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-INTRODUCTION-

The Binder with elastic A.R.C is a versatile machine made for tying various products in different areas:

**INDUSTRY
HORTICULTURE
VEGETABLE FARMING
NURSERY**

- The machine can use flexible bindings such as single or triple elastic.
- Any other use of the machine is forbidden. It's the same for any operation realized contrary to the indications of these instructions for use.
- We highly recommend that you carefully read the following pages concerning the use and maintenance of the machine in order to get maximum use and to lengthen the life span of the machine.
- The average continuous noise level equivalent to an A while working is below or equal to 70 dB (A).
- As the machine weight only 33 kgs one person can move it.
- This manual is applicable to the following types of machines: Right and Left "175" binder using all types of wire.
- These types of binders are in compliance with the technical descriptions listed in article R 4312-1 of the work code (Decree 2008-1156 dated on 07th November 2008, is the transcription from the French laws in accordance with the European directive for the machine 2006/42/CE of May 17, 2006).

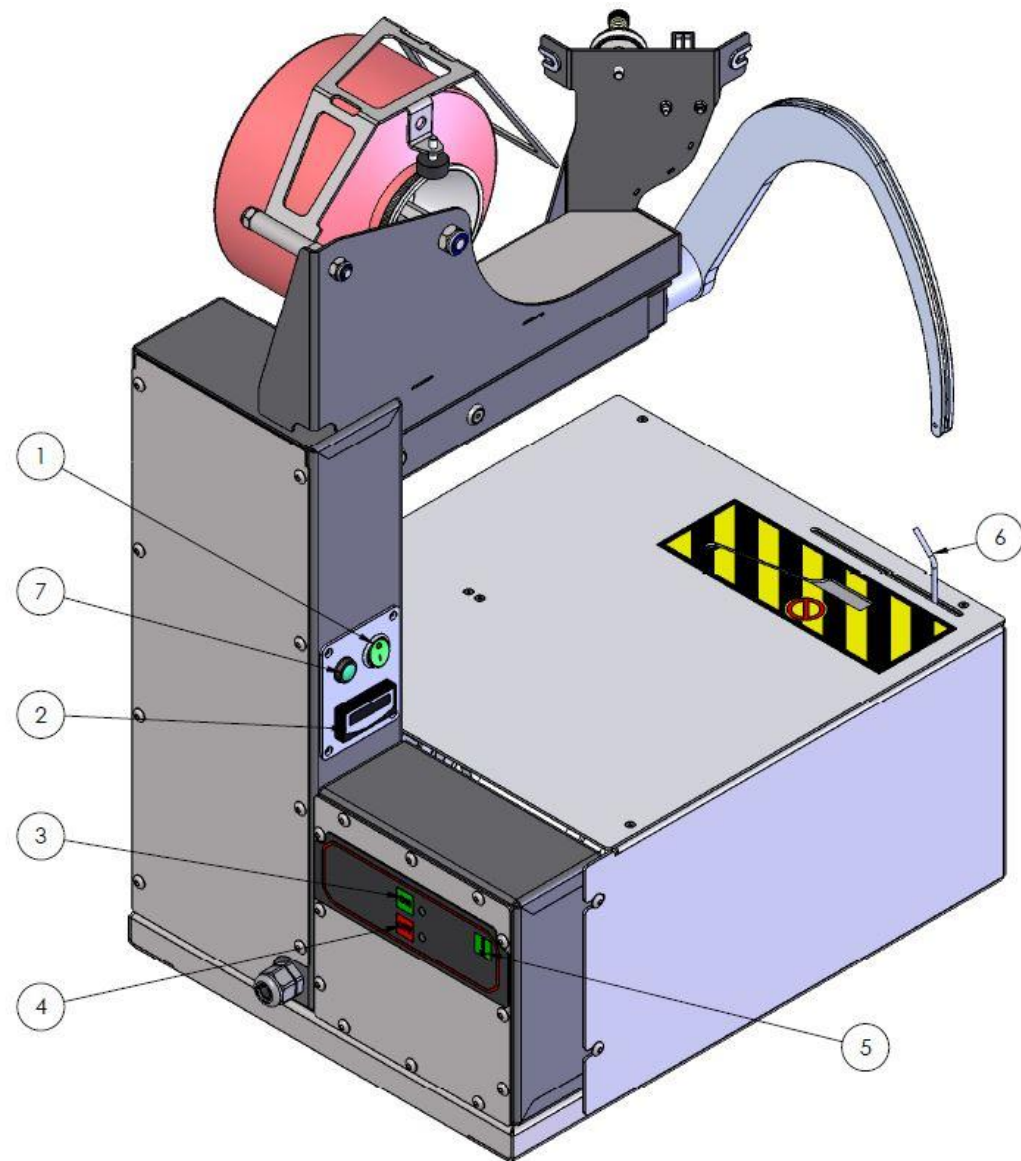
N° 8203 - 02/18



Has been verified and approved by french organization
APAVE N° 04232697.2.LM0042

- USE -

1. "ON/OFF" button
2. Counter without reset
3. The «ON » button
4. The « OFF » button
5. Step by step
6. Automatic release (following version)
7. Cycle button (Option)



- START-UP -

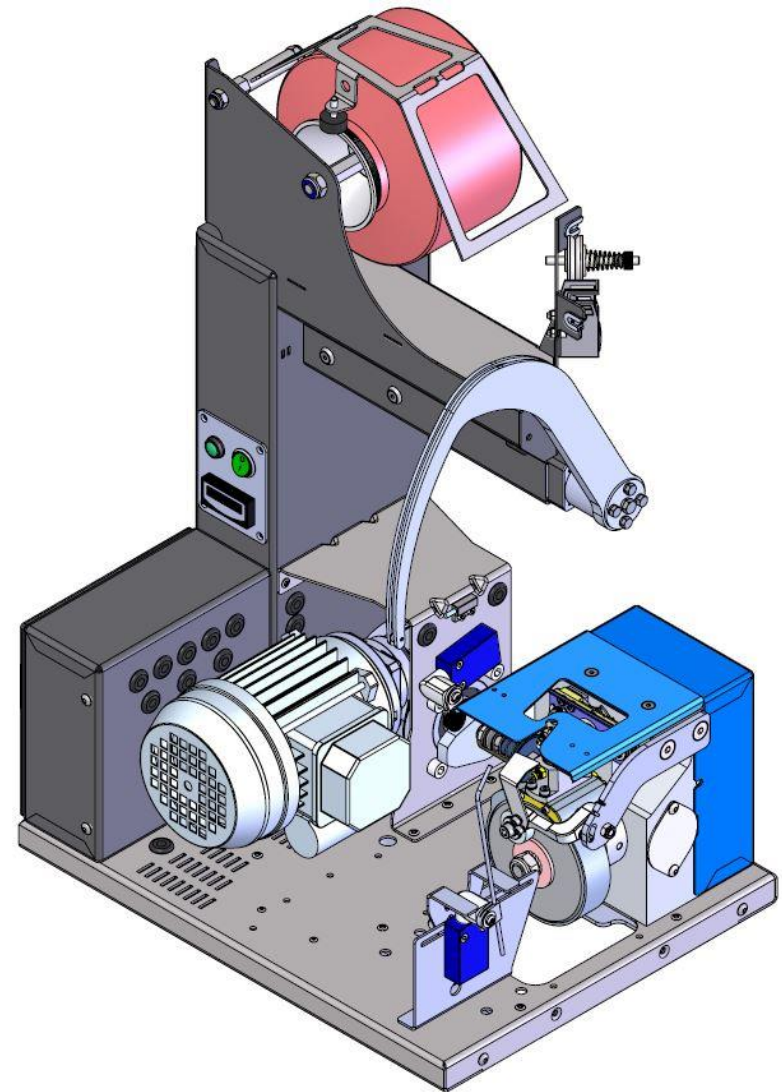
PLUGGING IN THE MACHINE

- The machine is designed to be connected to a standard wall socket (grounded).
- The cables are insulated for up to 500 V.
- Plug the machine in after making sure that the voltage of the machine corresponds to the supply voltage

CAUTION

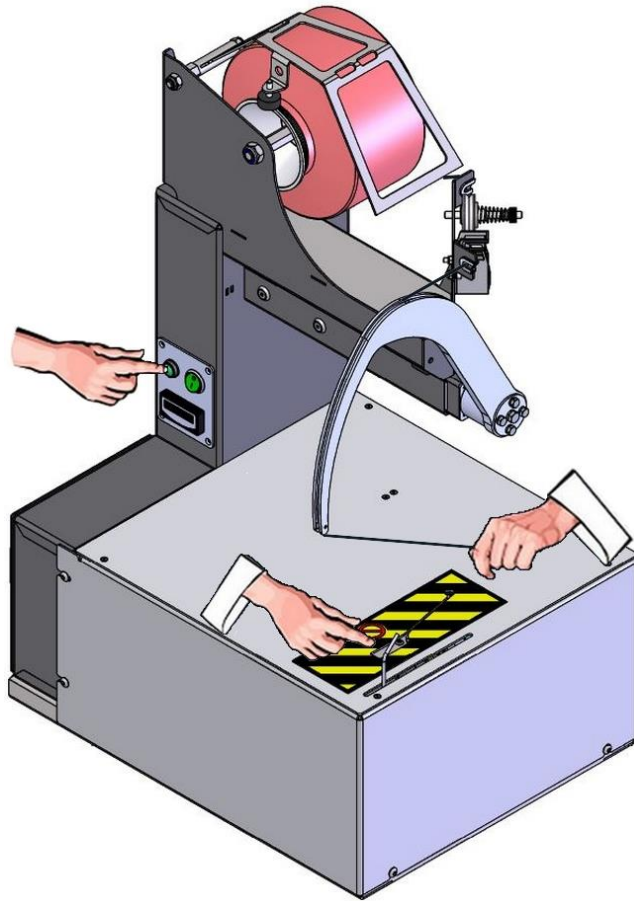
- When the machine is used in" stand alone" mode, the machine should not start automatically when plugged in. If it does you must correct the strap supply position on the printed circuit. See page "Card configuration".
- In version 400 V, make sure with the step by step button which the knotter turns in the direction of the arrow; if not reverse 2 phases.

Note: Test with the smallest possible impulse.

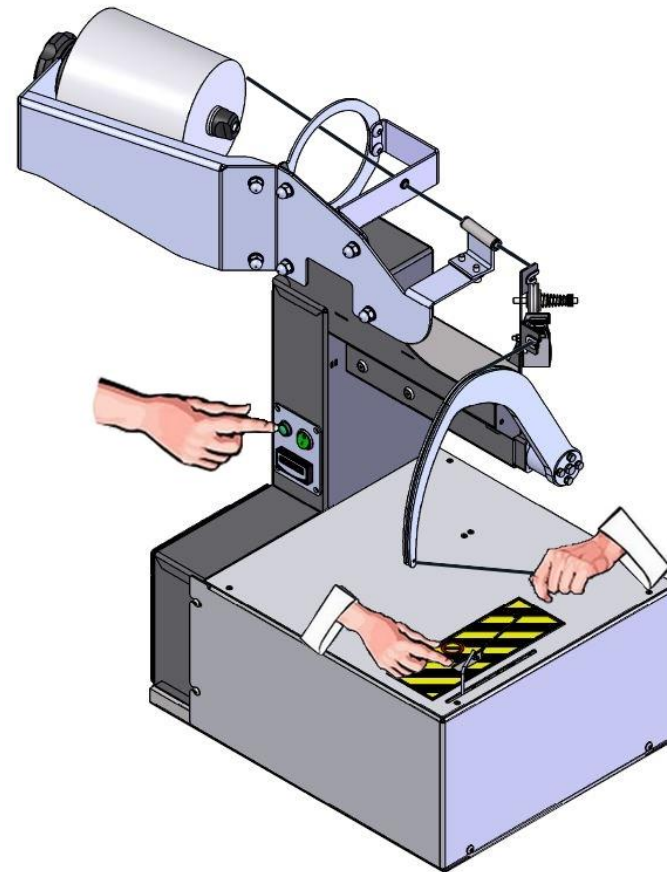


- LINK THREADING -

- Follow the drawing for the installation of the spool and threading the tying material into the arm.
- Take the end of the tying material coming out of the arm and hold it firmly towards the back of the machine.
- Activate the start switch or the cycle button (green).
- Pull towards the back during the whole cycle of the machine in order to take the left over thread of the first tie off.
- The lower threading occurs automatically.
- Activate the trigger or the "cycle button ", the machine is now ready to go.



