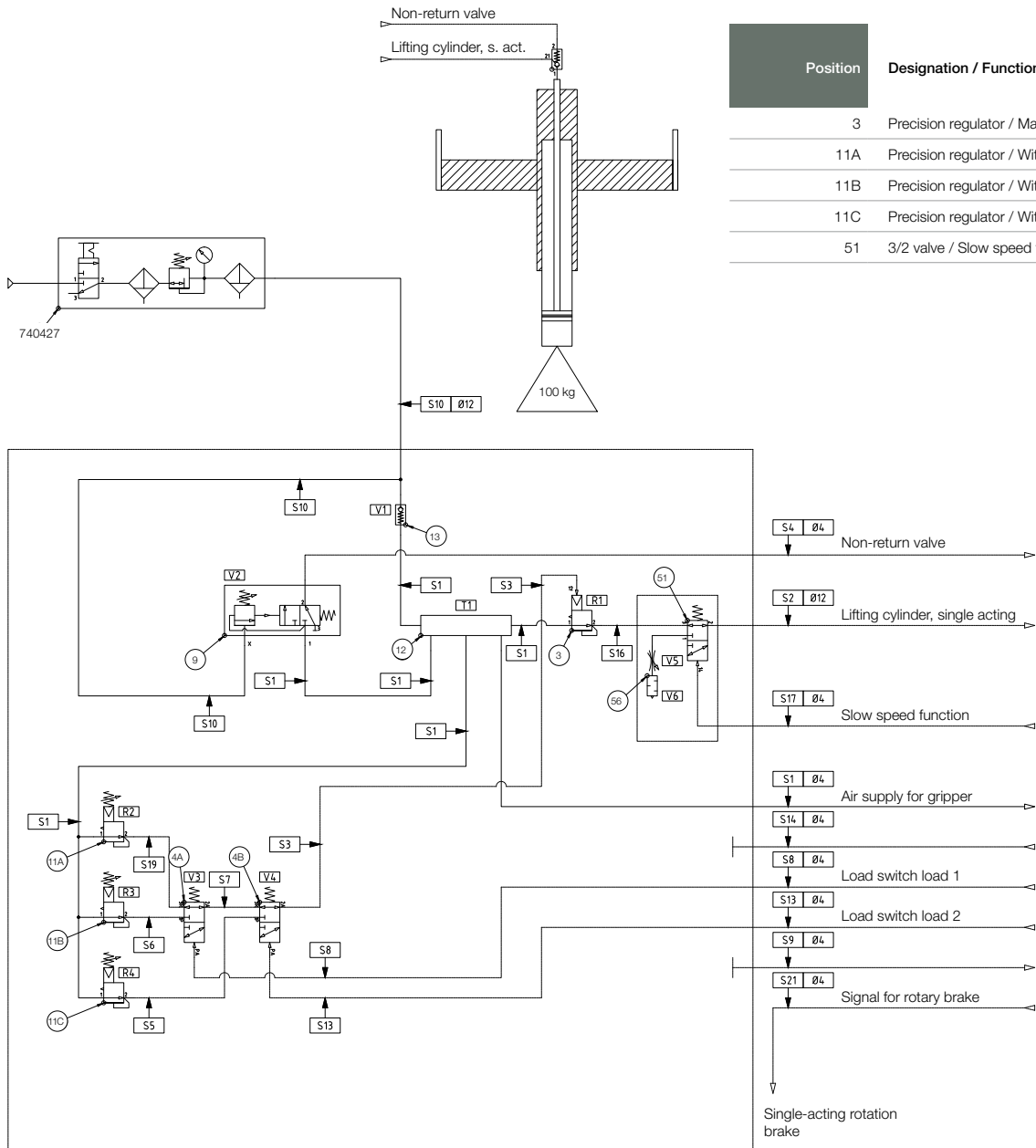


741341



741323





- Three different load levels can be handled by activating "load 0", "load 1" or "load 2".
- The first load level ("load 0") is adjusted for counterbalancing the mobile part of the lifter incl. gripper tool.
- The system is equipped with lowering function for a controlled lowering. Functional conditions are configured by the customer, and depend on the specific application.

Pneumatics

741336

Weight kg

6,6

R: spare part S: wear part

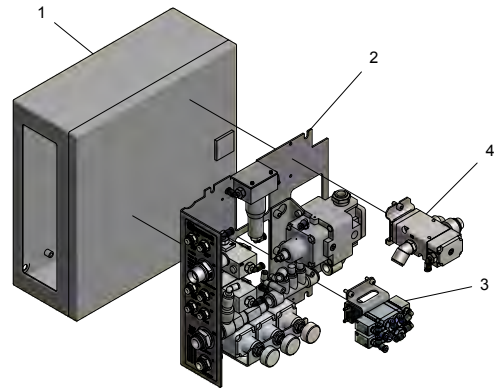
5.8 Pneumatics: 3-weight automotive with slow speed function

741337 3-weight AM slow speed function			
#	Article nr.	Designation	Quantity
1	741324	Pneumatic cabinet	1
2	741341	3-weight, pre-mounted	1
3	741322	Automotive 3-weight	1
4	741323	Slow speed function	1

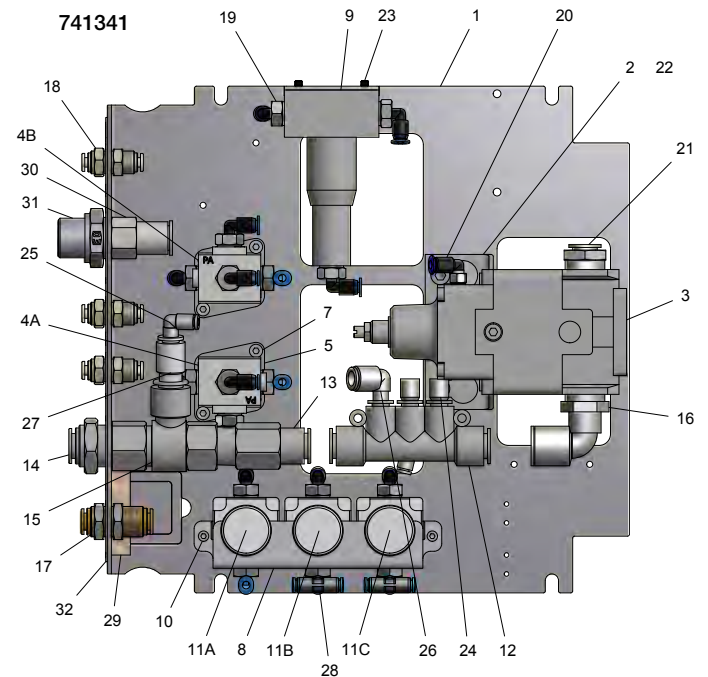
741341 3-weight, pre-mounted			
#	Article nr.	Designation	Quantity
1	741311	Mounting plate	1
2	741346	Bracket	1
3	737067	Precision regulator	R 1
4	738125	3/2 valve monostable	R 2
5	741310	Bracket	2
6	730820	Screw MF6S M5x12	4
7	730528	Screw MC6S M4x10	4
8	739776	Bracket	1
9	739553	Pressure guard	R 1
10	733679	Screw MC6S M3x10	2
11	738124	Precision regulator	R 3
12	739592	Manifold fitting	1
13	739597	Non-return valve	R 1
14	740798	Push-in connector 12-12	1
15	740799	L-fitting female Ø12	1
16	741348	Push-in L-fitting Ø12	1
17	739272	Push-in connector 8-8	1
18	739270	Push-in connector 4-4	6
19	739513	Push-in L-fitting G1/8"-4	17
20	732373	Push-in L-fitting M5-4	1
21	741349	Straight push-in fitting Ø12	1
22	731331	Screw MC6S M6x10	2
23	735595	Screw MC6S M4x25	2
24	741350	Blanking plug Ø8	3
25	741351	Push-in L-fitting Ø8-4	3
26	741352	Push-in L-fitting Ø8-8	1
27	741353	Straight push-in fitting Ø12-8	1
28	741355	Push-in T-fitting Ø4	2
29	741390	Air filter	S 1
30	741800	Straight push-in fitting G3/8"-12	1
31	741749	Adapter 1/2"-3/8"	1
32	741327	Sign plate 3-weight	1

741322 Automotive 3-weight			
#	Article nr.	Designation	Quantity
40	741345	Bracket	1
41	741359	5/2 valve, bistable	R 2
42	732669	OR gate	R 1
43	730528	Screw MC6S M4x10	2
44	739513	Push-in L fitting G1/8"-4	5
45	732373	Push-in L-fitting M5-4	2
46	734715	Plug 1/8", hex socket	1
47	739259	Push-in Y-fitting Ø4	2
48	739287	Push-in T-fitting M5-4	2

