ZACMI®
FOOD & BEVERAGE PLANTS

SPARE PART LIST

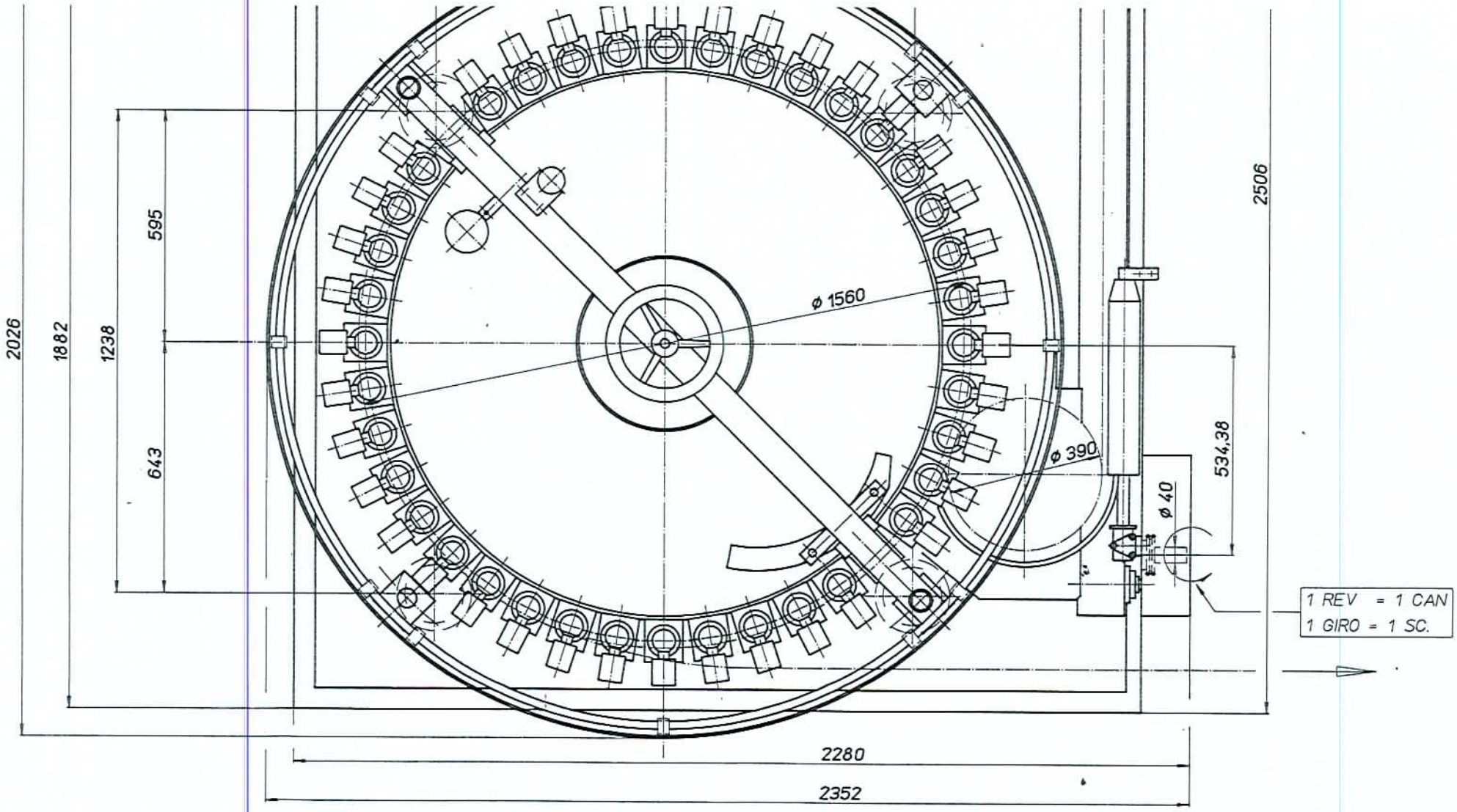
FOR

ROTATING VALVE PISTON FILLER

CE

Project:	**-**
Serial Number:	**0295-N-040/0003**
Item:	**1**
Year:	**1991**
Customer:	**CASTELBERRY -USA-**
Country:	**USA**