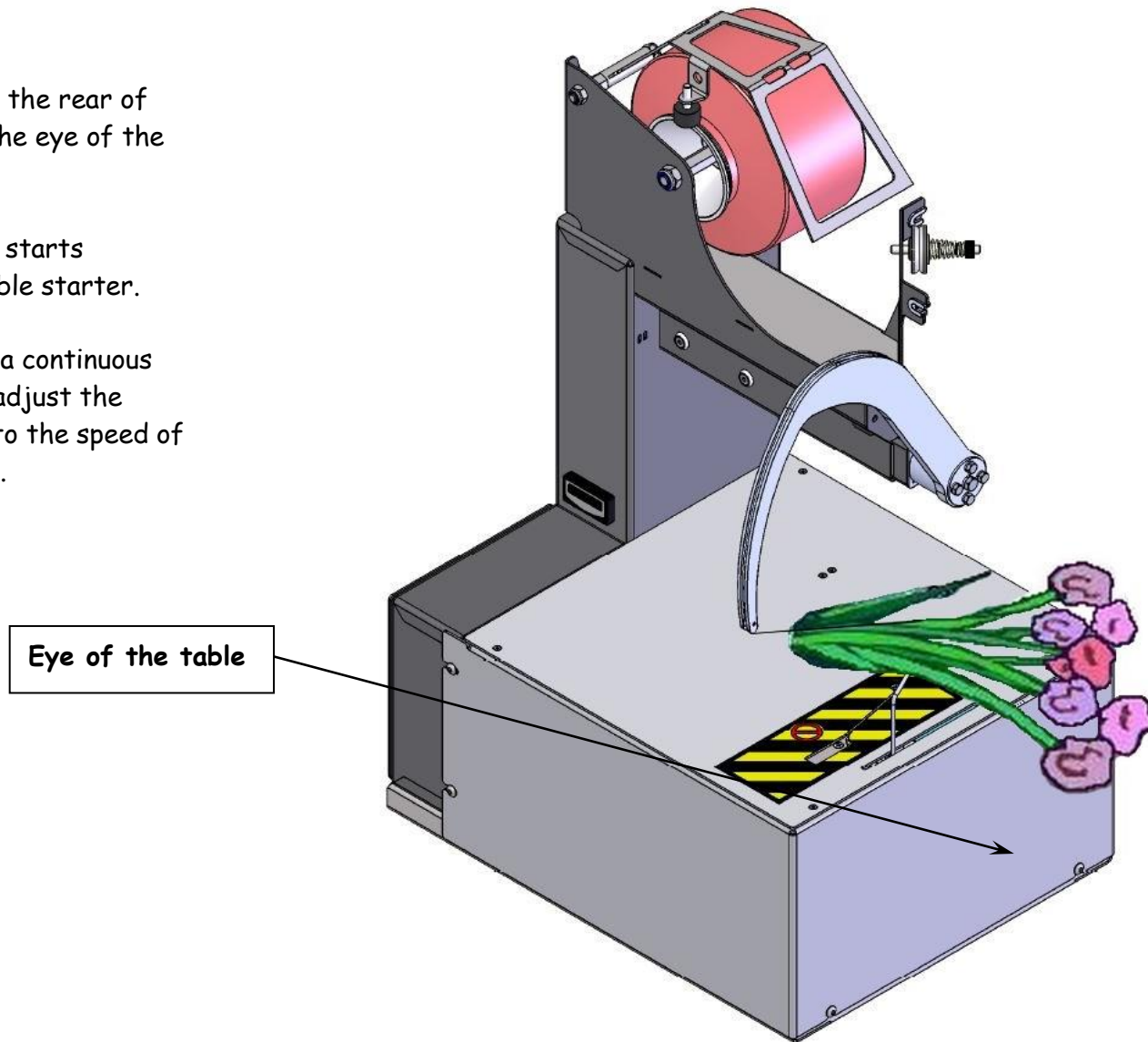
1 core or 3 cores elastic string



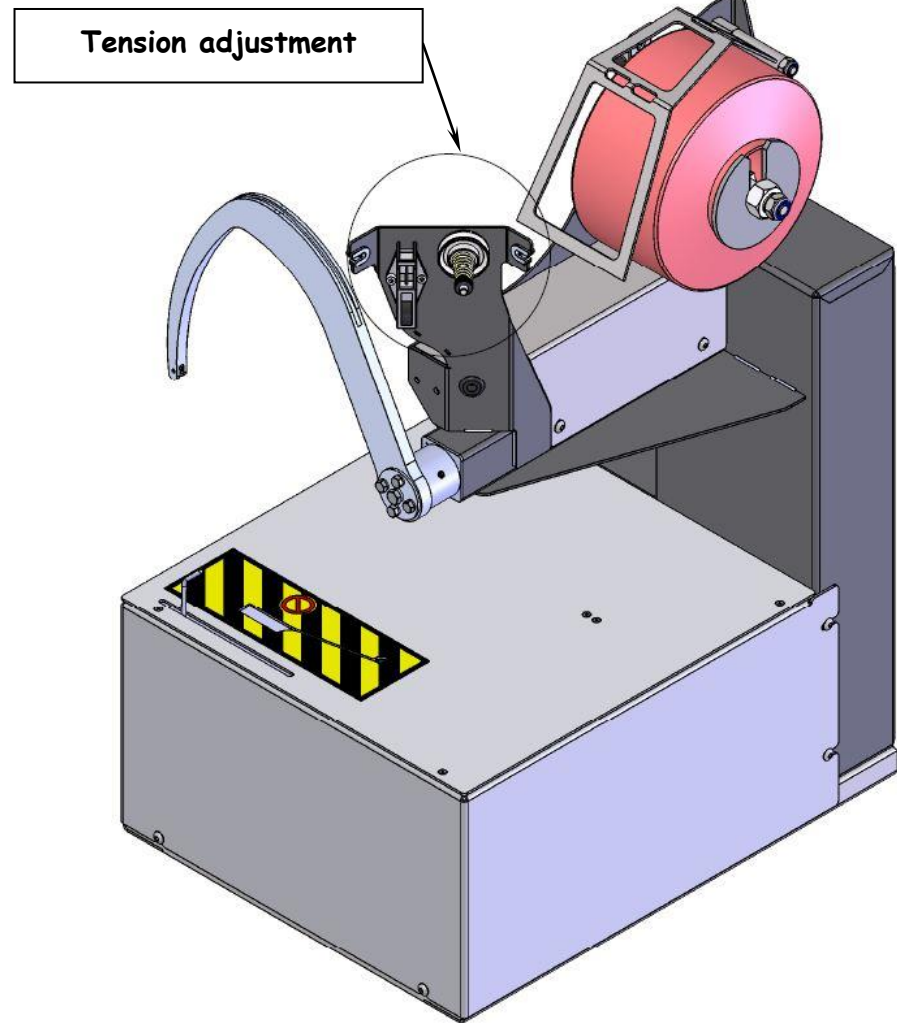
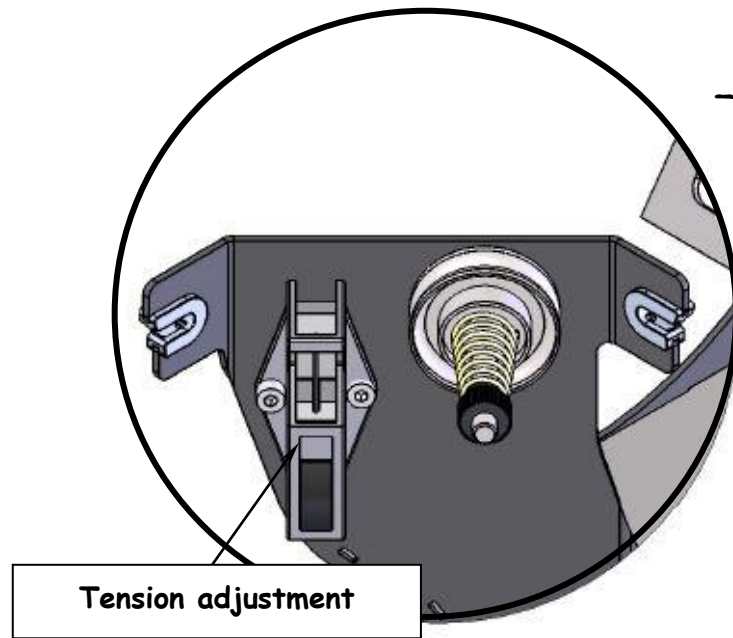
Knitted elastic string

- POSITIONING THE BUNCH -

- Push the bunch to be tied towards the rear of the table along with the tie until the eye of the table appears.
- At this moment, the tying process starts automatically through the adjustable starter.
- If the binder is incorporated into a continuous supplying conveyor, it suffices to adjust the position of the starter according to the speed of the belt and the size of the bunch.



- BASIC SETTING -

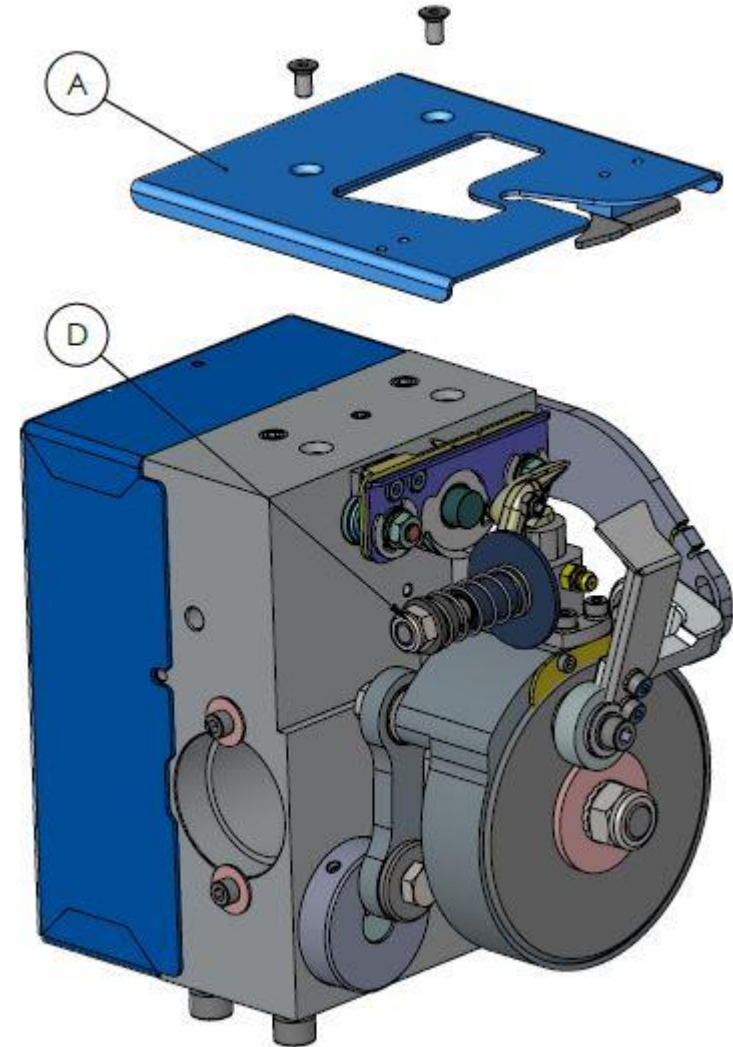
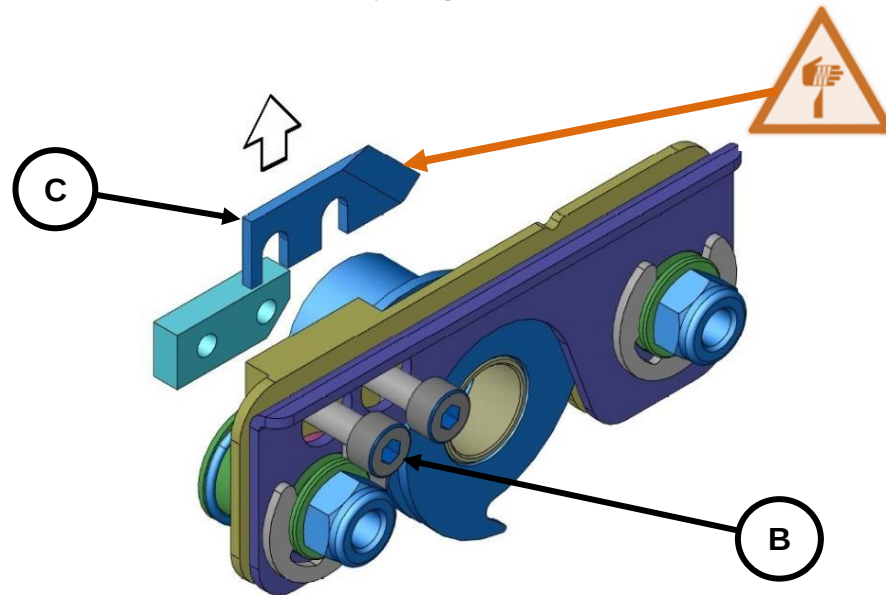


TENSION ADJUSTMENT

- It can be done using the black streaked nut on the clamping block.
- This adjustment is very delicate and is done a quarter of a turn at a time until the proper tension is obtained.
- The size of the bunch has an effect on the tightening. With an identical tension, a large bunch will be bound tighter than a small one.
- Too much tension will cause the tying material to break, and a loose tension will prevent the tying material from freeing itself from the knitter.

REPLACING THE KNIFE

- Remove knotter table A, unscrew the two bolts B.
- Pull up the knife C and replace it. It has open slots to make the replacement easier. There's only one position : max into the slots
- Make sure the knife is always in good condition.

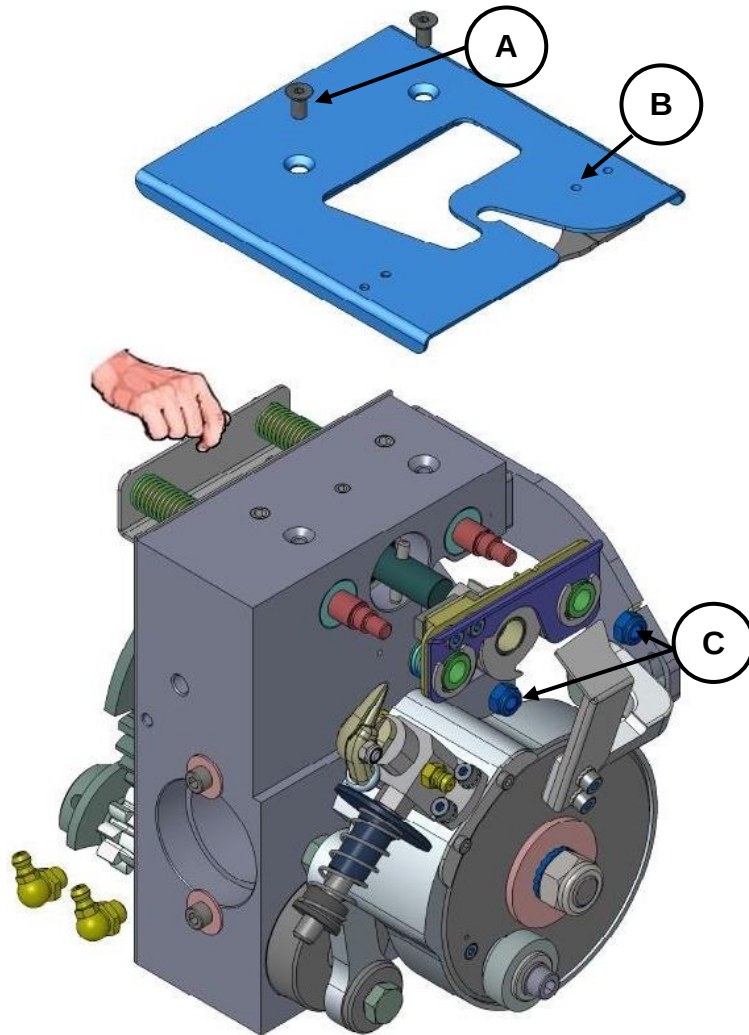


ADJUSTMENT OF THE KNOTTER TIGHTNER

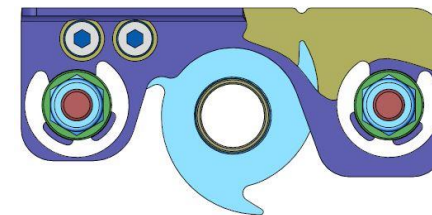
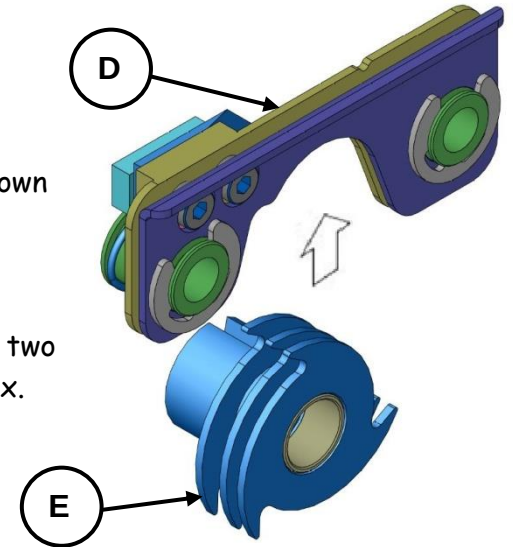
- If the knots have a tendency to slide, tighten up slightly the nut D of the knotter-tightener

REPLACEMENT OF STRING HOLDER PLATES AND ROTARY HOLDER

- Remove work table and outer box.
- Run the machine with the step button till it stops with the knotter laid down to the max angle as shown



- Unplug the machine.
- Remove knotter table B and its two screws A as well as the rear box.
- Loosen the two nuts "C" while holding the stopping plate.
- The set of fixed string holder plate D and the rotating holder E come out together.
- After replacement of either one of the two components or both of them make sure the tooth of the rotary holder is facing the gage of the back string holder plate, as shown on the following drawing.
- Reverse procedure for rebuilding.



-MAINTENANCE-

In order to have the machine running with best efficiency, it's very important to regularly clean and service the machine.

CAUTION : For any maintenance operating, unplug the machine

1. UNPLUG the machine.
2. UNSCREW the nuts and take the work table off, undo the 4 clips using a screwdriver through holes.
3. CLEAN the inside of the machine using compressed air. It's important to clean the machine before lubrication.
4. GREASING and lubrication. (see below).

WEEKLY

OIL:

- ❖ String holder axle D and E.
- ❖ Tightening knotter axle A.
- ❖ Knotter roller B and knotter jaw axle C.
- ❖ Linear bushings J et K

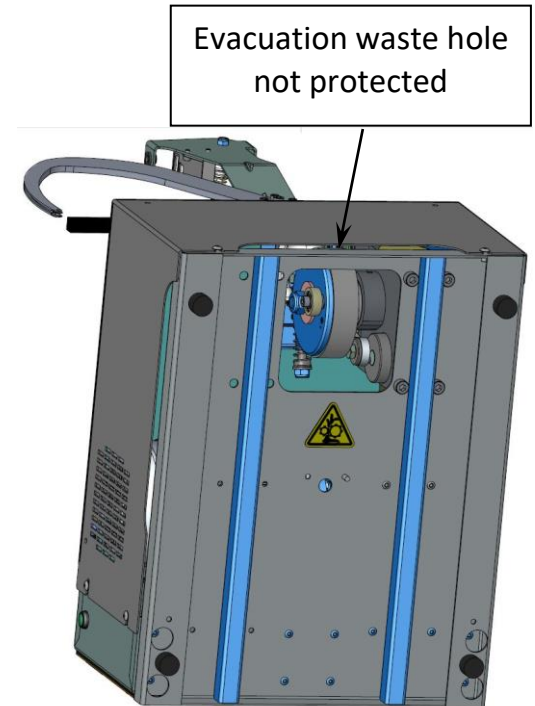
MONTHLY

GREASE:

- ❖ Knotter housing F.
- ❖ Nipple G.
- ❖ Cams and gears L--->Q.
- ❖ Conical gear H et I.