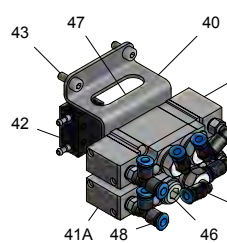
741337



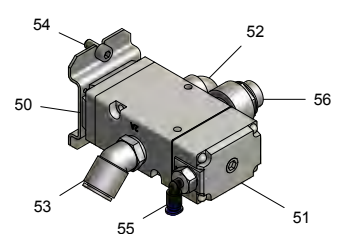
741341



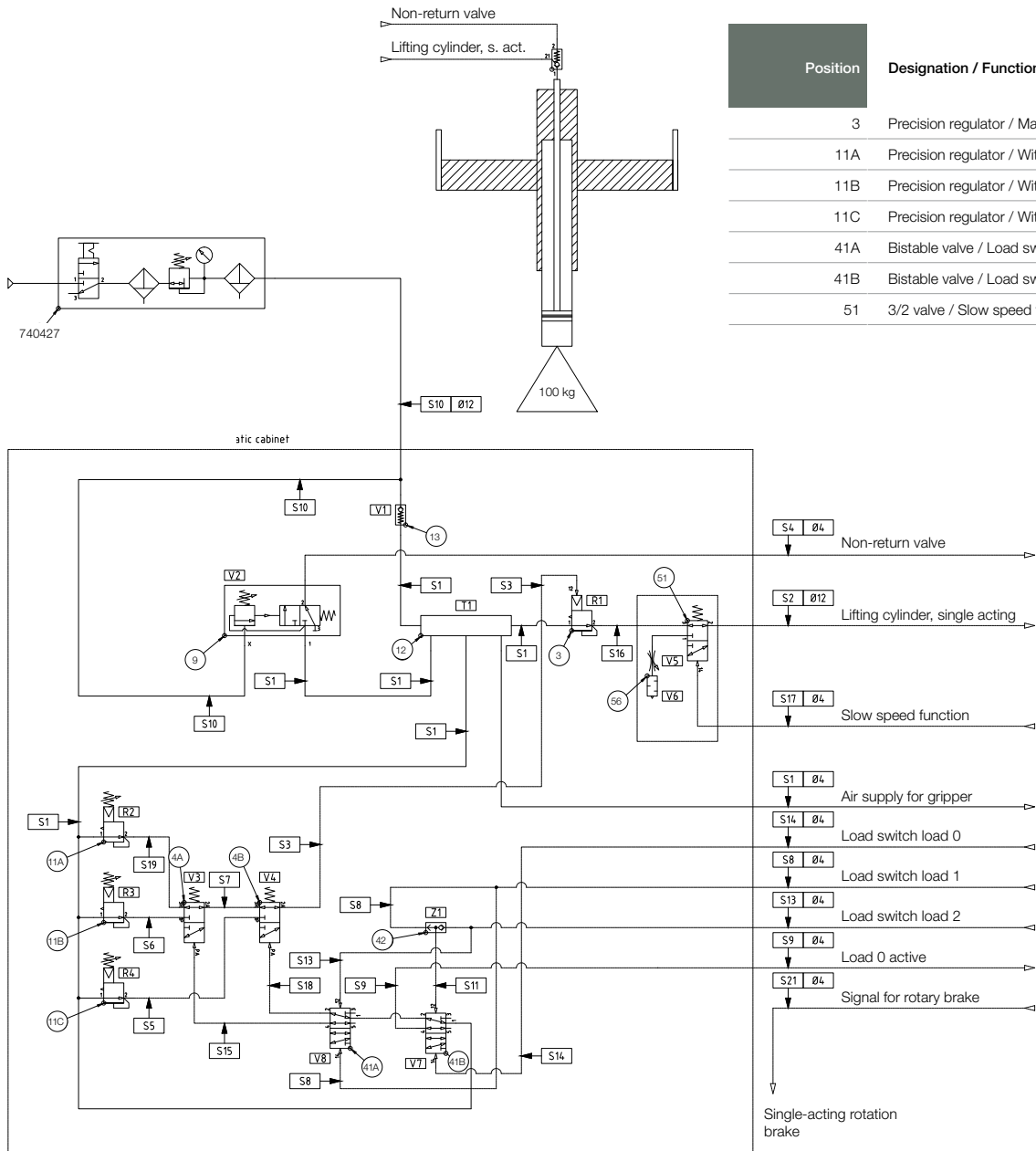
741322



741323



741323 Slow speed function			
#	Article nr.	Designation	Quantity
50	741360	Bracket	1
51	739551	3/2 valve NC	R 1
52	741356	Push-in L-fitting Ø12	1
53	741357	Push-in elbow fitting Ø12-45°	1
54	730306	Screw MC6S M5x10	2
55	739513	Push-in L-fitting G1/8"-4	1
56	741358	Metering valve with silencer 3/8"	R 1



- Three different load levels can be handled by activating "load 0", "load 1" or "load 2".
- The first load level ("load 0") is adjusted for counterbalancing the mobile part of the lifter incl. gripper tool.
- The load is switched by a bistable valve, ie. load alternation is done by impulse signals.
- The system is equipped with lowering function for a controlled lowering. Functional conditions are configured by the customer, and depend on the specific application.

Pneumatics

741337

Weight kg

6,8

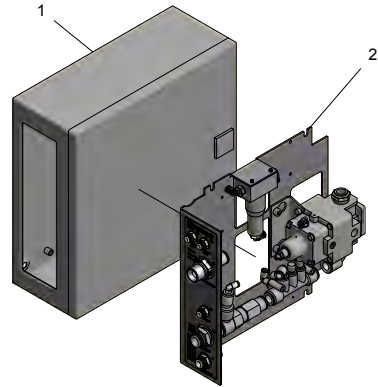
R: spare part S: wear part

5.9 Pneumatics: pilot control

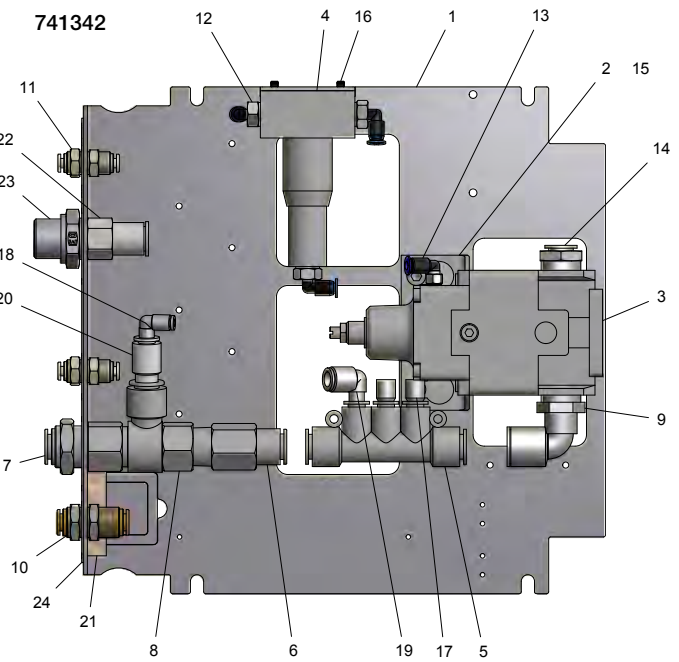
741338 Pilot control			
#	Article nr.	Designation	Quantity
1	741324	Pneumatic cabinet	1
2	741342	Pilot control, pre-mounted	1