If the machine is used intensively or is used in a dirty environment the maintenance of the machine should take place daily.

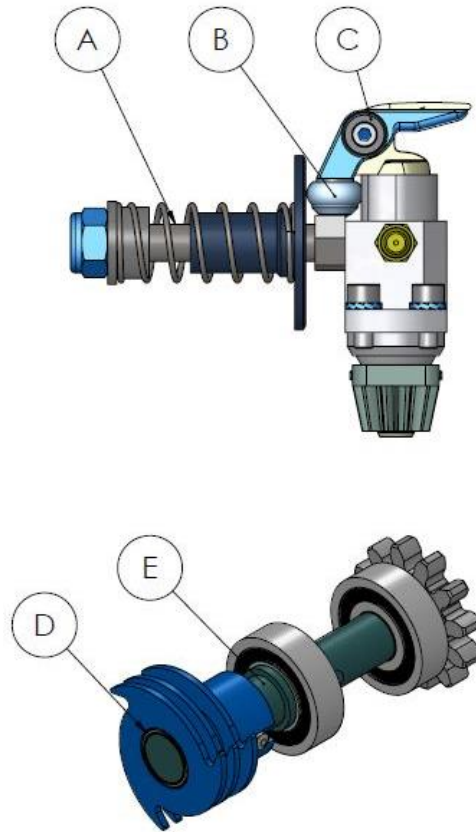
5. PLACE the table on the clips and use the screw.
6. REPLUG the machine.



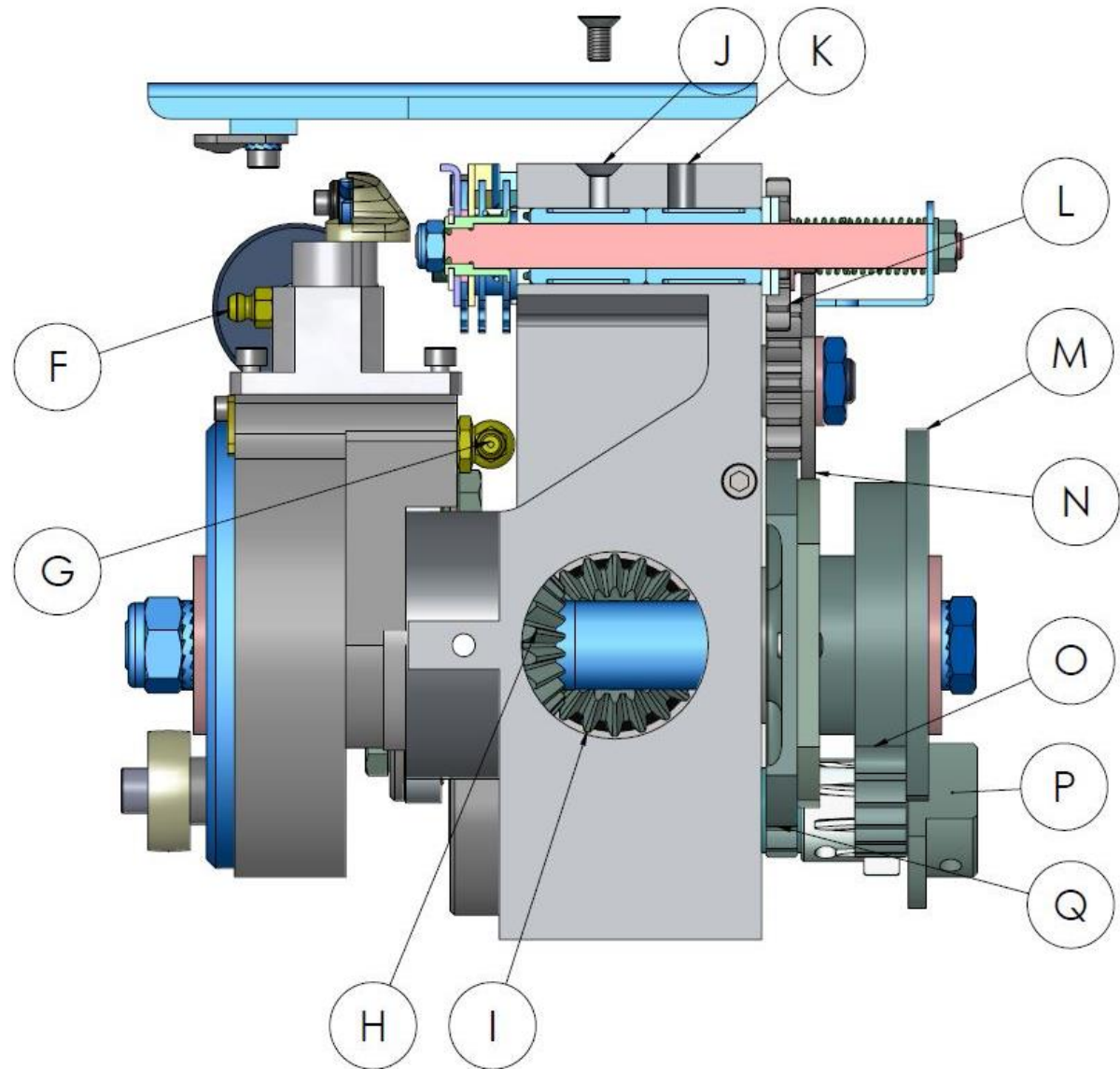
RECOMMENDED LUBRICANTS

OIL type HL: with a viscosity $10 < \text{ISO VG} < 22$.
Grease: LMX GREASE High performance.

- MAINTENANCE -



OIL	GREASE
A	F
B	G
C	H
D	I
E	L
J	M
K	N
	O
	P
	Q



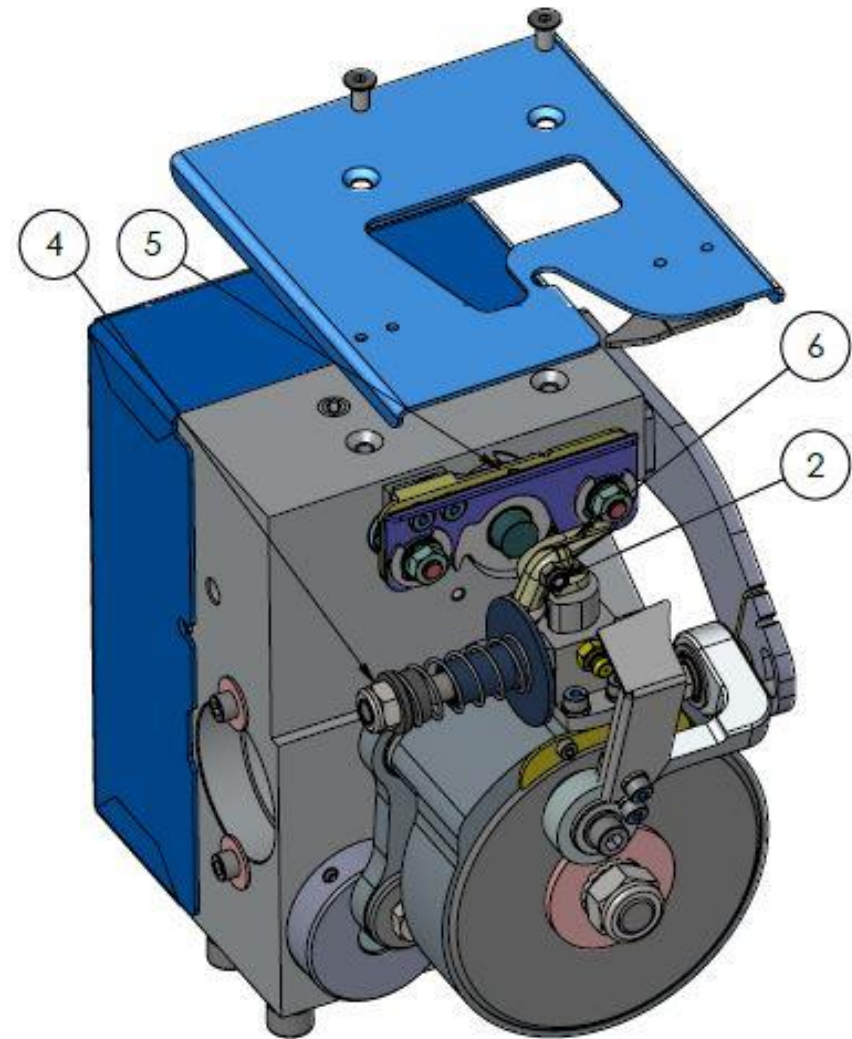
- TROUBLE SHOOTING -

THE MACHINE DOES NOT WORK

- A. Check the power supply, plug and socket.
- B. Check that the emergency stop is not activated.
- C. Check the fuses.

THE TYING PROCESS DOES NOT OCCUR

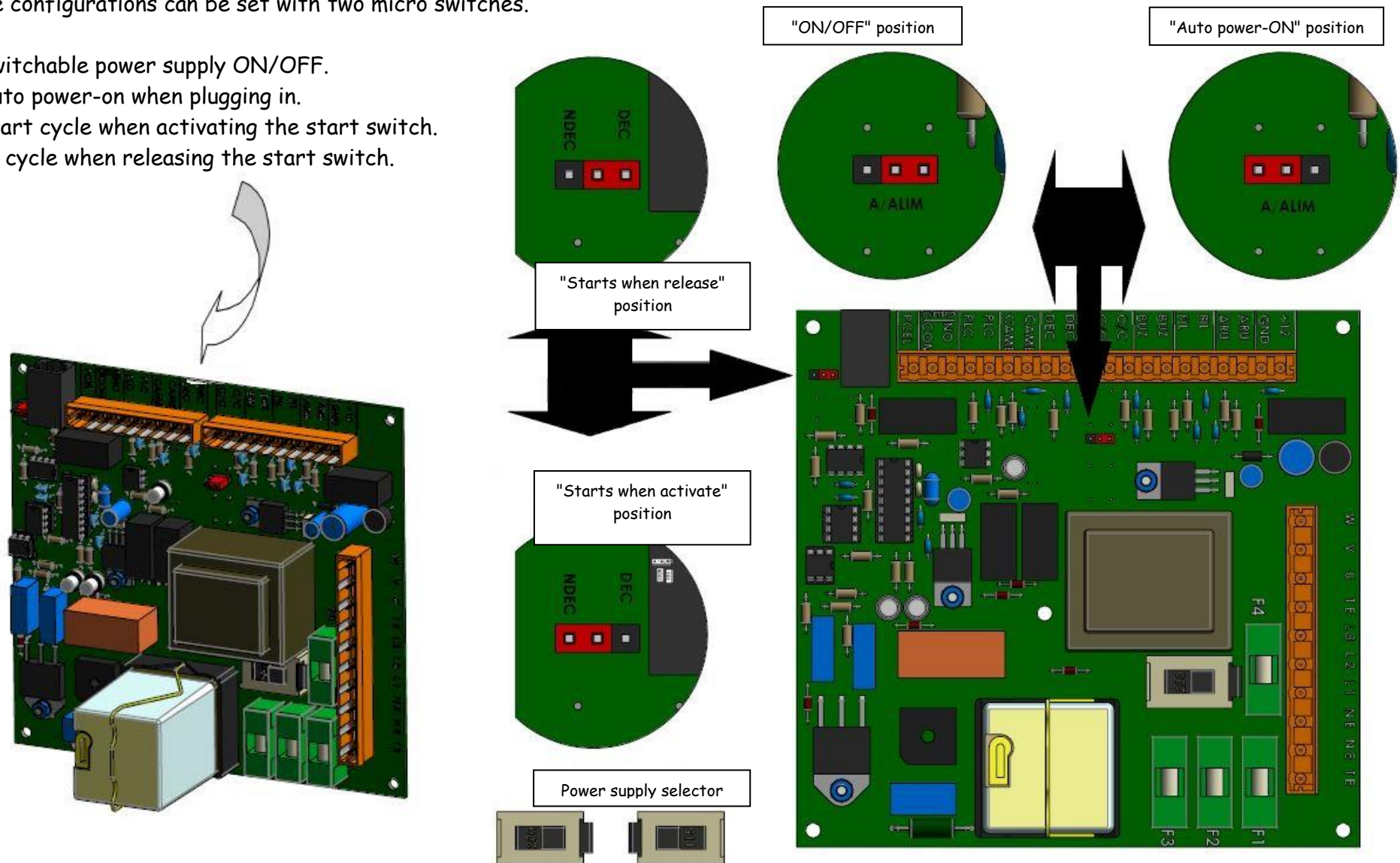
1. Check that the threading of the tying material is correct.
2. Check the working order of the knotter (the tightening of the knotter jaw).
3. Make sure that the knotter jaw is the correct one for the tying material used.
4. Check the pressure of the knotter-tightener.
5. Check that the knife is in good condition.
6. Check the cleanliness of the knotter jaw. There mustn't be any left-over elastic in the jaw.
7. Check the tension of the thread.



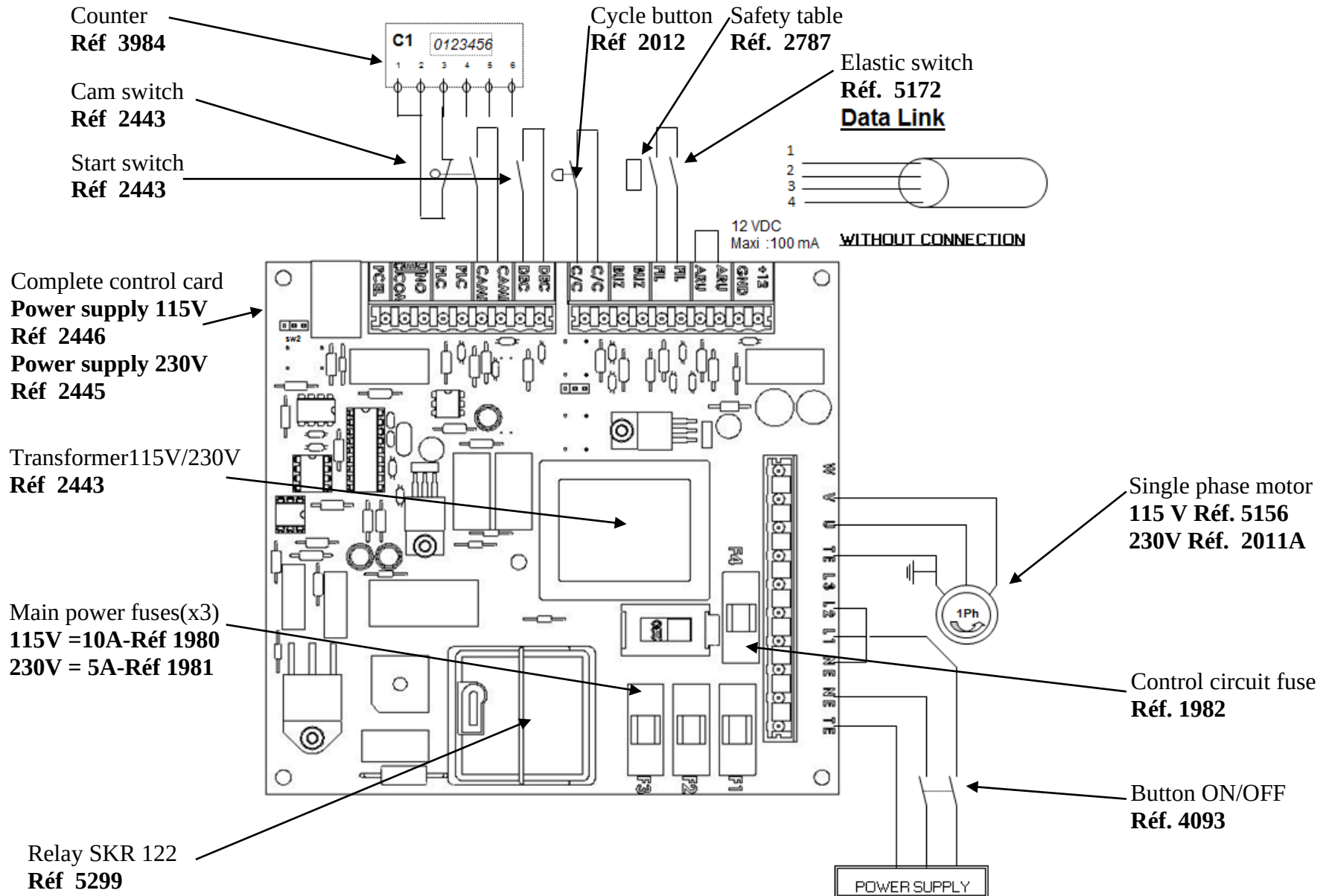
- CONFIGURATIONS OF THE CONTROL CARD -

It is possible to configure the binder with 4 options
These configurations can be set with two micro switches.

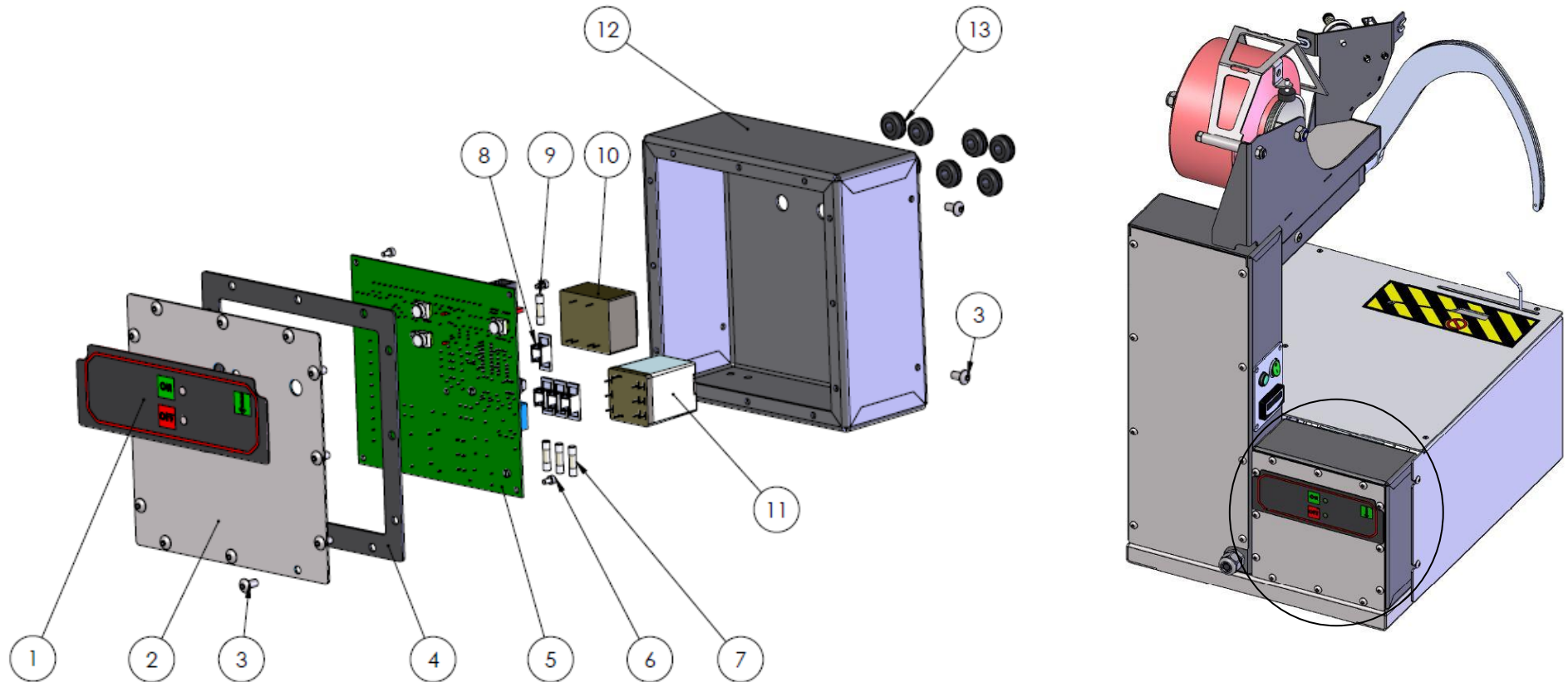
- Switchable power supply ON/OFF.
- Auto power-on when plugging in.
- Start cycle when activating the start switch.
- Start cycle when releasing the start switch.



- WIRING DIAGRAM : STANDARD VERSION -

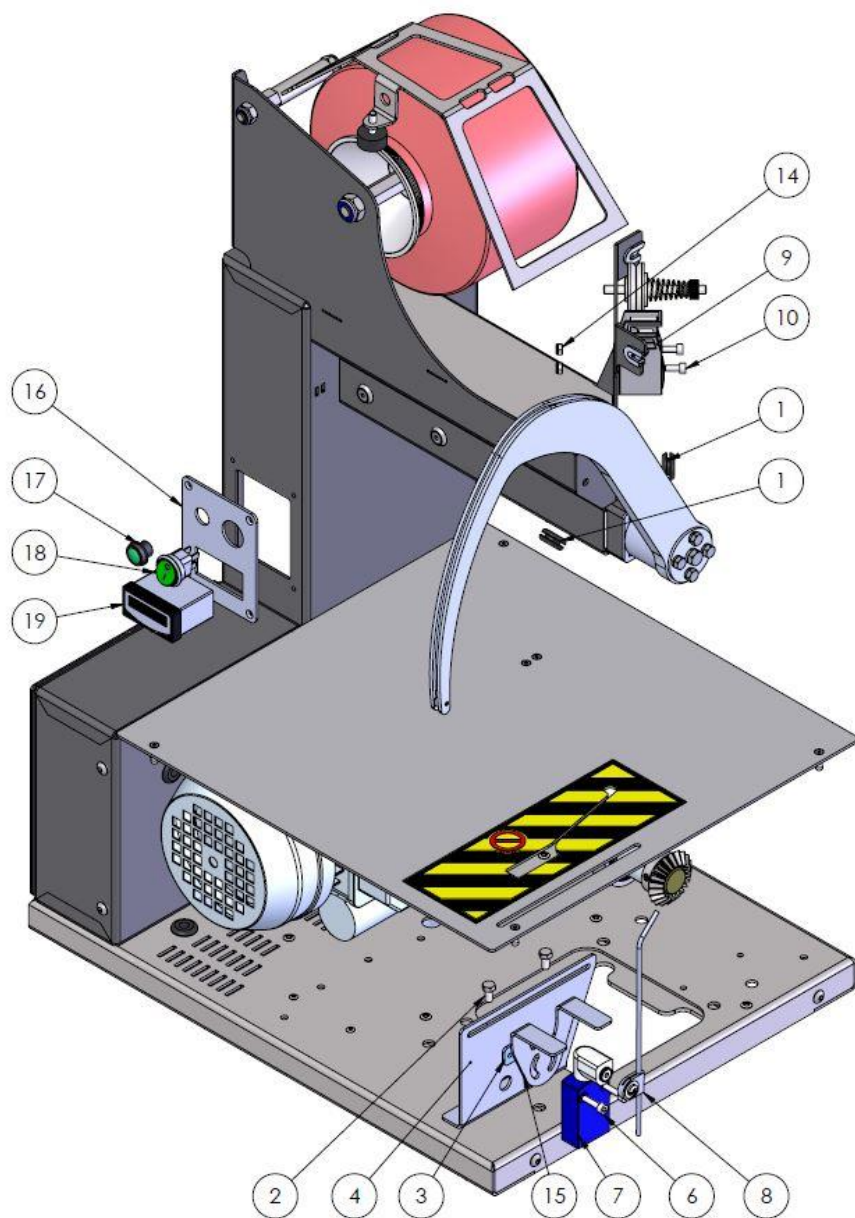


- SPARE PARTS LIST - EXPLODED VIEW -

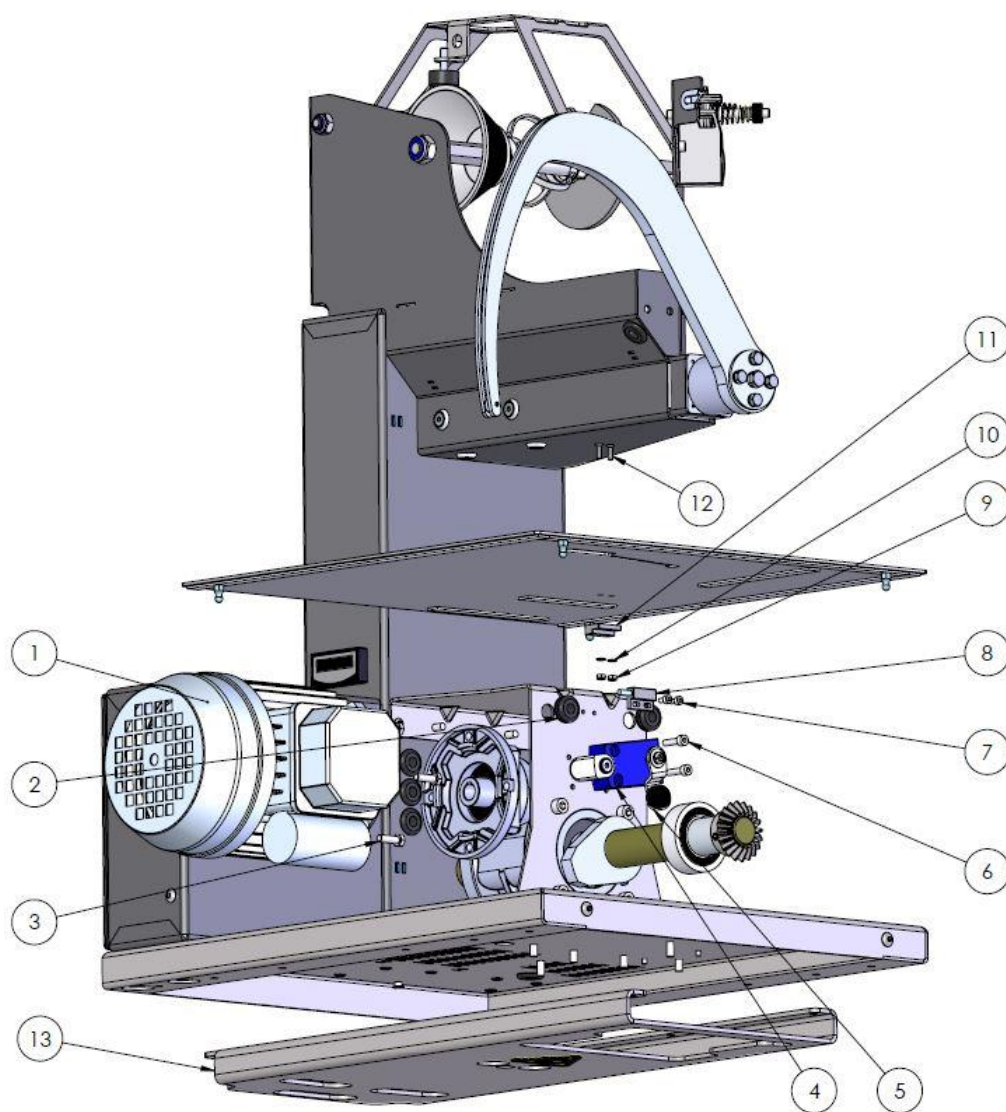


Rep	Order Ref	Description	Qty
1	2781	Façade de coffret électrique	1
2	2709A	Closure plate	1
3	2696	Screw TB Hc M5x10	14
4	2401B	Seal of electrical box	1
5	2445	Complete card 230 V	1
5	2446	Complete cards 115 V	1
6	5178	Screw CHc 3X 6	5
7	1981	Power fuse 230 V = 5A	3

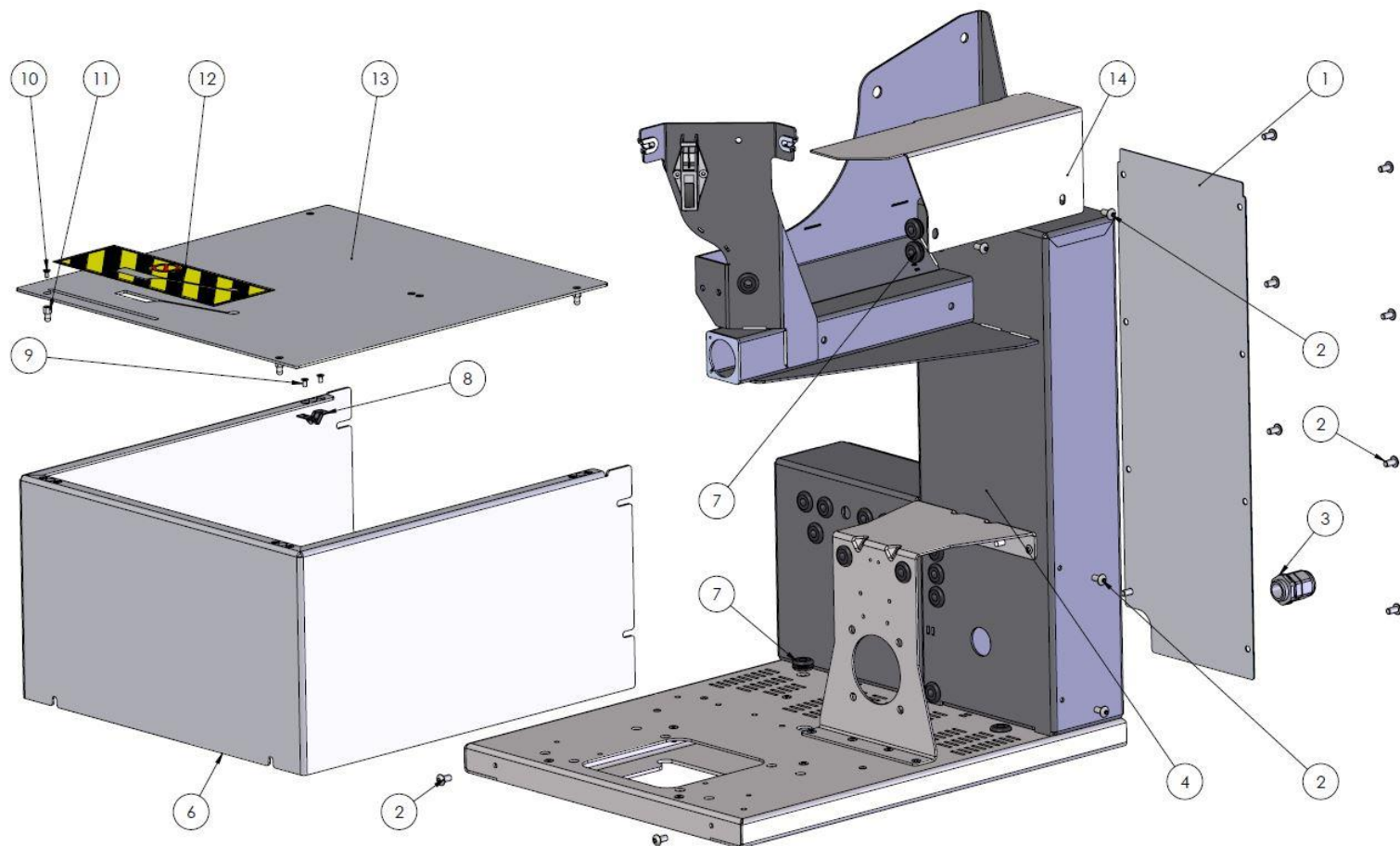
Rep	Order Ref	Description	Qty
7	1980	Power fuse 115 V = 10A	3
8	2924	Fuse support 5 x 20	4
9	1982	Control fuse 150 mA	1
10	1899	Transformer 115/230V	1
11	5299	Relay SKR 122	1
12	2379B	Electrical box	1
13	2434	Rubber grommet	8