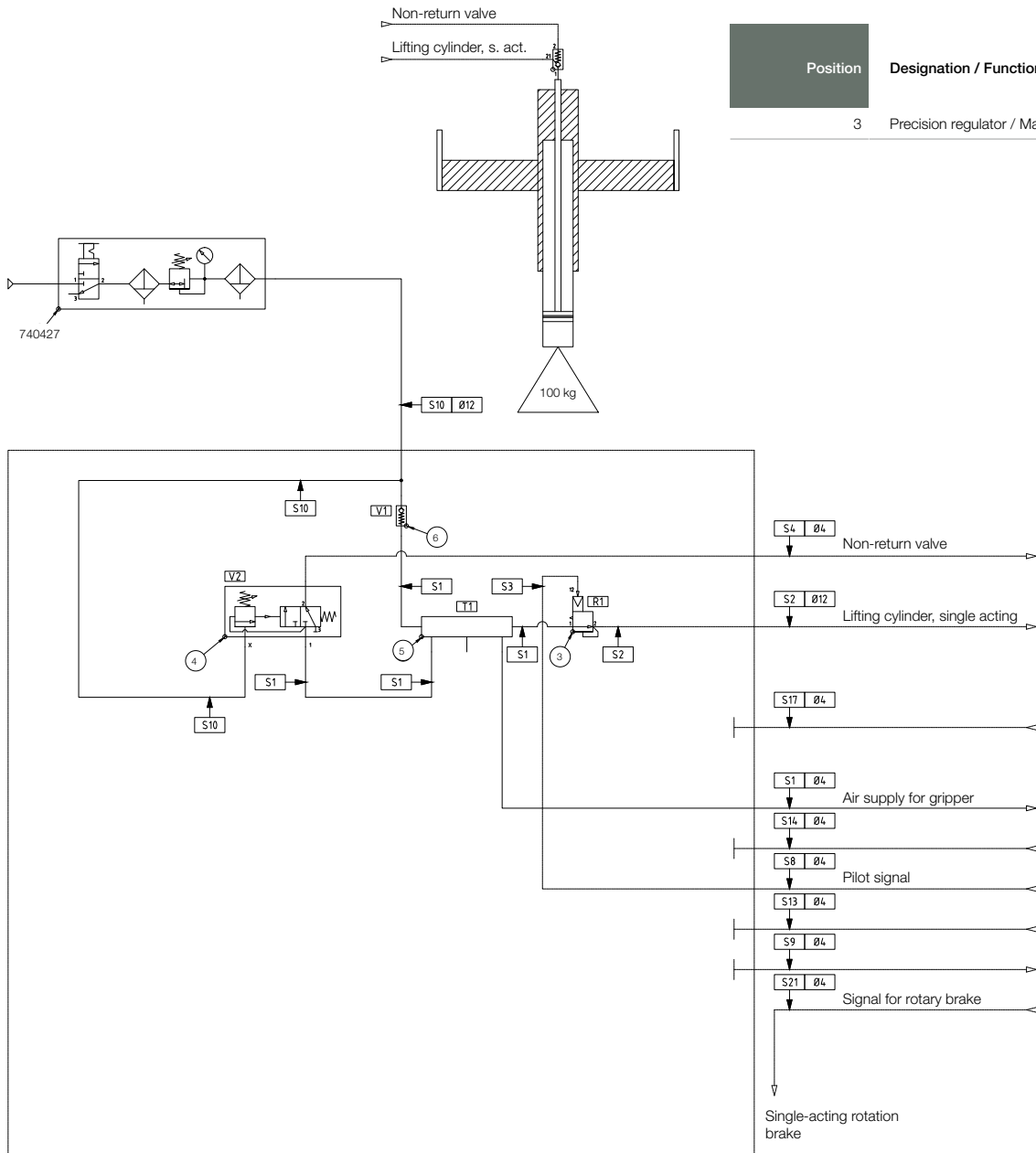
741342 Pilot control, pre-mounted			
#	Article nr.	Designation	Quantity
1	741311	Mounting plate	1
2	741346	Bracket	1
3	737067	Precision regulator	R 1
4	739553	Pressure guard	R 1
5	739592	Manifold fitting	1
6	739597	Non-return valve	R 1
7	740798	Push-in connector 12-12	1
8	740799	L-fitting female Ø12	1
9	741348	Push-in L-fitting Ø12	1
10	739272	Push-in connector 8-8	1
11	739270	Push-in connector 4-4	3
12	739513	Push-in L-fitting G1/8"-4	3
13	732373	Push-in L-fitting M5-4	1
14	741349	Straight push-in fitting Ø12	1
15	731331	Screw MC6S M6x10	2
16	735595	Screw MC6S M4x25	2
17	741350	Blanking plug Ø8	4
18	741351	Push-in L-fitting Ø8-4	2
19	741352	Push-in L-fitting Ø8-8	1
20	741353	Straight push-in fitting Ø12-8	1
21	741390	Air filter	S 1
22	741800	Straight push-in fitting G3/8"-12	1
23	741749	Adapter 1/2"-3/8"	1
24	741328	Sign plate, piloted	1

741338



741342





Position	Designation / Function
3	Precision regulator / Main regulator

- Different load levels are handled steplessly.
- A load sensing device (option: parallelogram 740882) or a manually controlled device (option: throttle handle 731853/-4) provides an analog signal to a pressure regulator for the conversion of the load level.

Pneumatics	741338
Weight kg	2,7

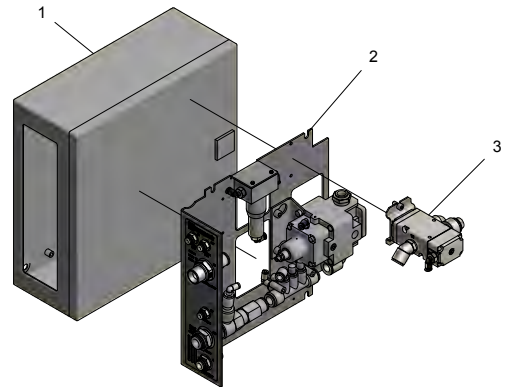
5.10 Pneumatics: pilot control with slow speed function

741339 Pilot control slow speed function			
#	Article nr.	Designation	Quantity
1	741324	Pneumatic cabinet	1
2	741342	Pilot control, pre-mounted	1
3	741323	Slow speed function	1

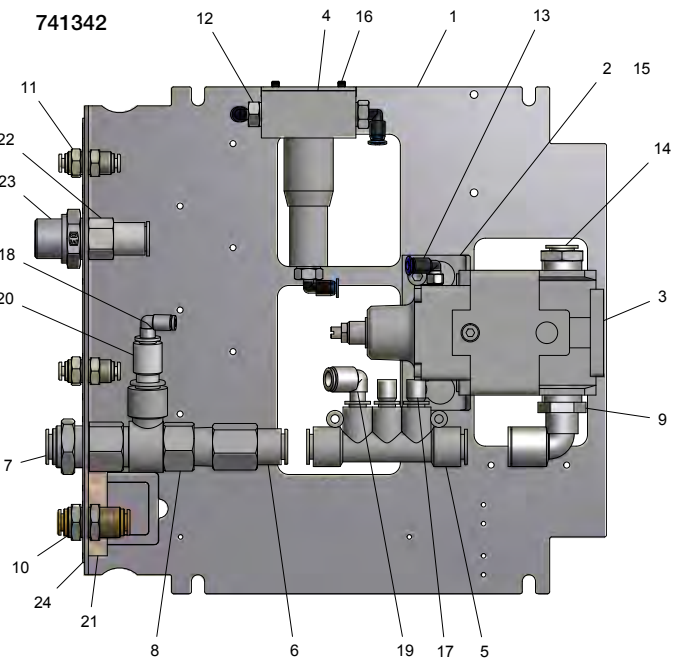
741342 Pilot control, pre-mounted			
#	Article nr.	Designation	Quantity
1	741311	Mounting plate	1
2	741346	Bracket	1
3	737067	Precision regulator	R 1
4	739553	Pressure guard	R 1
5	739592	Manifold fitting	1
6	739597	Non-return valve	R 1
7	740798	Push-in connector 12-12	1
8	740799	L-fitting female Ø12	1
9	741348	Push-in L-fitting Ø12	1
10	739272	Push-in connector 8-8	1
11	739270	Push-in connector 4-4	3
12	739513	Push-in L-fitting G1/8"-4	3
13	732373	Push-in L-fitting M5-4	1
14	741349	Straight push-in fitting Ø12	1
15	731331	Screw MC6S M6x10	2
16	735595	Screw MC6S M4x25	2
17	741350	Blanking plug Ø8	4
18	741351	Push-in L-fitting Ø8-4	2
19	741352	Push-in L-fitting Ø8-8	1
20	741353	Straight push-in fitting Ø12-8	1
21	741390	Air filter	S 1
22	741800	Straight push-in fitting G3/8"-12	1
23	741749	Adapter 1/2"-3/8"	1
24	741328	Sign plate, piloted	1

741323 Slow speed function			
#	Article nr.	Designation	Quantity
50	741360	Bracket	1
51	739551	3/2 valve NC	R 1
52	741356	Push-in L-fitting Ø12	1
53	741357	Push-in elbow fitting Ø12-45°	1
54	730306	Screw MC6S M5x10	2
55	739513	Push-in L-fitting G1/8"-4	1
56	741358	Metering valve with silencer 3/8"	R 1