Rep	Order Ref	Description	Qty
1	2434	Rubber grommet	2
2	2744	Screw H M5x10	2
3	2699	Clamping limb switch	1
4	2698B	Switch support	1
6	2733	Screw CHc M4x16	2
7	2443	Body switch	1
8	2442	Head of switch	1
9	5172	Détecteur "Fil coupé" (Option)	1
10	2732	Screw CHc M4x6	2
14	2544	Nut M4 (nylstop)	1
15	8127	Trigger stop	1
16	8128	Plate without button	1
16	8129	Plate with counter	1
16	8130	Plate with counter and button	1
17	2012	Cycle button (option)	1
18	4093	ON/OFF button (option)	1
19	3984	Counter (option)	1



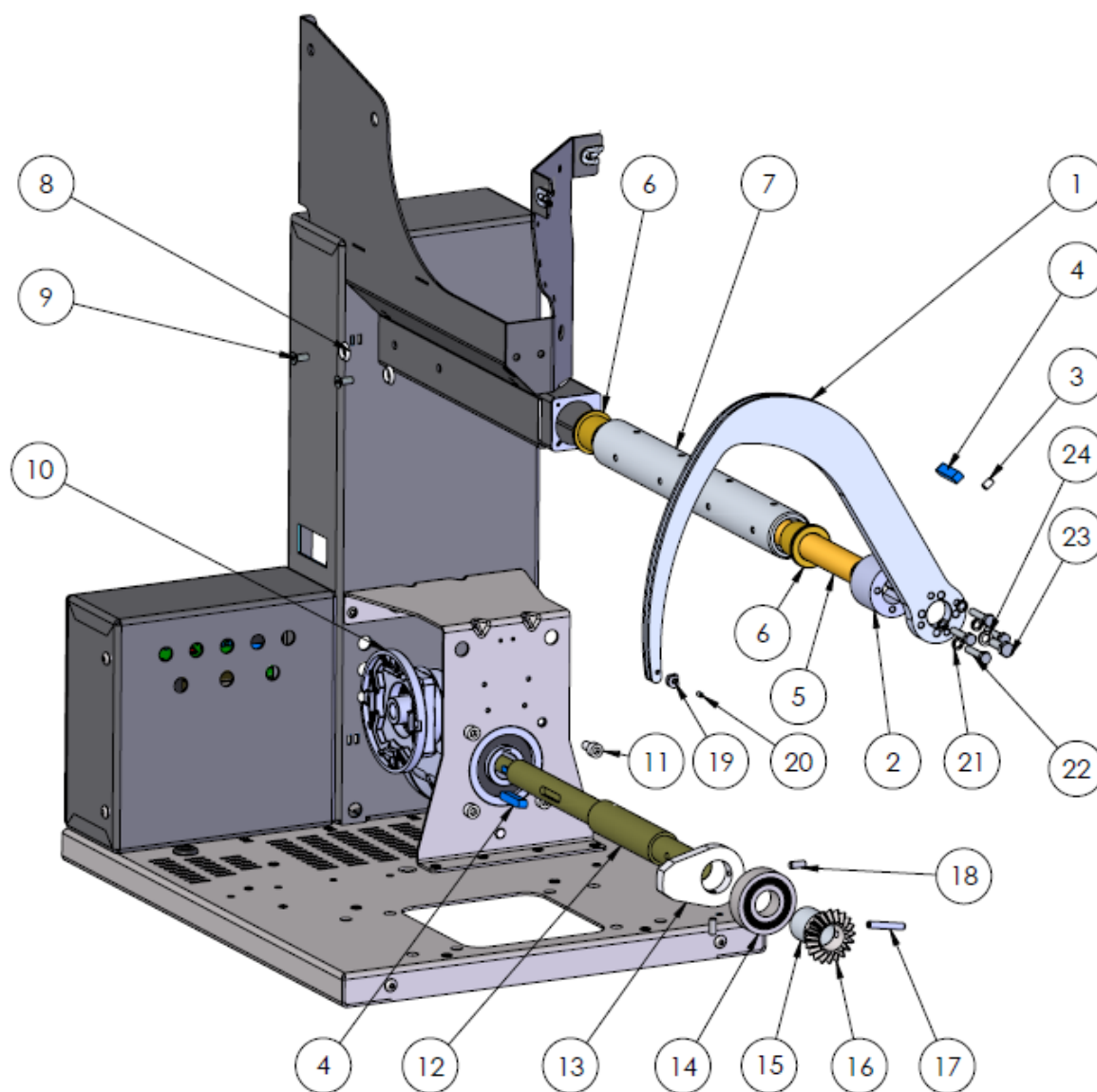
Rep	Order Ref	Description	Qty
1	5156A	Single phase motor 100 V	1
2	2434	Rubber grommet	2
3	5187	Screw H M5x16	4
4	2443	Body switch	1
5	2444	Switch roller	1
6	2733	Screw CHc M4x16	2
7	2187	Screw CHc M3x6	2
8	2787	Magnetic proximity switch	1
9	2543	Nut M3 (Nylstop)	2
10	2790	Washer ZU Ø3	2
11	2788	Magnet for proximity switch	1
12	2789	Screw FHc M3x10	2
13	8023A	Reinforcement for base plate	1

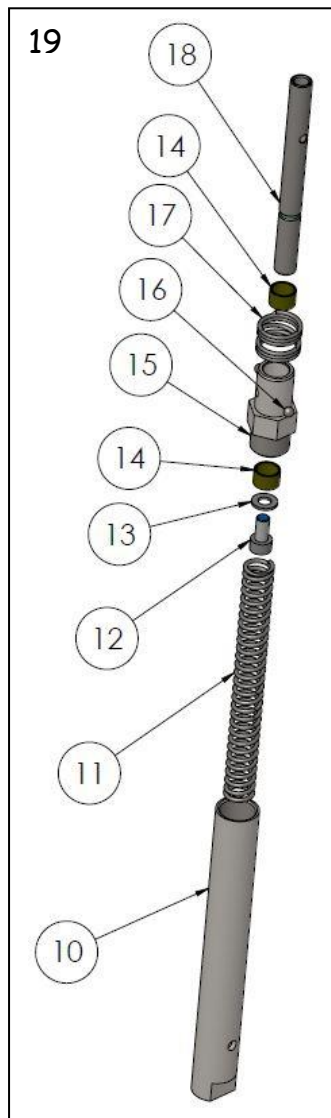


Rep	Order Ref	Description	Qty
1	2381C	Mechanical box cover right	1
1	2381C_Sym	Mechanical box cover left	1
2	2696	Screw BHc M5x10	12
3	2435	Screw on cable bushing PG11	1
4	4510B	Assembled structure Right	1
4	4516A	Assembled structure Left	1
6	4017B	Mechanism cover	1
7	2434	Rubber grommet	9
8	4113	Female clips	4

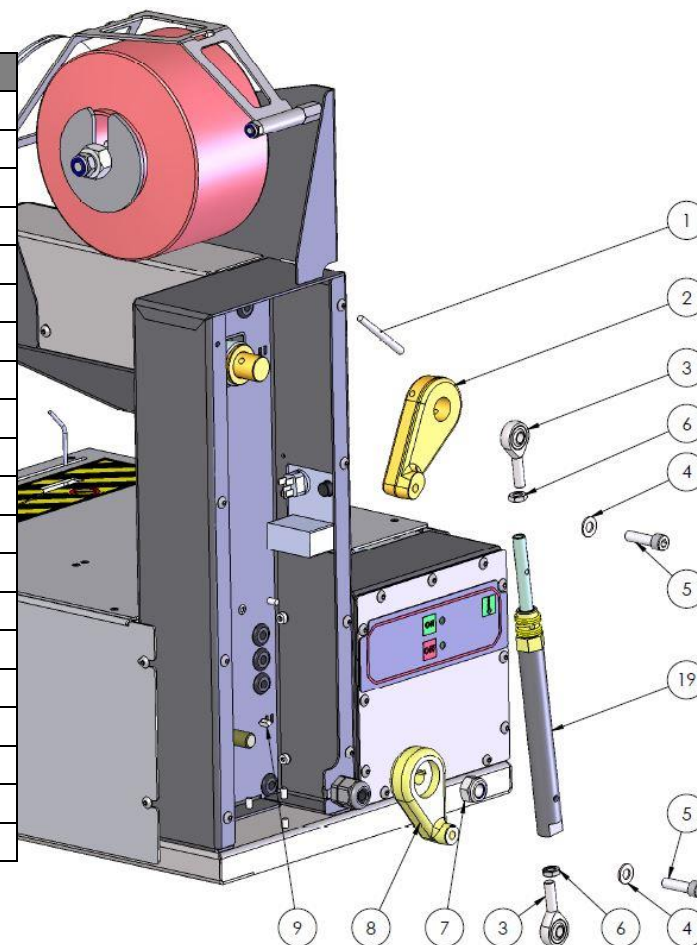
Rep	Order Ref	Description	Qty
9	2433	Countersand head Rivet Ø3.2 x 6	8
10	5176	Screw FHc M3x6	4
11	5224	Male clip	4
12	5617	Table label	1
13	8017A	Table right	1
13	8126	Table left	1
14	4018B	Wire cover right	1
14	4095	Wire cover left	1

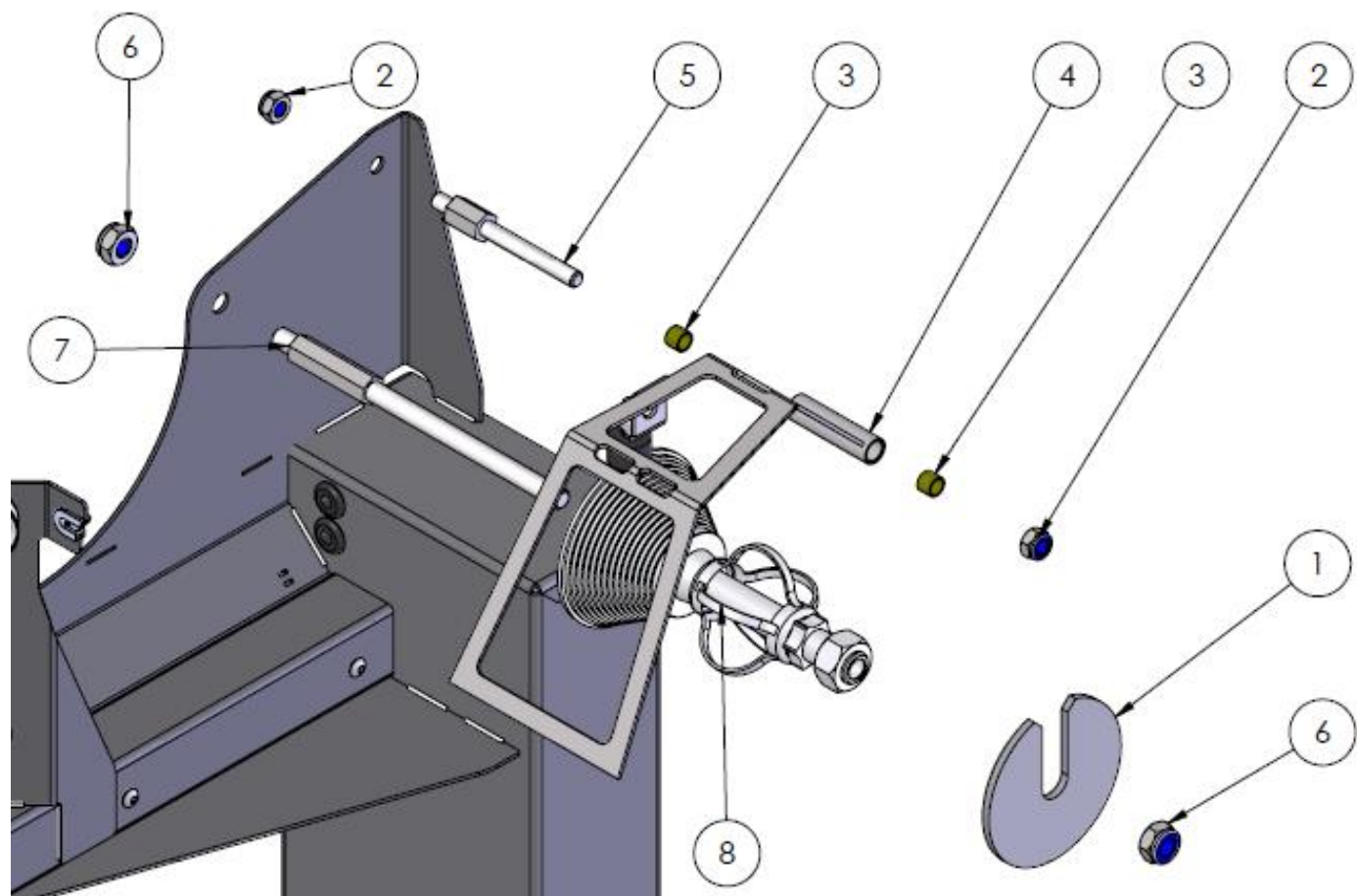
Rep	Order Ref	Description	Qty
1	5311B	Needle	1
2	5540	Needle hub	1
3	2737	Screw Hc M5 x 8	1
4	2003	Key way 6 x 6 x 30 BR	2
5	2388B	Needle Shaft (Right)	1
5	2436A	Needle shaft (Left)	1
6	2004	Bronze bushing BP25 C 20-26-25	2
7	2387A	Tube (Right)	1
7	2392A	Tube (Left)	1
8	2657	Specific washer Ø 5	4
9	2210	Screw Fhc M5 x 12	4
10	2437	Gear reducer 1/15	1
10	2950	Gear reducer 1/10	1
11	2198	Screw CHc M6 x 12	4
12	2389A	Secondary shaft (Right)	1
12	2439	Secondary shaft (Left)	1
13	6086B	Cam	1
14	2009	Bearing 6204 2RS	1
15	5537	Secondary shaft spacer (Right)	1
15	5603	Secondary shaft spacer (Left)	1
16	5506	Conical gear	1
17	1960	Pin Ø 5 x 30	1
18	1957	Screw Hc M5 x 12	1
19	5592A	Needle stainless steel insert	1
20	2441	Pin Ø 3 x 6	1
21	2181	Washer grower Ø 5	4
22	2746	Screw CHc M5 x 25	4
23	2748	Screw CHc M6 x 20	1
24	2182	Washer grower Ø 6	1





Rep	Order Ref	Description	Qty
1	5291	Conical pin Ø 6x60	1
2	2395A	Upper crank	1
3	2007	Ball and socket joint KA 8D	2
4	5209	Washer Ø 8 ZU	2
5	2008	Screw CHc M 8X 30	2
6	5208	Nut Hm M 8	2
7	1953	Nut Nylstop M 12	1
8	2394	Lower crank right	1
8	2407	Lower crank left	1
9	5136	Key way 4x4x10 BR	1
10	5553	Connecting rod body	1
11	5256	Main spring	1
12	2438	Screw CHc M 6X 12	1
13	2662	Washer Ø 6 MU	1
14	5251	Bushing MB 10 08 DU	2
15	5554	Closure	1
16	2023	Ball Ø 4.763	2
17	5306	Lock spring	1
18	5555A	Inner bar	1
19	5624	Assembled discharge connecting rod	1

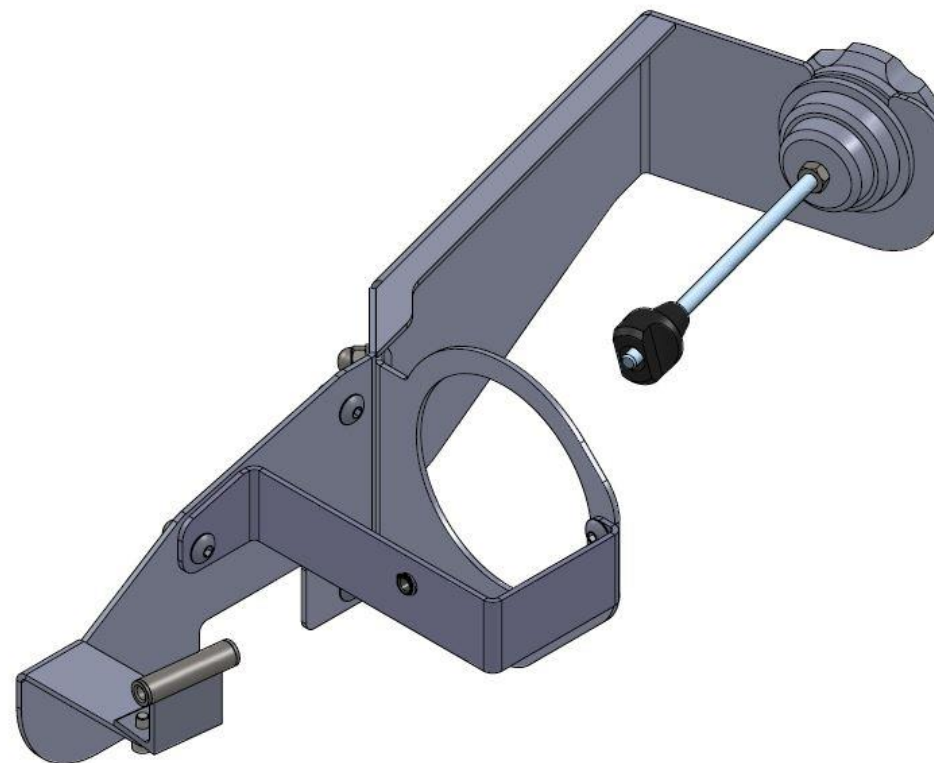
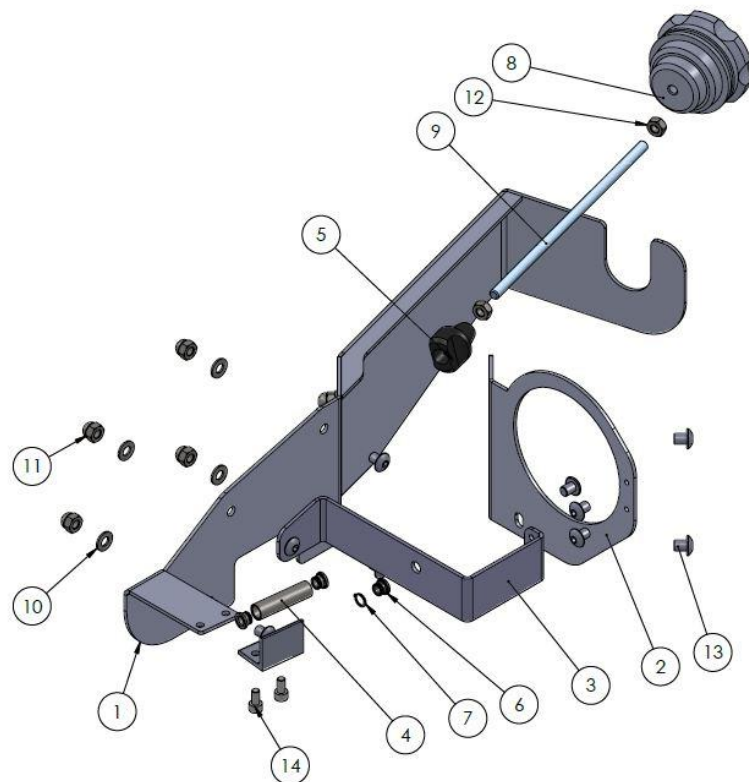




Porte bobine pour botteleuse standard équipée pour élastique simple ou triple

Rep	Order Ref	Description	Qty
1	5166	Lock spool washer	1
2	2736	Nut Nylstop M 8	2
3	5107A	Bushing GSM 0810-08	2
4	4111	Anti spinning spool (Right)	1
4	4112	Anti spinning spool (Left)	1

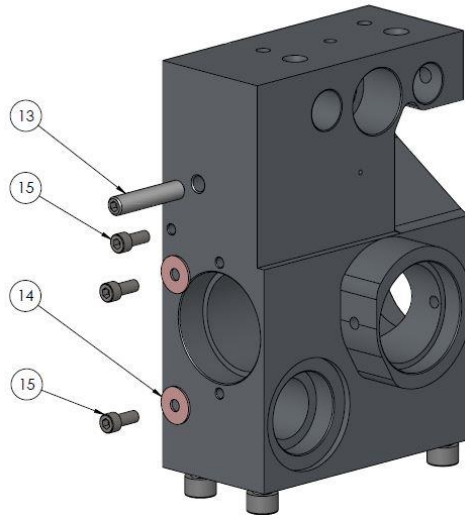
Rep	Order Ref	Description	Qty
5	4026	Anti spinning spool shaft	1
6	2546	Nut Nylstop M 10	2
7	4025	Spool shaft	1
8	5170	Spool holder + nut	1



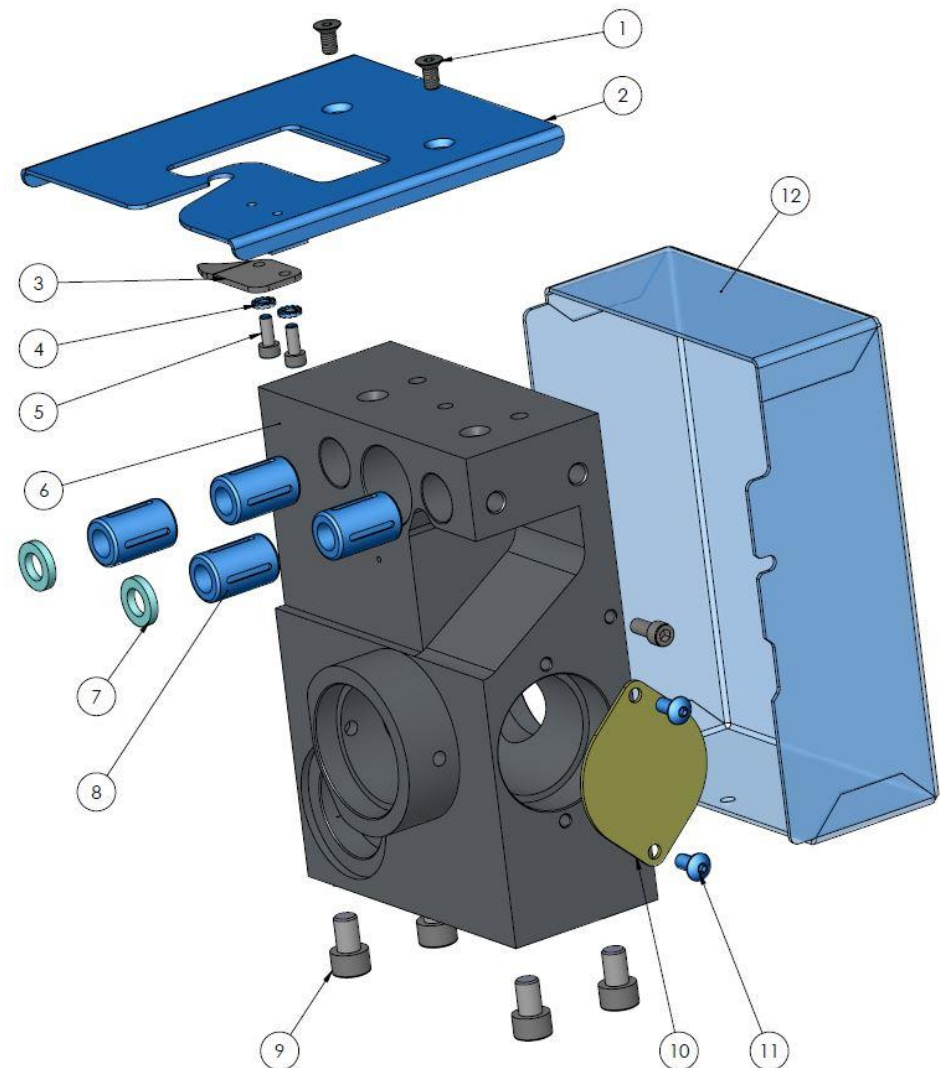
Porte bobine pour botteuse équipée pour fil tricoté

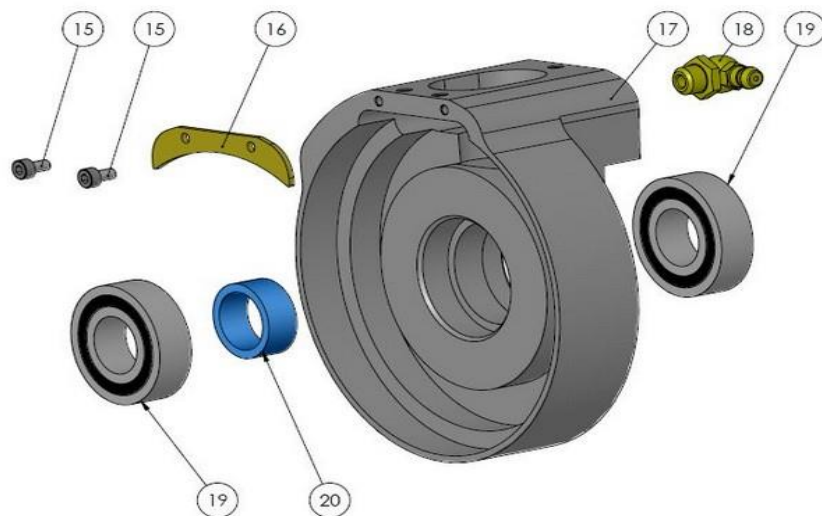
Rep	Order Ref	Description	Qty
1	3694	Platine support bobine ficelle DR	1
1	8181	Platine support bobine ficelle GA	
2	3693	Anneau passe ficelle DR	1
2	3693_Sym	Anneau passe ficelle GA	
3	3692	Patte support œillet DR	1
3	3692_Sym	Patte support œillet GA	
4	2721	Fourreau de l'arrêt de bobine	1
5	3696	Contre cône	1
6	5169	Oeillet ceramique	3
7	5216	Circlips	1
8	3695	Moyeu amovible	1

Rep	Order Ref	Description	Qty
9	3697	Tige fileté M8	1
10	8094	Rondelle Ø 8 ZU	7
11	3708	Ecrou borgne M8	7
12	2176	Ecrou H M8	2
13	3459	Vis BHc M 8 x 10	9
14	2198	Vis CHc M 6 x 12	2

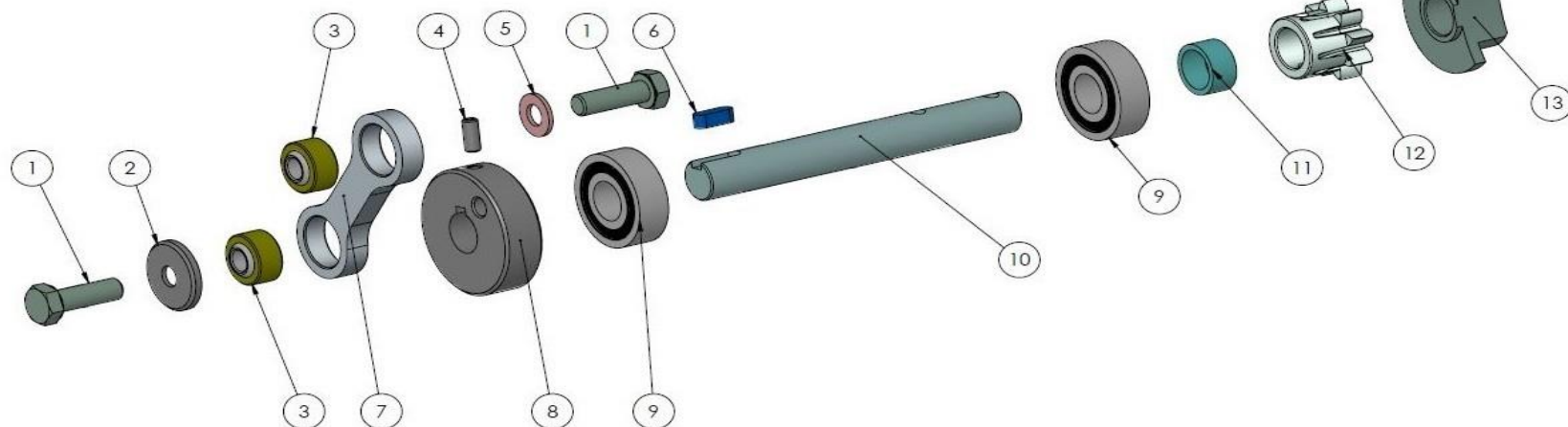


Rep	Order Ref	Description	Qty
1	5190	Screw FHc 5x 10	2
2	5324D	Knotter table	1
3	5528B	String recall plate	1
4	1949	Washer Ø4	2
5	5179	Screw CHc 4X 10	2
6	5501C	Main block	1
7	2422	Seal G 10-17-3	2
8	1973	Linear bearing KH 1026	4
9	1970	Screw CHc 8 X 12	4
10	5588	Hole cover	1
11	2423	Screw BHc 5X 10	2
12	2391A	Mechanism cover	1
13	1967	Screw Hc 8x 40 (Pointed)	1
14	5195	Washer Ø 5 LU	2
15	1964	Screw CHc 5X 12	4