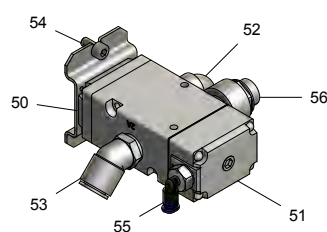
741339

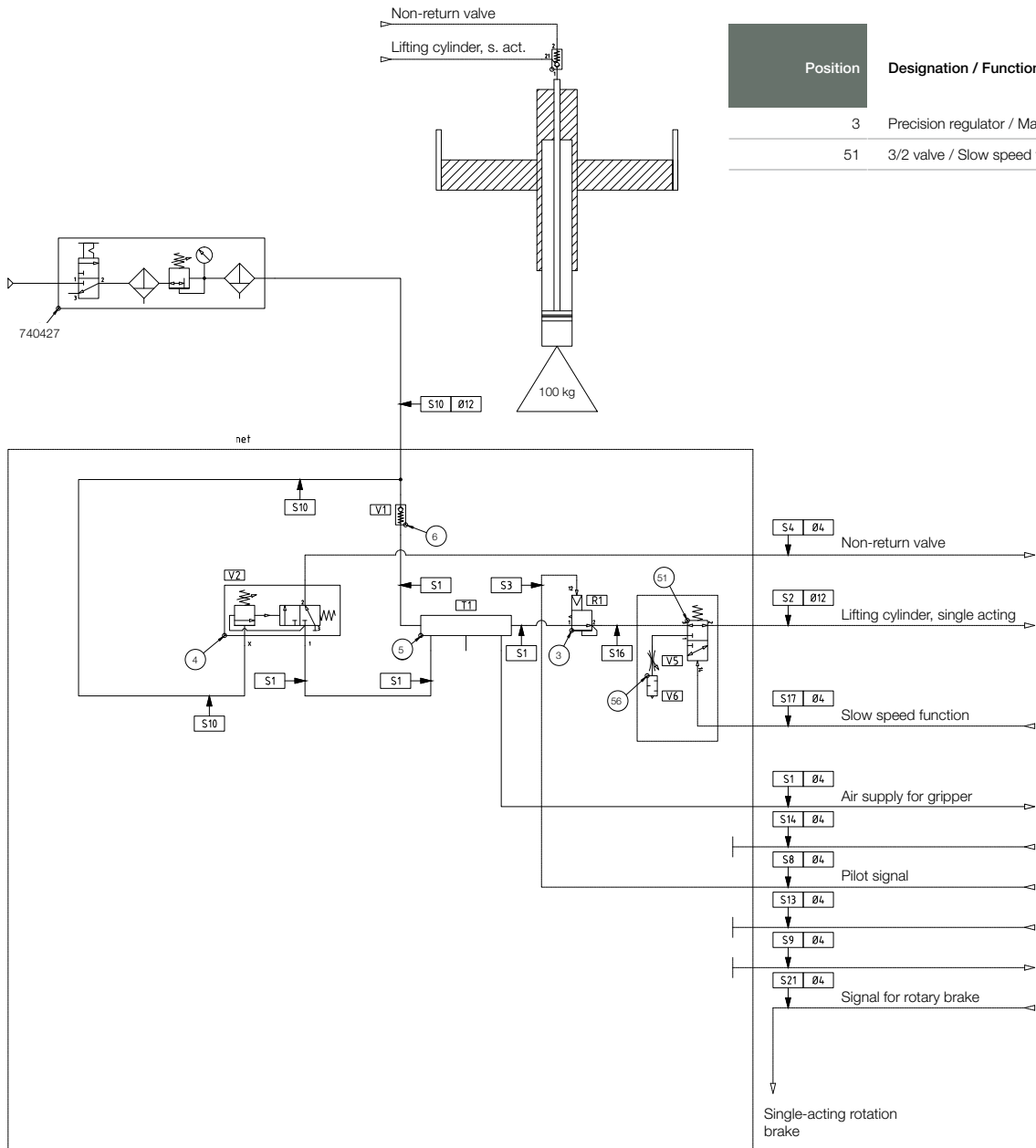


741342



741323





- Different load levels are handled steplessly.
- A load sensing device (option: parallelogram 740882) or a manually controlled device (option: throttle handle 731853/-4) provides an analog signal to a pressure regulator for the conversion of the load level.
- The system is equipped with lowering function for a controlled lowering. Functional conditions are configured by the customer, and depend on the specific application.

Pneumatics

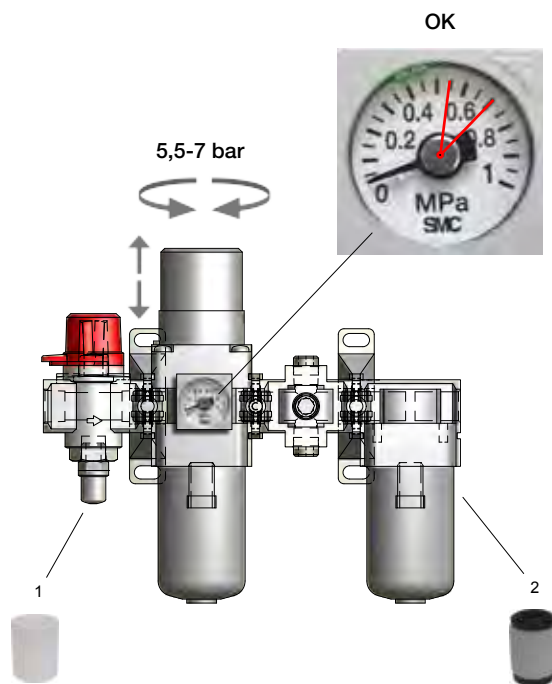
741339

Weight kg 4,0

R: spare part S: wear part

5.11 Air preparation unit

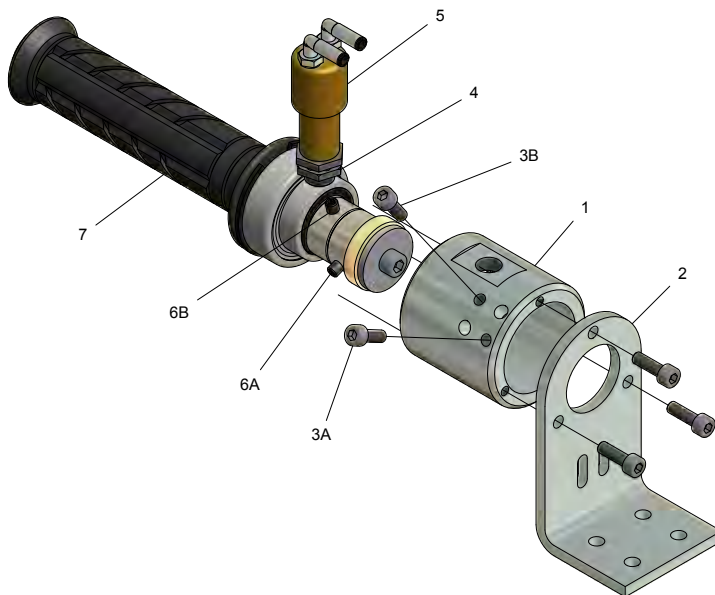
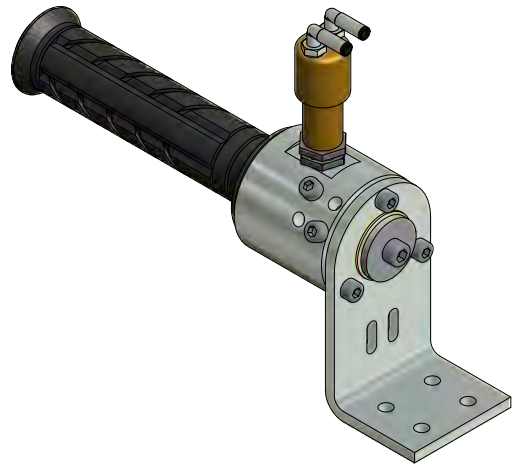
740427 FRL unit (B)				
#	Article nr.	Designation	Quantity	
1	730671	Filter	S	1
2	735351	Micro filter 0,3 µm	S	1



5.12 Control unit: Throttle handle

73185x*		Throttle handle 180°	
#	Article nr.	Designation	Quantity
1	732079	Bearing housing	1
2	732081	Bracket	1
3	733645	Screw MC6S M5x14	2
4	733647	Nut M12x1,25 special	1
5	731383	Pilot regulator	R 1
6	732105	Screw MP6SS M5x12	2
7	6090231	Rubber handlebar	1

- A throttle handle is used for handling varying loads in combination with pneumatic configuration: pilot control.
- Two versions are available for different load ranges.



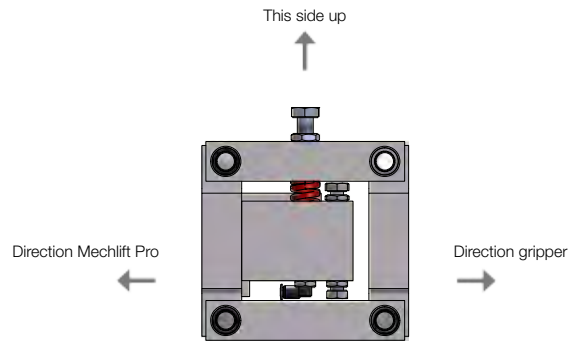
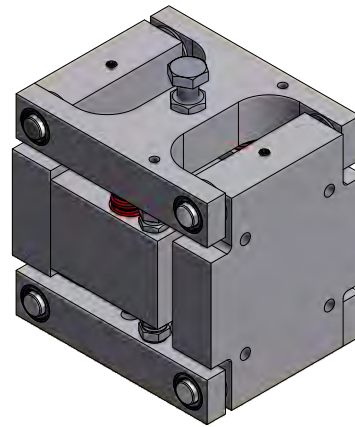
Throttle handle		731853	731854
Ratio	MPa	0,17	0,34
Load interval**	kg	0-48	0-96

* The BOM shows a selection of the components. ** See chart on page 57.