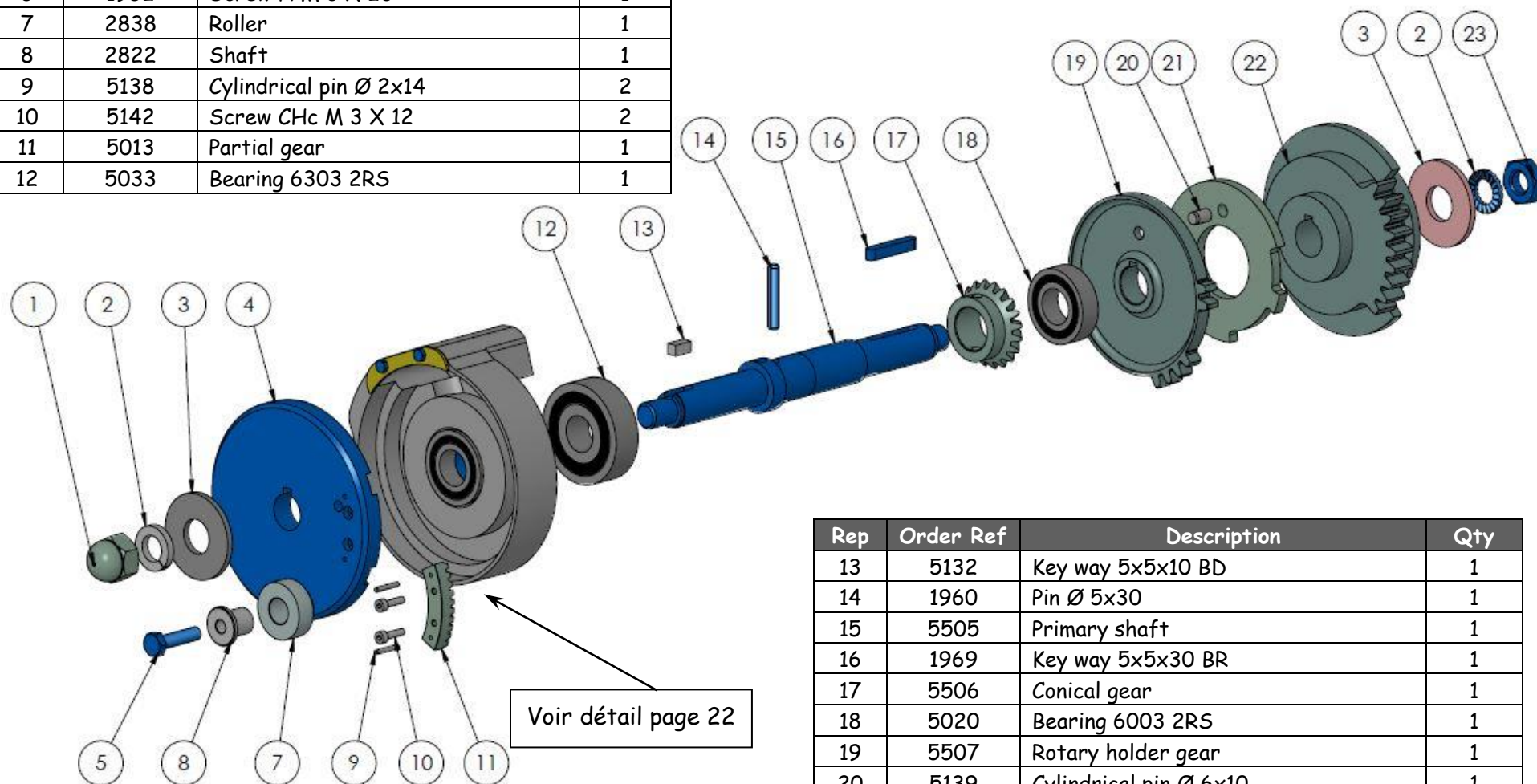
Rep	Order Ref	Description	Qty
15	5178	Screw H M3x6	2
16	5564	Closing sheet	1
17	5503	Knotter unit support	1
18	2421	Nipple 90° M8	1
19	5020	Bearing 6003 2RS	2
20	5009	Primary shaft spacer	1
21	2866	Pin Ø 5x25	1



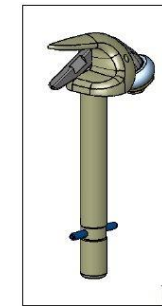
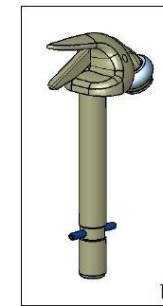
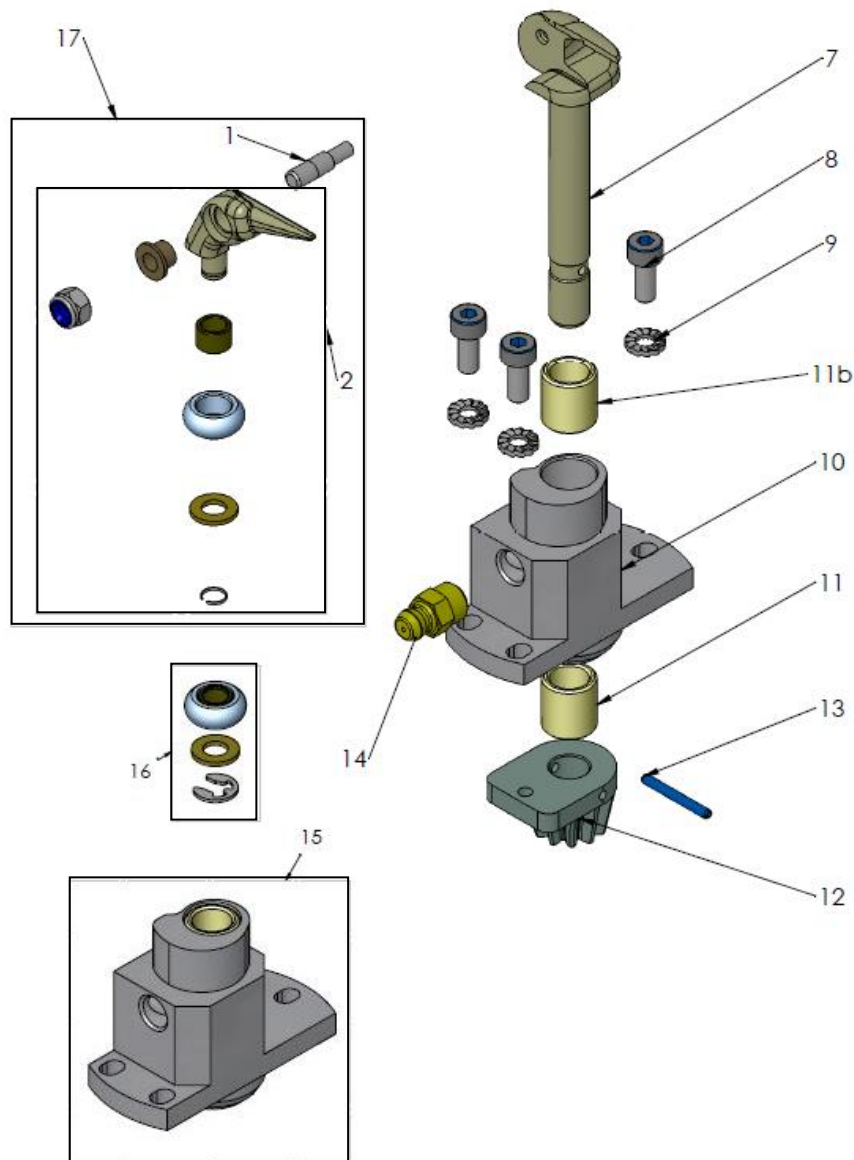
Rep	Order Ref	Description	Qty
1	1955	Screw H M8 x 25	2
2	5558	Stopping washer	1
3	1956	Ball and socket joint G8D	2
4	1957	Screw Hc M5 x 12	1
5	5209	Washer Ø 8 LU	1
6	1959	Key way 5x5x14 BR	1
7	5552B	Rod	1

Rep	Order Ref	Description	Qty
8	5518A	Hub rod	1
9	1958	Bearing 6202 2RS	2
10	5516A	Toppler shaft	1
11	5517A	Bearing spacer	1
12	5515A	Gear	1
13	5514A	Toppler arm	1
14	1960	Pin Ø 5 x 30	2

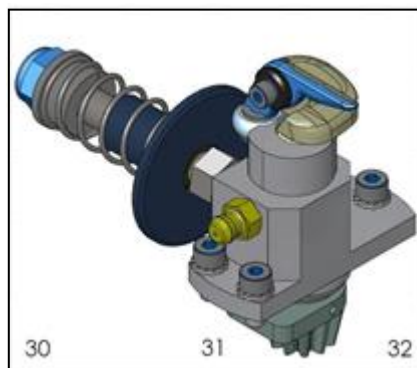
Rep	Order Ref	Description	Qty
1	1953	Nut Nylstop M12	1
2	1954	Washer Ø12	2
3	1961	Washer Ø 16 LU	2
4	5502A	Knotter driving wheel	1
5	1952	Screw H M 6 X 20	1
7	2838	Roller	1
8	2822	Shaft	1
9	5138	Cylindrical pin Ø 2x14	2
10	5142	Screw CHc M 3 X 12	2
11	5013	Partial gear	1
12	5033	Bearing 6303 2RS	1



Rep	Order Ref	Description	Qty
13	5132	Key way 5x5x10 BD	1
14	1960	Pin Ø 5x30	1
15	5505	Primary shaft	1
16	1969	Key way 5x5x30 BR	1
17	5506	Conical gear	1
18	5020	Bearing 6003 2RS	1
19	5507	Rotary holder gear	1
20	5139	Cylindrical pin Ø 6x10	1
21	5508	Cam	1
22	2693	Toothed wheel	1
23	1998	Nut Hm M12 Z	1

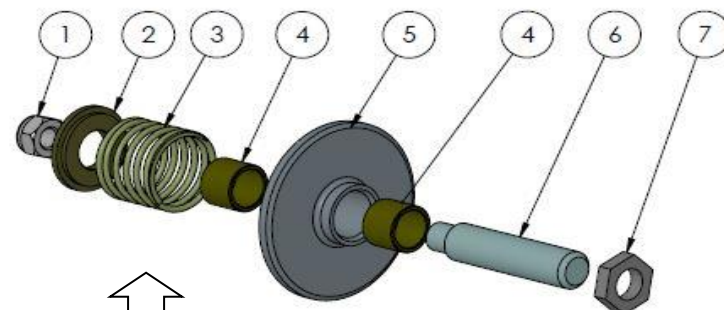
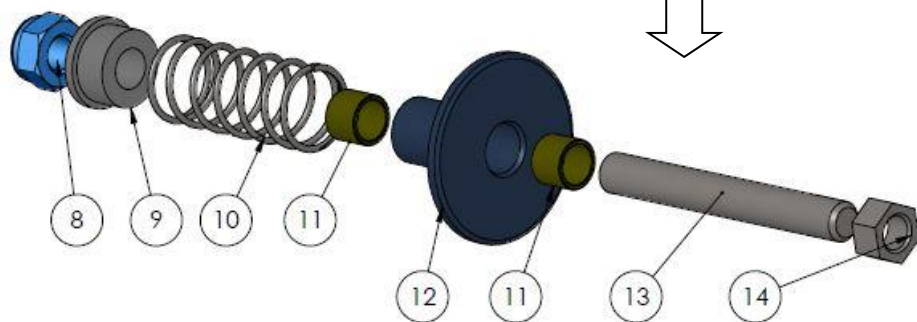


Rep	Order Ref	Description	Qty
1	4032B	Knotter jaw shaft	1
2	3407A	Single core string knotter jaw assembled without shaft	1
2	3408A	Triple core string knotter jaw assembled without shaft	1
2	4283	knotter jaw assembled without shaft (Raffia/AR12CA)	1
7	2316D	Knotter + pin	1
7	4286	Knotter + pin (AR12CA)	1
8	5179	Screw CHc 4X 10 Z	3
9	1949	Washer Ø4	3
10	5504	Knotter housing	1
11	11023	Bronze bushing BP 25 8-11-20	1
11b	5084	Bronze bushing BP 25 8-11-12	1
12	5063	Knotter gear	1
13	2867	Pin Ø2x18	1
14	5160	Nipple M8	1
15	5240	Knotter housing + Bushing assembled	1
16	4084	Bearing	1
17	3398A	Single core string knotter jaw set	1
17	3399A	Triple core string knotter jaw set	1
17	4285	Knotter jaw assembled (Raffia/AR12CA)	1
18	3400A	Single core string knotter assembled	1
19	3401A	triple core string knotter assembled	1
19	4287	knotter assembled (AR12CA)	1



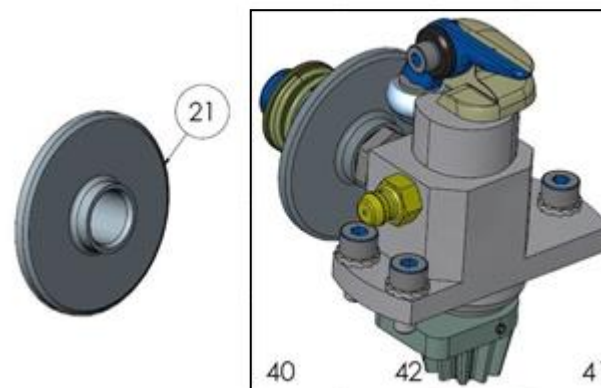
Rep	Order Ref	Description	Qty
8	5207	Nut Nylstop M 8	1
9	5287	Spring cup (Right)	1
10	5286	Spring (Right)	1
11	5107A	Bushing GSM 0810-08	2
12	5030	Knotter tightener (Right)	1
13	5031A	Knotter tightener Shaft (Right)	1
14	5250	Knotter tightener nut (Right)	1
20	5239A	Knotter tightener with bushing (Right)	1
30	3337A	Assembled knotter unit 1 core string (Right)	1
31	3397A	Assembled knotter unit 3 core string (Right)	1
32	4289	Assembled knotter unit for string AR12CA (Right)	1

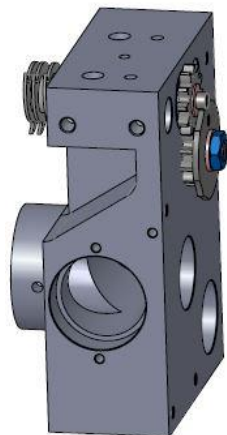
MACHINE DROITE



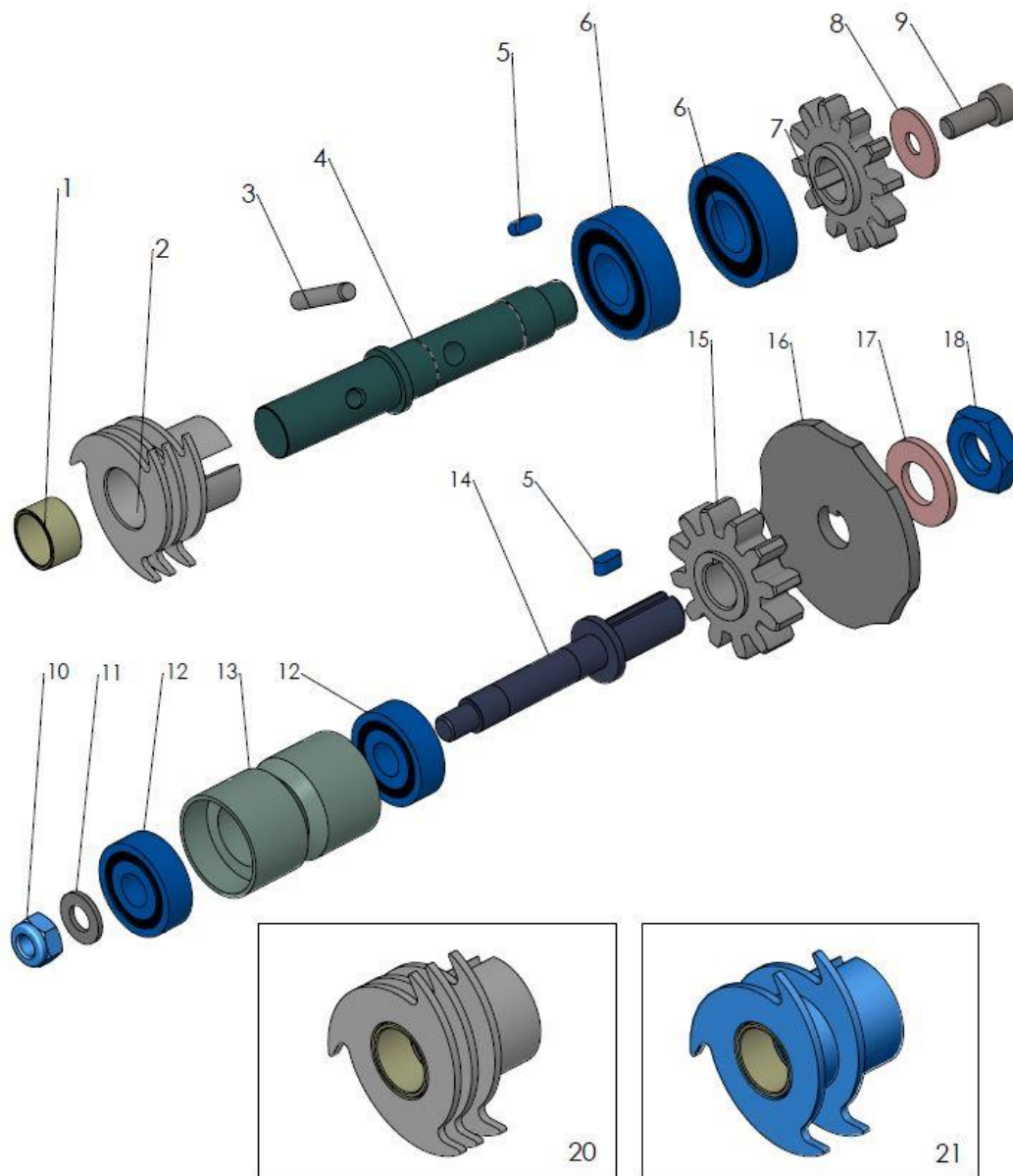
MACHINE GAUCHE

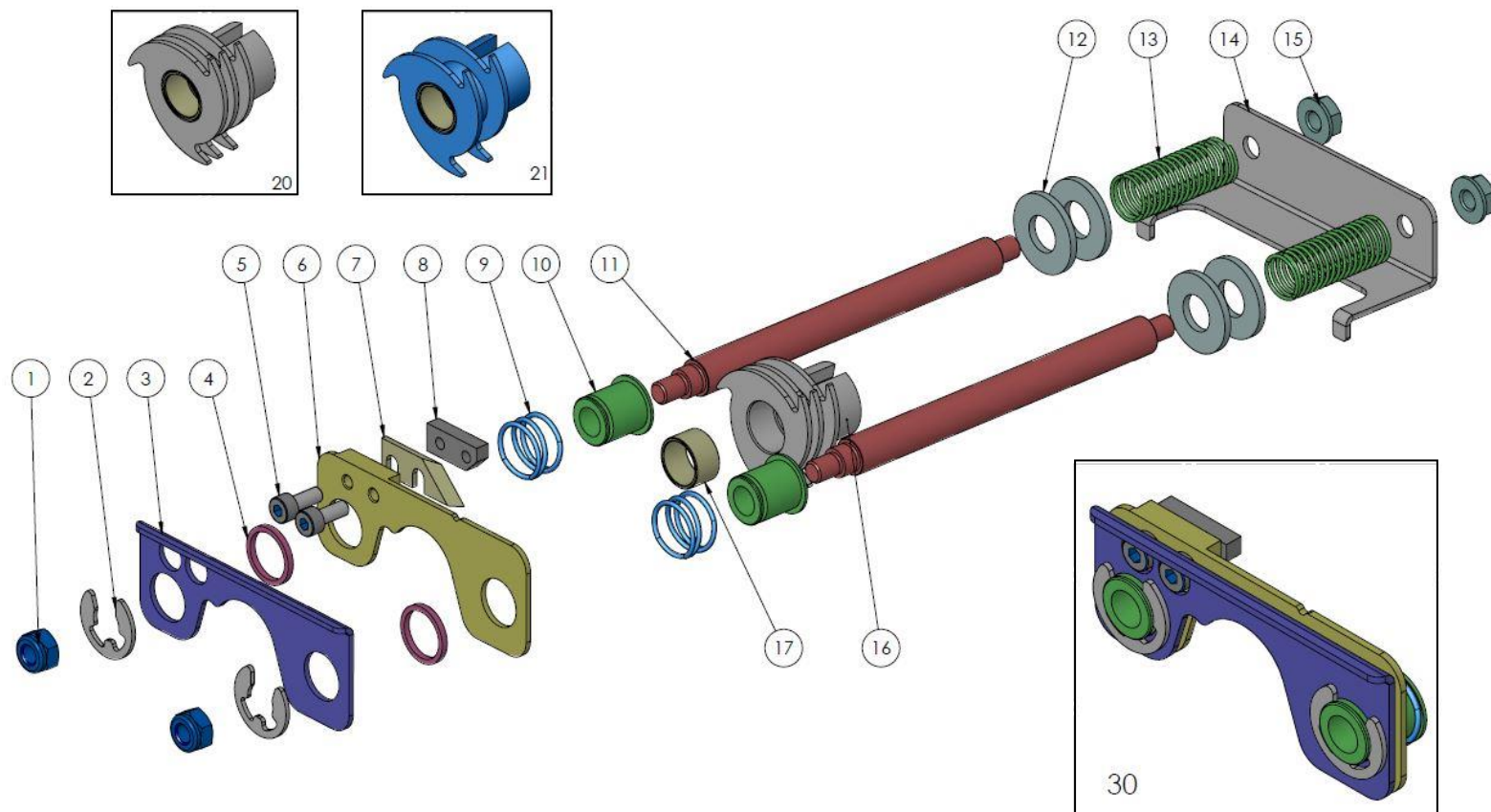
Rep	Order Ref	Description	Qty
1	5202	Nut Nylstop M 6	1
2	5612	Spring cup (Left)	1
3	5286A	Spring (Left)	1
4	5107A	Bushing GSM 0810-08	2
5	5611	Knotter tightener (Left)	1
6	5609	Knotter tightener Shaft (Left)	1
7	5610	Knotter tightener nut (Left)	1
21	2416A	Knotter tightener with bushing (Left)	1
40	3335A	Assembled knotter unit 1 core string (Left)	1
41	3336A	Assembled knotter unit 3 core string (Left)	1
42	4290	Assembled knotter unit for string AR12CA (Left)	1





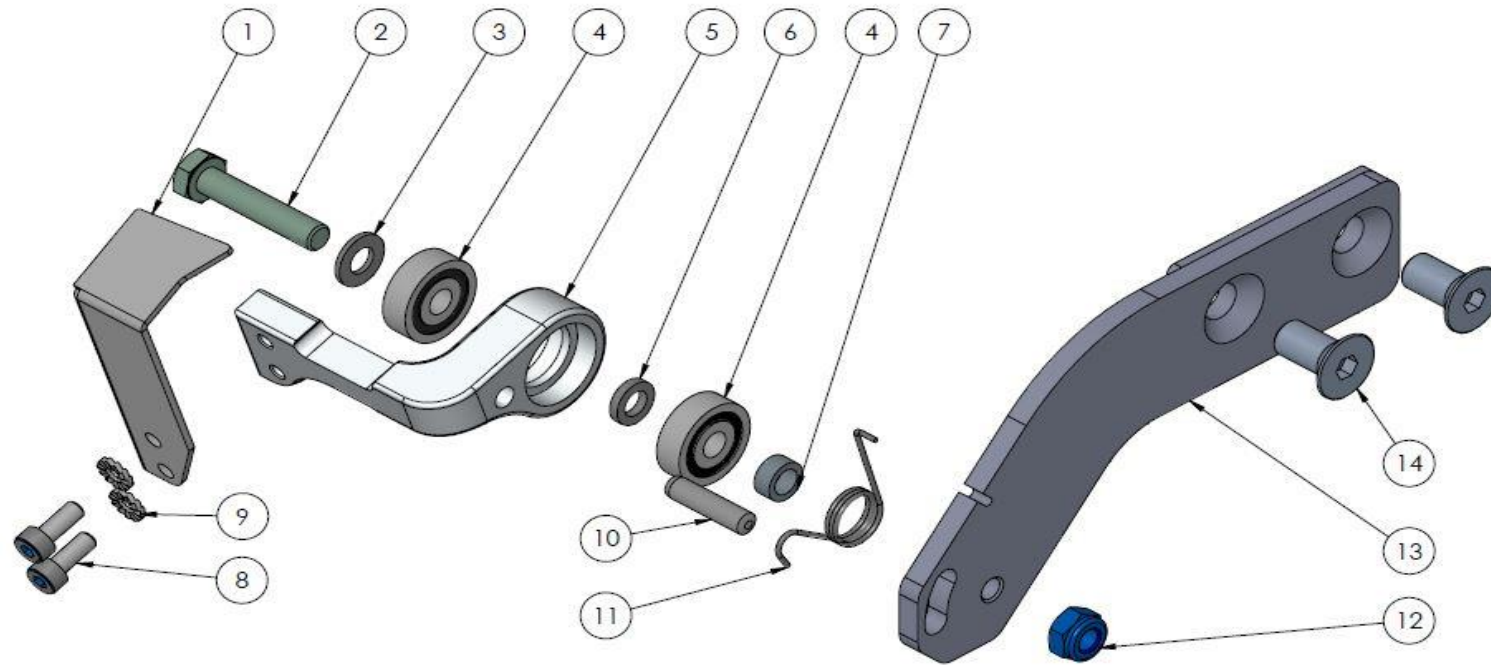
Rep	Order Ref	Description	Qty
1	5128A	Bushing JSM 1214-08	1
2	5015A	Rotary string holder 3 flange	1
2	2844	Rotary string holder 2 flange	1
3	5140	Pin G06 Ø 4 x 22	1
4	5521D	Rotary string holder shaft	1
5	5131	Key way 3x3x 7 BR	2
6	5038	Bearing 6001 2RS	2
7	5511	Rotary string holder gear	1
8	5195	Washer Ø 5 LU	1
9	1964	Screw CHc M5X 12	1
10	5202	Nut Nylstop M 6	1
11	2662	Washer Ø 6 MU	1
12	1966	Bearing 608 2RS	2
13	5520	Intermediate gear housing	1
14	5519B	Intermediate gear shaft	1
15	5509	Intermediate gear	1
16	5510	Rotary holder anti spinning cam	1
17	5212	Washer Ø 10 ZU	1
18	1965	Nut Hm M10 Z	1
20	2424A	Rotary holder 5015A +bushing	1
21	2845A	Rotary holder 2844 + bushing	1



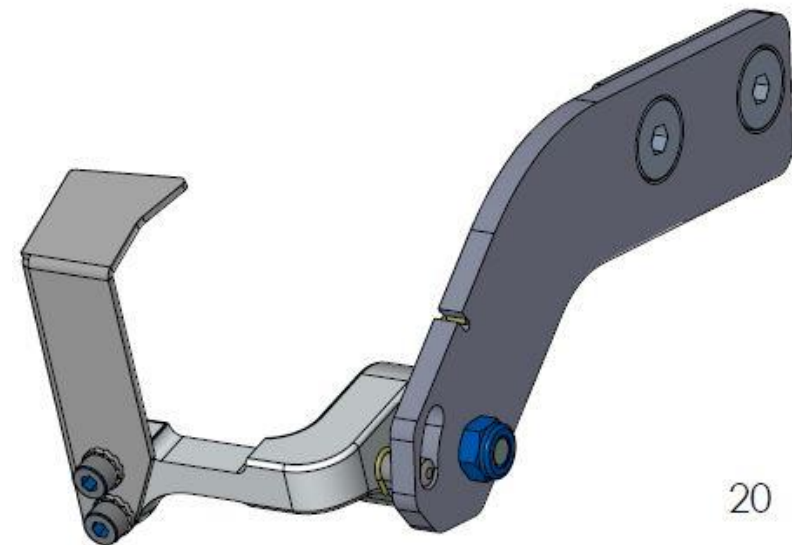


Rep	Order Ref	Description	Qty
1	2152	Nut Serpress M6	2
2	2153	Circlips E type	2
3	5626	Front holder plate	1
4	5628	Spacer	2
5	5179	Screw Chc M4x10	2
6	5627	Rear holder plate	1
7	5034A	Knife	1
8	5524	Knife plate	1
9	5630	Spring	2
10	5629	Bushing holder plate	2
11	5525A	Shaft "elastic string"	2

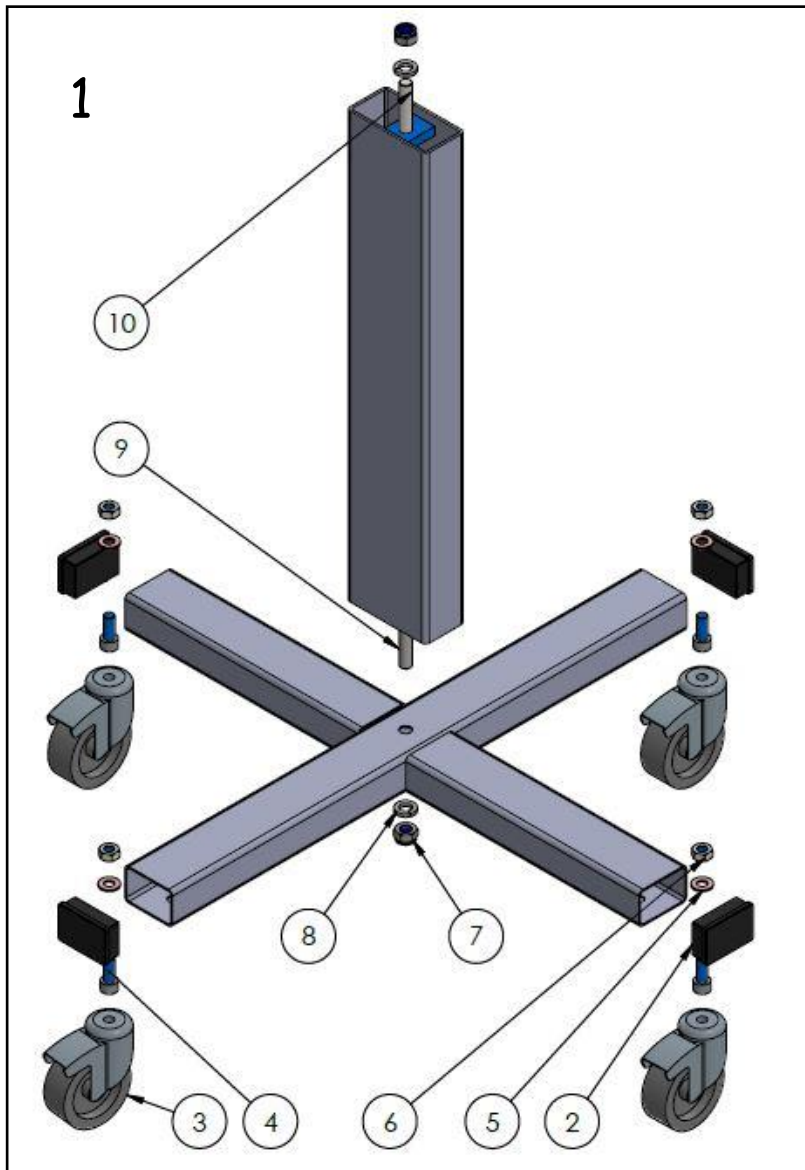
Rep	Order Ref	Description	Qty
12	1963	Nylon washer Ø 10 MU	4
13	5583A	Spring	2
14	5526	Stopper plate	1
15	5202	Nut Nylstop M6	2
16	5015A	Rotary string holder 3 flange	1
16	2844	Rotary string holder 2 flange	1
17	5128A	Bushing JSM 1214-08	1
20	2424A	Rotary holder 5015A +bushing	1
21	2845A	Rotary holder 2844 +bushing	1
30	5631	Holder plates set	1



Rep	Order Ref	Description	Qty
1	5534C	Feed-in	1
2	1986	Screw H M6 x 30-20	1
3	1951	Washer Ø 6 ZU	1
4	1985	Bearing 626 2RS	2
5	5530B	Feed-in support	1
6	5533	Bearing spacer	1
7	5581	Spring spacer	1
8	5179	Screw H M 4x 10	2
9	1949	Washer Ø 4 ZU	2
10	1987	Cylindrical pin Ø 5x20	1
11	5582	Spring	1
12	5202	Nut Nylstop M 6	1
13	5531A	Bracket	1
14	1984	Screw FHc M 8 x 16	2
20	2426	Complete bracket set	1



20



Rep	Order Ref	Description	Qty
1	8372	Complete assembled foot	1
2	2465	Square tube cap	4
3	1848	Wheel	4
4	5679	Screw CHc M10 x 30	4
5	5212	Washer Ø10 ZU	4
6	5210	Nut Nylstop M 10	4
7	1953	Nut Nylstop M 12	2
8	2671	Washer Grower Ø12	2
9	2255	Screw H M12 x 80	1
10	8371	Screw H M12 x 60	1