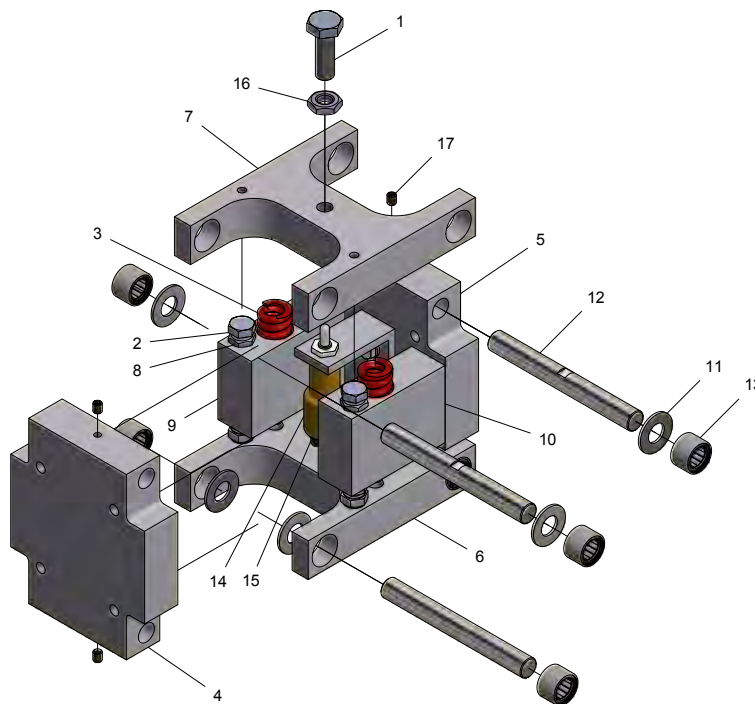
R: spare part S: wear part

5.13 Control unit: Load cell (parallelogram)

#	Article nr.	Designation	Quantity
1	731401	Screw M10x1,25x30	1
2	731319	Screw M6S M8x25, full thread	4
3	731384	Spring D=20 d=10 L0=32	2
4	740880	Front part	1
5	740879	Rear part	1
6	731397	Bottom part	1
7	731398	Upper part	1
8	731337	Nut ML6M M8	6
9	731399H	Spring bracket RH	1
10	731399V	Spring bracket LH	1
11	731380	Slide washer 12/24x1,5	8
12	740881	Shaft	4
13	731382	Needle bearing	8
14	731383	Pilot regulator	R 1
15	732373	Push-in L-fitting M5-4	2
16	731375	Nut M10x1.25, fine thread	1
17	733649	Screw MP6SS M5x6	4



- A pneumatic load cell (parallelogram) is used for handling varying loads in combination with pneumatic configuration: pilot control.
- When using a parallelogram: note that manual influence on the lifter to generate a lifting or lowering movement can only be performed on the part of the lift arm that resides on the lifter side of the parallelogram.



* The BOM shows a selection of the components.

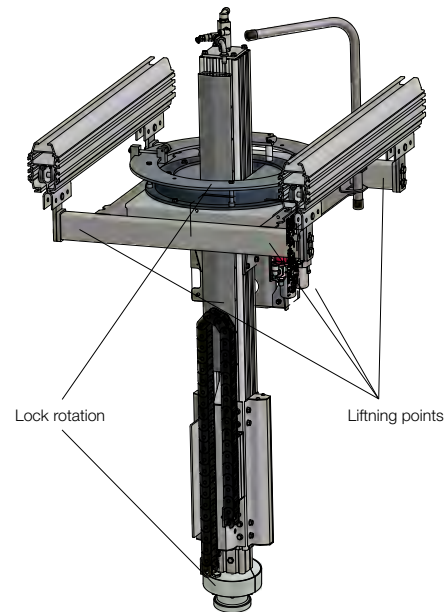
R: spare part S: wear part

6. Installation and commissioning

6.1 Mechanical installation

Mechlift Pro is advantageously installed in RonI aluminium rail system Mechrail.

1. Verify that the rail system is dimensioned for the total load including dynamic effects.
2. Check that end stops are mounted in all end points on the track and crane.
3. Install suspensions on Mechlif Pro if they are not already mounted.
4. Lock all rotation stops at top and bottom.
5. Raise Mechlif Pro by clamping the cross unit using a forklift, or by winch/hoist.
6. Install the suspensions into the trolleys.



6.2 Pneumatic installation

Mechlift Pro must be used only with clean, filtered air (0.3 µm), and is delivered with an air preparation unit.

Initial adjustment: 2 weight (incl. automotive)

1. Install Mechlif Pro, install the gripper tool and check all mechanical fixings and pneumatic connections.
2. Plug in the air connection, the signal for load switching and eventual air supply to the gripper tool.
3. Verify that the screw knobs of both regulators are in their lowest position. Turn on the air supply.
4. Adjust the regulator 'without load' (L0) to balance the load. The load should not sink or rise.
5. Grip the load with the tool and generate the lifter's signal for load switching. Adjust the regulator 'load' (L1) to balance the load. The load should not sink or rise.

Initial adjustment: 3 weight (incl. automotive)

1. Install Mechlif Pro, install the gripper tool and check all mechanical fixings and pneumatic connections.
2. Plug in the air connection, the signal for load switching and eventual air supply to the gripper tool.
3. Verify that the screw knobs of all regulators are in their lowest position. Turn on the air supply.
4. Adjust the regulator 'without load' (L0) to balance the load. The load should not sink or rise.
5. Grip the first load with the tool and generate the lifter's signal for load switching. Adjust the regulator 'load 1' (L1) to balance the load. The load should not sink or rise.
6. Grip the second load with the tool and generate the lifter's signal for load switching. Adjust the regulator 'load 2' (L2) to balance the load. The load should not sink or rise.

Initial adjustment: pilot control

For initial adjustment of the throttle handle, see page 57. For initial adjustment of the parallelogram, see page 58.

1. Install Mechlif Pro, install the gripper tool and check all mechanical fixings and pneumatic connections.
2. Plug in the air connection and eventual air supply to the gripper tool.

Initial adjustment: slow speed function

1. Install Mechlif Pro according to the instructions for 2 weight, 3 weight or pilot control.
2. Screw in the flow control valve completely.
3. Grip the load with the gripper tool.
4. Give a signal on S17.
5. Screw out the flow control valve until desired lowering speed is reached.
6. Remove the signal from S17.

Initial adjustment: gripping tool

For the functionality of the gripping tool, see its documentation.

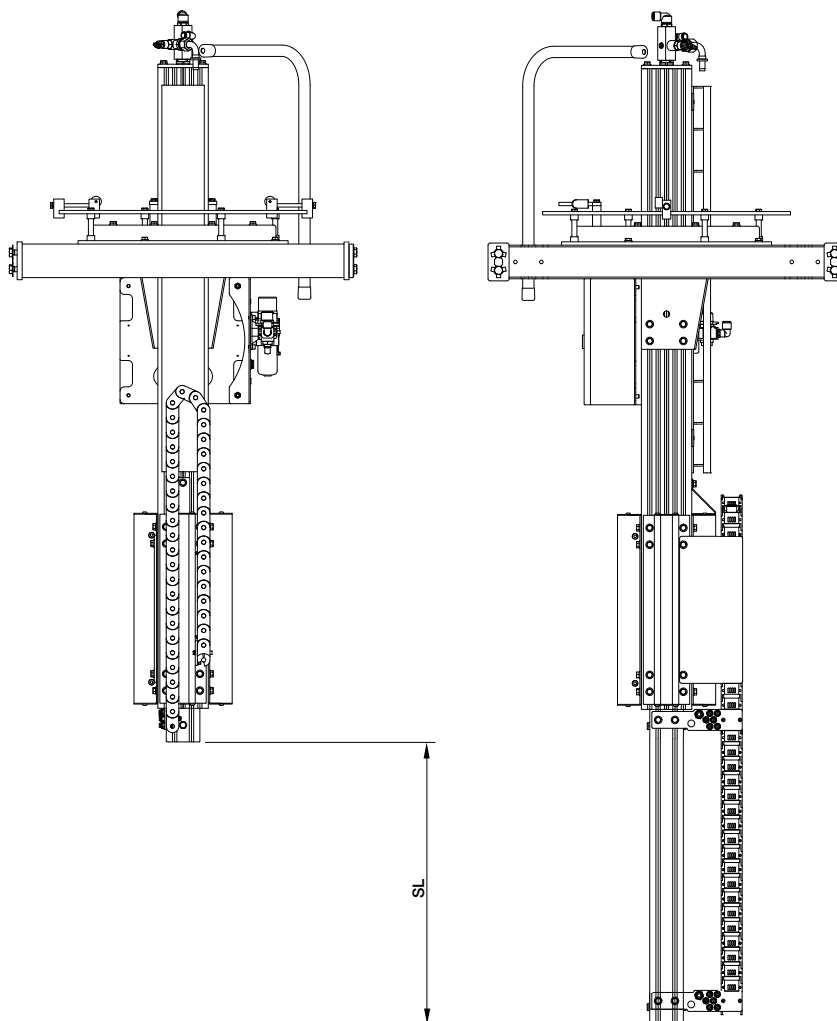
7. User instructions

Mechlift Pro is intended for use in combination with a gripping tool for a smooth and ergonomic material handling.

The operation of pneumatic Mechlif Pro is largely dependent on its specific application:

- its pneumatic configuration
- gripper design and functionality
- characteristics and variability of the handled object
- the surrounding work environment
- intended work pace as well as usage frequency

A complete workstation, including Mechlif Pro, must be accompanied by a specific operating instruction for the particular application, taking into account the mentioned factors.



8. Service, maintenance & running

A general review and functional control tests are performed on a regular basis during commissioning.

All service and maintenance shall be recorded. The user should make sure that material for the purpose is easily available.

NOTE: Make sure that damaged components are replaced immediately in order to avoid possible personal and material damage.

Keep the equipment and area on and adjacent to the workplace cleaned. This is important for the comfort and well-being of personnel and facilitates service and maintenance. Dirt gives a clear indication of the equipment not being properly maintained, which may possibly affect the remaining guarantees on the equipment.

Maintenance safety instructions

The prescribed procedures and service intervals, including those concerning the replacement of parts/accessories, are described in the instruction manual and must be followed. Professionals are the only persons who are allowed to carry out such procedures.

Staff members with appropriate competence and authority are the only persons who are allowed to carry out mechanical and electrical repair and maintenance work. Unauthorised persons should be prohibited to work with machines and devices inside the equipment.

The equipment should be disconnected and secured against unintentional or unauthorised use, including reconnection, during all repair and maintenance work.

It should be confirmed that the equipment is free from voltage before any work on electric equipment is commenced.

Make sure that:

- moving parts are stationary and locked, and that
- moving parts cannot move accidentally during maintenance work.

Use safe and environmentally friendly maintenance products and spare parts!

Directions for work during operation

The user or the "authorised person" must, in each individual case, ensure that the work in question can be carried out without any risk of personal injury because of specific local conditions.

To prevent accidents, only approved and suitable tools and aids may be used during maintenance, adjustment and repair work.

Do not touch rotating parts. Maintain an adequate safe distance between yourself and the machinery to prevent clothes, limbs and hair from becoming caught.

Avoid the occurrence of naked flame, extreme heat (e.g. welding) and sparks in the presence of volatile cleaning materials and nearby inflammable or heat-sensitive materials (e.g. wood, plastics, oils, fats and electric equipment). This can result in fire hazard, harmful gases and damaged insulation.

Directions for work with pneumatic equipment

The equipment should be stopped immediately on discovery of faults related to the air supply.

Work on pneumatic equipment or parts must only be carried out by authorised staff.

The parts on which inspection, maintenance and repair work is to be carried out should be disconnected from the air supply.



Keep the equipment and area on and adjacent to the workplace cleaned.

8.1 Recommended spare parts / wear parts

7409xx		Pillar unit		
#	Article nr.	Designation		Quantity
7	741893	Guide ring for piston	S	1
11	740622	Piston seal	S	1
18	731364	Filter	R	2
22	731571	Non-return valve G3/8"	R	1
27	733239	Cable chain 10.0.40	R	L4

731048		Top guiding with wheels		
#	Article nr.	Designation		Quantity
3	731053	Wheel D=30, complete	R	4
4	731050	O ring	S	1
5	731049	O ring	S	1

740957/-8		Wheel guiding MP120		
#	Article nr.	Designation		Quantity
3	731065	Wheel with shaft, complete	R	2

742400/-1		Rotation unit MP80 / brake		
#	Article nr.	Designation		Quantity
5	731492	Damper	S	1

742708		Brake unit		
#	Article nr.	Designation		Quantity
1	742709	Brake caliper, sub-assy	R	2

741843		Manual pressure release kit		
#	Article nr.	Designation		Quantity
2	741807	Speed control valve with pressure release	S	1

742131		Stroke limiter		
#	Article nr.	Designation		Quantity
3	742136	Adjustable stop	S	2

740427		FRL unit (B)		
#	Article nr.	Designation		Quantity
1	730671	Filter	S	1
2	735351	Micro filter 0,3 µm	S	1

742407		Maintenance kit		
#	Article nr.	Designation		Quantity
1	731049	O ring	S	1
2	731050	O ring	S	1
3	731051	Bushing 20x23x20	S	1
4	740622	Piston seal	S	1
5	741893	Guide ring for piston	S	1
6	731717	Grease Klübersynth LF44-22, 40 g in pot		1

741340		2-weight, pre-mounted		
#	Article nr.	Designation		Quantity
3	737067	Precision regulator	R	1
4	738125	3/2 valve monostable	R	1
9	739553	Pressure guard	R	1
11	738124	Precision regulator	R	2
13	739597	Non-return valve	R	1
29	741390	Air filter	S	1

741341		3-weight, pre-mounted		
#	Article nr.	Designation		Quantity
3	737067	Precision regulator	R	1
4	738125	3/2 valve monostable	R	2
9	739553	Pressure guard	R	1
11	738124	Precision regulator	R	3
13	739597	Non-return valve	R	1
29	741390	Air filter	S	1

741342		Pilot control, pre-mounted		
#	Article nr.	Designation		Quantity
3	737067	Precision regulator	R	1
4	739553	Pressure guard	R	1
6	739597	Non-return valve	R	1
21	741390	Air filter	S	1

741343		Automotive 2-weight		
#	Article nr.	Designation		Quantity
41	741359	5/2 valve, bistable	R	1



























































741322		Automotive 3-weight		
#	Article nr.	Designation		Quantity
41	741359	5/2 valve, bistable	R	2
42	732669	OR gate	R	1

741323		Slow speed function		
#	Article nr.	Designation		Quantity
51	739551	3/2 valve NC	R	1
56	741358	Metering valve with silencer 3/8"	R	1

73185x*		Throttle handle 180°		
#	Article nr.	Designation		Quantity
5	731383	Pilot regulator	R	1

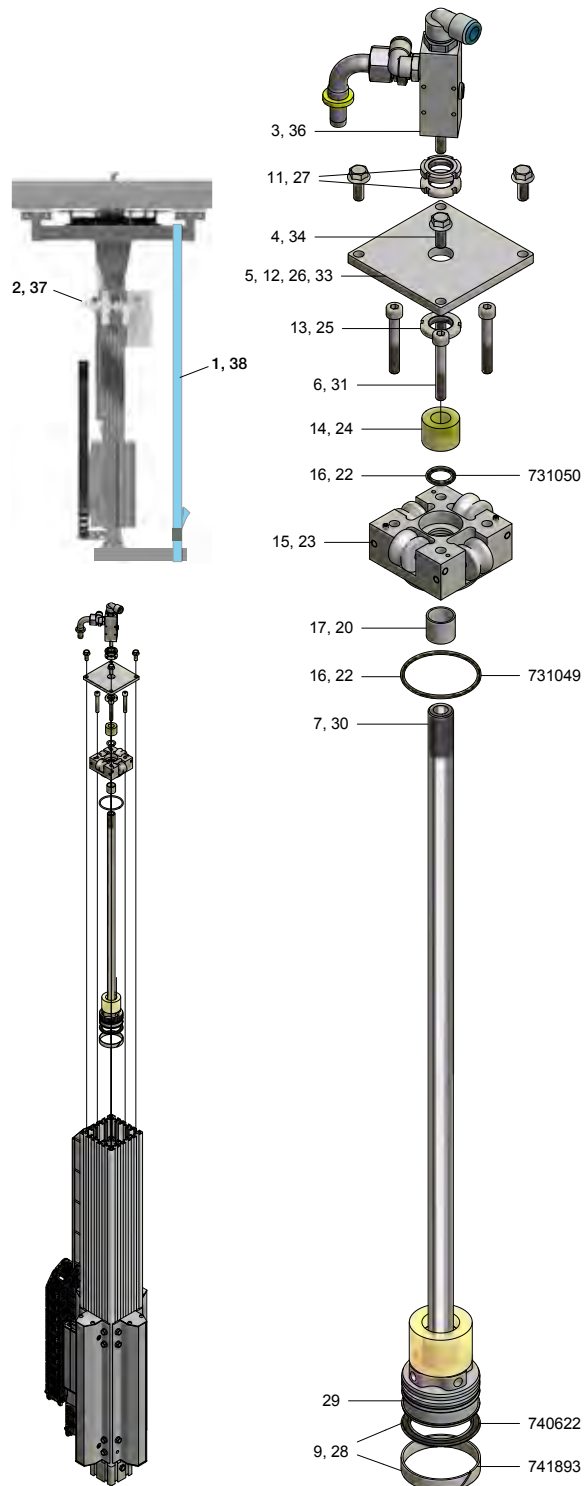
740882		Load cell (parallelogram)		
#	Article nr.	Designation		Quantity
14	731383	Pilot regulator	R	1

8.2 Service record – Mechlif Pro 100 pneumatic

ID: Service by:		Client/ place: Date:	Interval in months when 1-3 shifts	Interval in months when >3 shifts	The service record shall be archived by the client/user.	1/1		
	Visual inspection, examine whether the product exhibits damages						* If applicable. The service must be performed considering the maintenance safety instruction.	
	Auditory inspection, examine whether the product exhibits discordant sound							
	Physical inspection, examine whether the product exhibits damages							
	Mechanical inspection, examine whether the product exhibits decomposition, instruments is needed							
No	Product	Inspection			Inspector Dept. / Sign.	Comment		
1	<u>Base model</u>	    General overview.	4	3				
1.1	Fasteners	  	4	3				
1.2	Bearings	  	4	3				
1.3	Rotation limiters	  						
2	<u>Pillar unit</u>	    General overview.	4	3				
2.1	Fasteners	  	4	3				
2.2	Cable chain	   	4	3				
2.3	Wheel guiding	    Verify the condition of the wheels. Start by removing the lower cap and pulling out the front cap. Inspect the wheels' running surfaces. Mount the front cap and reassemble the lower cap.	4	3				
3	<u>Pneumatic</u>	    General overview.	4	3				
3.1	Fasteners	  	4	3				
3.2	Hoses	    Check hoses and fittings.	4	3				
3.3	Filter regulator with manual drainage	  Open the blowdown valve from time to time to blow out collected condensate. Do not allow the liquid level to exceed: "Max drain level".	1	1				
3.4	Micro regulator with manual drainage	  Open the blowdown valve from time to time to blow out collected condensate. Do not allow the liquid level to exceed: "Max drain level". Filter element is replaced when the pressure drop across the filter reaches 0.1 MPa, and at least once a year.	1	1				
4	<u>Control unit(s)*</u>	   General overview and function test: drive the lifter in all applicable situations.	1	1				
5	<u>Tool adapter*</u>	    General overview and check fasteners.	4	3				
5	<u>Brakes*</u>	    General overview and function test.	4	3				

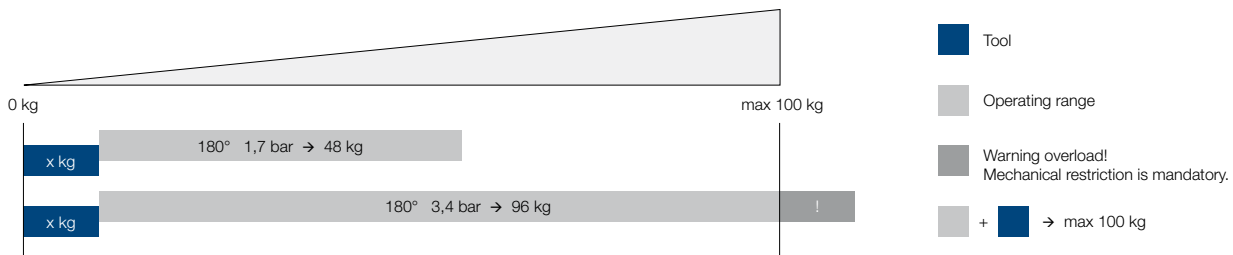
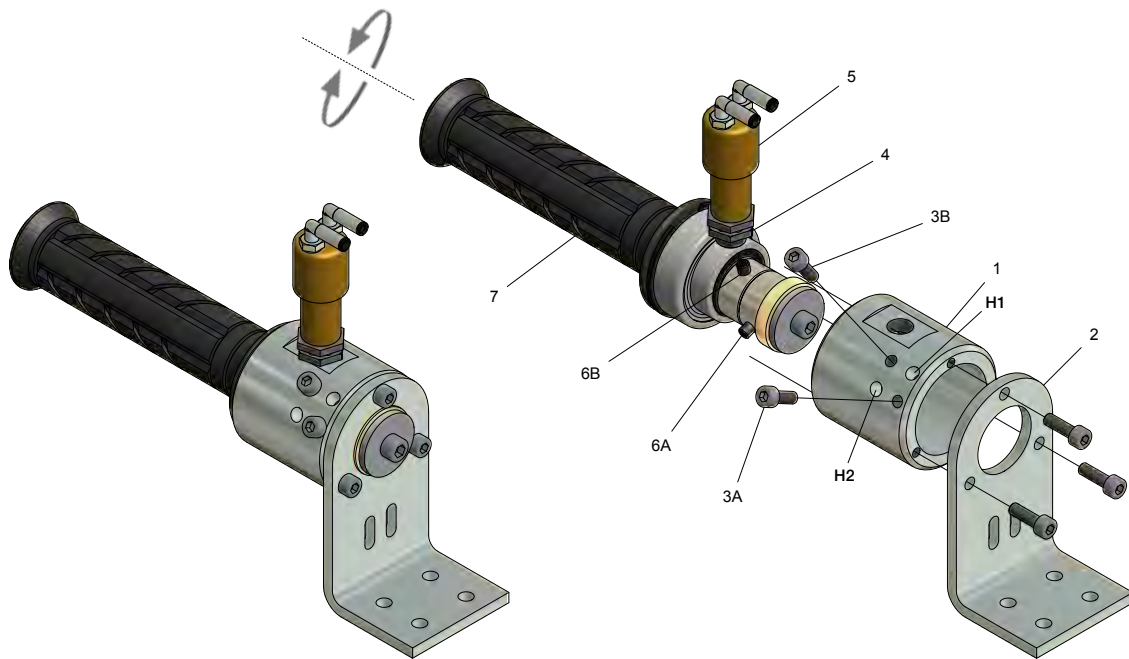
8.3 Replacement of O rings

1. Move the cylinder profile to its upper position, make sure that it cannot fall down during servicing, if necessary remove any stroke length restriction.
2. Switch off the air supply, make sure that no one unintentionally connects up the air supply before servicing is complete.
3. Remove the base with the HGL valve on top in order to evacuate any trapped air.
4. Remove the four screws which attach the top plate to the outer aluminium profile (MP120).
5. Pull up the top plate a little.
6. Remove the four screws which attach the top guide to the inner cylinder profile (MP80C).
7. Pull up the entire piston rod, take care to pull it straight up to prevent damage.
8. Make sure that the piston rod is protected once it is outside the inner cylinder profile, never clamp the rod itself.
9. Remove the guide ring and the O ring from the piston.
10. Clean the piston with a dry, clean piece of cloth or similar.
11. Remove the upper lock nuts.
12. Remove the top plate.
13. Remove the lower lock nut.
14. Remove the rubber damper.
15. Pull out the entire top guide from the piston rod.
16. Remove both the inner and the outer O rings from the top guide.
17. Remove the bushing on the top guide.
18. Clean the top guide with a dry, clean piece of cloth or similar.
19. Check the O rings and bushing, look for any damage which may indicate abnormal wear.
20. Fit the new bushing to the top guide, the outer end should align with the lower surface of the top guide when it is fitted.
21. Lubricate all new O rings and the fitted bushing, use plenty of lubricant, part. no.: 731717.
22. Fit the new O rings on the top guide, make sure that they fit correctly.
23. Wrap the piston rod thread with thread tape to protect the O ring in the top guide, carefully place the top guide on the piston rod, remove the thread tape afterwards.
24. Fit the rubber damper.
25. Fit the lower lock nut.
26. Fit the top plate.
27. Fit the upper lock nuts.
28. Fit the new guide ring and O ring on the piston, make sure that they fit correctly.
29. Fill the cavity between the guide ring and the O ring on the piston with plenty of lubricant, use lubricant part no.: 731717.
30. Lower the piston rod into the inner cylinder profile (MP80C).
31. Fit the four screws which attach the top guide to the inner cylinder profile (MP80C).
32. Tighten the screws to a torque of 24 Nm.
33. Lower the top plate fully.
34. Fit the four screws which attach the top plate to the outer aluminium profile (MP120).
35. Tighten the screws to a torque of 24 Nm.
36. Wrap the piston rod thread with thread tape, fit the base with the HGL valve on top.
37. Reconnect the air supply.
38. Remove the fall restriction from Mechlif Pro.
39. Check that Mechlif Pro is working with no faults.



742407		Maintenance kit		
#	Article nr.	Designation		Quantity
1	731049	O ring	S	1
2	731050	O ring	S	1
3	731051	Bushing 20x23x20	S	1
4	740622	Piston seal	S	1
5	741893	Guide ring for piston	S	1
6	731717	Grease Klübersynth LF44-22, 40 g in pot		1

8.4 Setting of balance function in throttle handle



Basic setting / calibration

1. Check and ensure that the air pressure is set to 5.5 bar.
2. Shutoff the air supply.
3. Loosen the lock nut (4). Screw in the pilot regulator (5) until its pin touches the bearing surface in its lowest position. Tighten the lock nut (4).
4. Make sure the tool is unloaded.
5. Locate (via hole H1) and tighten screw 6A in the calibrated position, the screw head should then touch screw 3A.
6. Turn handle (7) 180°. Locate (via hole H2) and tighten screw 6B, the screw head should then touch screw 3B.
7. Turn on the air supply.
8. Test run.

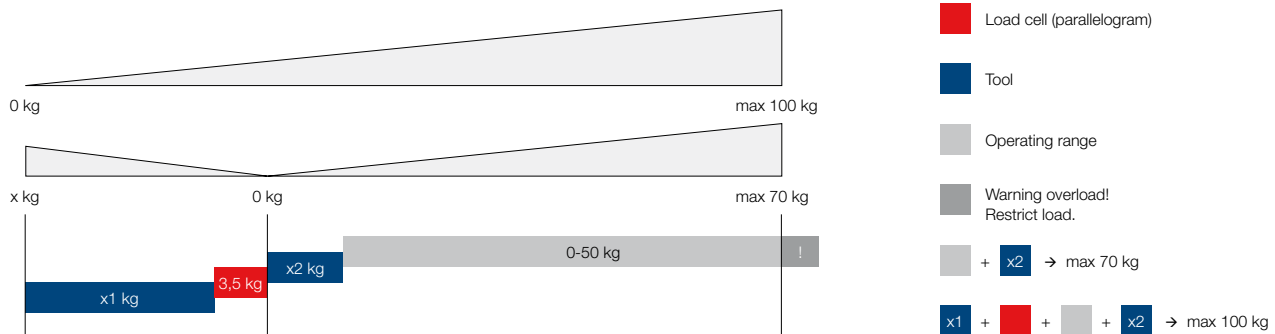
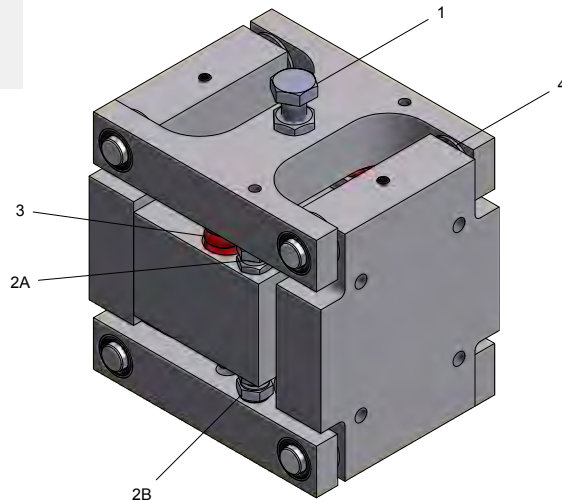
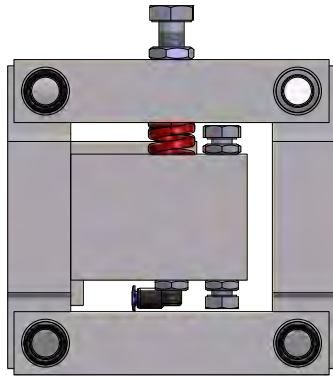
Setting the tool compensation

1. Check and ensure that the air pressure is set to 5.5 bar.
2. Make sure the tool is unloaded.
3. Make sure the handle is in the "0-position". Loosen the lock nut (4). Screw in the pilot regulator (5) until the tool is balanced. Tighten the lock nut (4).
4. Locate (via hole H1) and tighten screw 6A in the "0-position", the screw head should then touch screw 3A.
5. Load the tool with the maximum design load. NOTE! The tool and load together must not exceed the capacity of the lifting device!
6. Turn the handle (7) until the tool with load is balanced. Locate (via hole H2) and tighten screw 6B, the screw head should then touch screw 3B.
7. Test run.

- The settings above describe right-hand operation. On left-hand designs switch the designations 3A/3B, 6A/6B and H1/H2.
- Check on the lifting device specification which throttle is used (1.7/3.4).

8.5 Setting of balance function in load cell (parallelogram)

- Max. allowed load in parallelogram is 70 kg!
- Operating range variable load: 50 kg (max. 40 kg recommended).
- The load cell has a default setting upon delivery and does normally not require adjustment.



Initial settings

1.1 Preparations for setting

1. Check and ensure that the air pressure is set at 5.5 bar.
2. Check and ensure that the washers (4) can rotate freely.
3. The springs (3) must be set parallel.
4. Ensure that there is no load in the tool.
5. Check that the lock nuts on the maximum load screws 2A are loose and can be moved freely.
6. Screw the four screws 2A and 2B in as far as possible so that the parallelogram can move up and down freely.
7. Place the heaviest load in the tool.

1.2 Balancing

1. Check that the lock nut on the adjusting screw (1) is loose and can be moved freely.
2. Carefully adjust the adjusting screw (1): in to obtain more lifting power, out to obtain less lifting power.
3. Find the setting that requires the same effort from the operator to raise or lower the lifting device.
4. Check that the lifting device does not tend to rise or fall of its own accord.
5. Tighten the lock nut and check that the setting has not changed.

1.3 Setting maximum load

1. Ensure that the very heaviest intended load is located in the tool.
2. Unscrew the two "maximum load" screws 2A until the screw heads are exactly touching the stop.
3. Tighten both lock nuts and check that the setting has not changed.

1.4 Setting no load

This setting is sensitive and it is important that it is done carefully to obtain the correct behaviour from the manipulator.

1. Ensure that there is no load in the tool.
2. Unscrew the two lower "no load" screws 2B and find the setting that allows the tool to become balanced.
3. Check that the setting has been done correctly by testing movement upwards and downwards a number of times and release the manipulator.
4. Verify that the lifting device does not tend to rise or fall of its own accord.
5. Unscrew the other of the two lower "no load" screws 2B to the same distance as the first one.
6. Tighten both lock nuts and check that the setting has not changed.

Readjustment of load cell (parallelogram)

2.1 Preparation for readjustment

Since external factors can affect the behaviour of the lifting device, subsequent readjustment may become necessary.

1. Check and ensure that the air pressure is set at 5.5 bar.
2. Check and ensure that the washers (4) can rotate freely.
3. The springs (3) must be set parallel.
4. If the lifting device moves by itself without a load in the tool, see section 2.2
5. If the lifting device moves by itself with a load in the tool, see section 2.3

2.2 Without load

This setting is sensitive and it is important that it be done carefully to obtain the correct behaviour from the lifting device.

1. Release both lock nuts on the "no load" screws 2B.
2. Screw in one of the two lower "no load" screws 2B and with the other find the setting that allows the tool to become balanced.
3. Check that the lifting device does not tend to rise or fall by itself.
4. Tighten the lock nuts and check that the setting has not changed.
5. Unscrew the other of the two lower "no load" screws 2B to the same distance as the first one.
6. Tighten the lock nut and check that the setting has not changed.
7. Check that the lifting device does not tend to rise or fall by itself.

2.3 With load

1. Ensure that the very heaviest intended load is located in the tool.
2. Adjust as per section 1.2
3. Check that the lifting device can lift both light and heavy loads.
4. If necessary, also adjust in accordance with section 1.3

- With screws 2A and 2B, aim at getting the same distance upwards and downwards between lock nut and screw.

8.6 Troubleshooting

Type of problem	Probable cause	Action
No hoisting motion up/down	Air supply is turned off	Check whether the air supply for some reason has been turned of, and make sure no risk of injury appears when restoration of the air supply. Some procedures may only be performed by authorized maintenance staff. Restore the air supply. At least 5.5 bar (no more than 7 bar).
	Clogged filter	Clean or replace filter.
	The hoist is exposed to mechanical obstacle	Check whether some part of the hoist or tool including any object, are stuck in other equipment. Remove mechanical obstacle.
	Defective control unit*	Check whether the hoist is supplied with air. Inspect the control unit. Some procedure may be performed by authorized maintenance staff. Repair control unit.
	Defective equipment* that serve as condition	Check whether external equipment serving as conditions are defect. Repair equipment.
Incorrect operating range	Equipment serving as rotational working range limit out of position	Check whether the rotation limiters are out of position. Reset to correct position.
	Equipment serving as vertical working range limit out of position	Check whether the stroke limiter is out of position. Reset to correct position.
Irregular or jerky hoisting motion up/down	The hoist is exposed to mechanical obstacle	Check whether some part of the hoist or tool including any object, are stuck in other equipment. Remove mechanical obstacle.
	Defective bearings	Check whether the bearings are damaged. Replace bearings.
	Dirty filter in cylinder	Clean or replace filter.
Load ascends/descends	Regulator(s) are inaccurate	Adjust setting.
	Air leakage	Seal leakage.
The load drops when air supply is shut off	Pressure guard is inaccurate or defect	Adjust setting or replace.

9. EC certificate

CE EC declaration of conformity of the machinery

TRANSLATION
(according to 2006/42/EC, annex 2A)

Manufacturer

Representative for documentation
Representative for documentation

hereby declares that the machinery

Designation
Mechlift Pro, pneumatic

Designation

Machine type
Lifting unit

Version
100, 150

complies to all applicable regulations in

Machinery Directive 2006/42/EC

EMC Directive 2004/108/EC

and that standards and/or technical specifications as described below are applied.

Machinery Directive
SS-EN-ISO 12100:2010

EMC Directive

Low Voltage Directive

Place: Kristianstad

Date: 2014-10-01



10. Revisions

Revision list

Edition	#	Designation	Pages
2014-11-01	0	First edition	-
2015-02-01	1	Pneumatic drawing p. 43. / Revision list p. 62.	43, 62
2015-11-01	2	Updated cross units p. 10-11. / Replaced brake unit p. 24. / Updated pneumatic drawings p. 28-47.	10-11, 24, 28-47