Rev. 01



DATI TECNICI :		TECHNICAL DATA :
N. PISTONI	40	NR. PISTONS
PASSO MACCHINA	122.52	MACHINE PITCH
ALTEZZA CONTENITORE Min. / Max.	90 / 180 mm	CAN HEIGHT Min. / Max.
DIAMETRO CONTENITORE Min. / Max.	50 / 78 mm	CAN DIAMETER Min. / Max.
PRODUZIONE	600 c.p.m.	PRODUCTION
POTENZA INSTALLATA	00 kW	POWER INSTALLED
CONSUMO ARIA	50/60 Nl/1'	AIR CONSUNPTION
PRESSIONE	6 bar	AIR PRESSURE
PESO NETTO	3800 kg	NET WEIGHT
PESO LORDO	4000 kg	EXPORT

	PISTON FILLER Øp 1560				
POS.	DENOMINAZIONE	N. PEZZI	MATERIALE	DIS. N.	NOTE
DIR.		ZANICHELLI MECCANICA S.p.A.		Dis. C.G.	
FILE		PARMA UNCMI ITALY		Visto	
Tratt. termico :	Tempo h	MACCHINA PISTON FILLER Øp 1560		Scala 1:10	
Peso grezzo Kg.	Peso finito Kg.	40 PISTONI	MOD.N. 02.95	Data 24-9-90	
COMMESSA N°	PEZZI N°	ROTARY PISTON FILLER		DISEGNO N° 900.11078/A	
		Sost. il n°	Sost. dal n°		
		COMPRESO NEL DIS.N°			

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000.09978	GUIDE SUPPORT
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000.08738/A	NO CAN-NO FILL
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	PNEUMATIC DIAGRAM
	LUBRICATOR DIAGRAM

II TECHNICAL DATA

- Production order	: S0130
- Number of piston	: 40
- Production	: up to 600 can per minute depending on product and can size.
- Can pitch	: 122,52 mm.
- Pitch diameter of the cans	: 1560 mm.
- Power required for the rotation of the machine	: 2 HP
- Filler drive	: 1 R. = 1 C.
- Seamer link-up	: CANCO 450
- Customer can size	: 300x407
- Dosage volumen	: ~~480 cc~~ 550 cc
- Rotation	: Anti-clockwise
- Tension	: 240 V. - 60 Hz. (110 V.)

For more details see the lay-out drawing nr. 900.11078/A.

II FUNCTION OF THE MACHINE

The rotary piston filler is used to volumetrically fill liquid or semisolid products.
This machine is able to fill a wide variety of products such as: tomato paste, tomato sauce, brine, jams, marmelades, fruit juices and creams, mineral and vegetable oils, etc. into tinplate or plastic cans and glass jars.

III DESCRIPTION OF THE WORKING PRINCIPLE

A table top chain conveyor transfers the containers to a feed screw, built with variable pitch to make can infeed easier, and which spaces and synchronises the cans with a transfer star.
Then the star transfers the containers from the feed screw to the valve bowl where the containers are filled with liquid.
On the infeed belt is positioned a ''can stop'' activated by a pneumatic piston, which stops the cans when there is not enough stock of cans in the feeding phase.
The containers, at the beginning of the filling area, activate the '' no can-no fill'' device which allows the first working operation to start.
During the rotation of the bowl, the working operations controlled by the roller rotation, follow one another on the piston-lifting group.
This circular shaped group is divided into four areas which correspond to the four working operations.

1 st. area - level cam

The valve plug which is moved by the ''no can-no fill'' system, turns for a fixed angle to permit the closure of the passage between the bowl and the cylinder, and the opening of the passage between the cylinder and the container.

2 nd. area - downward sloping cam

The piston, on descending, transfers the product, which is taken in previously, into the container.

N.B. - If there are no containers, the ''no can - no fill'' device does not invert the valve position, in this case, during the descent, the piston again pumps the product inside the bowl.

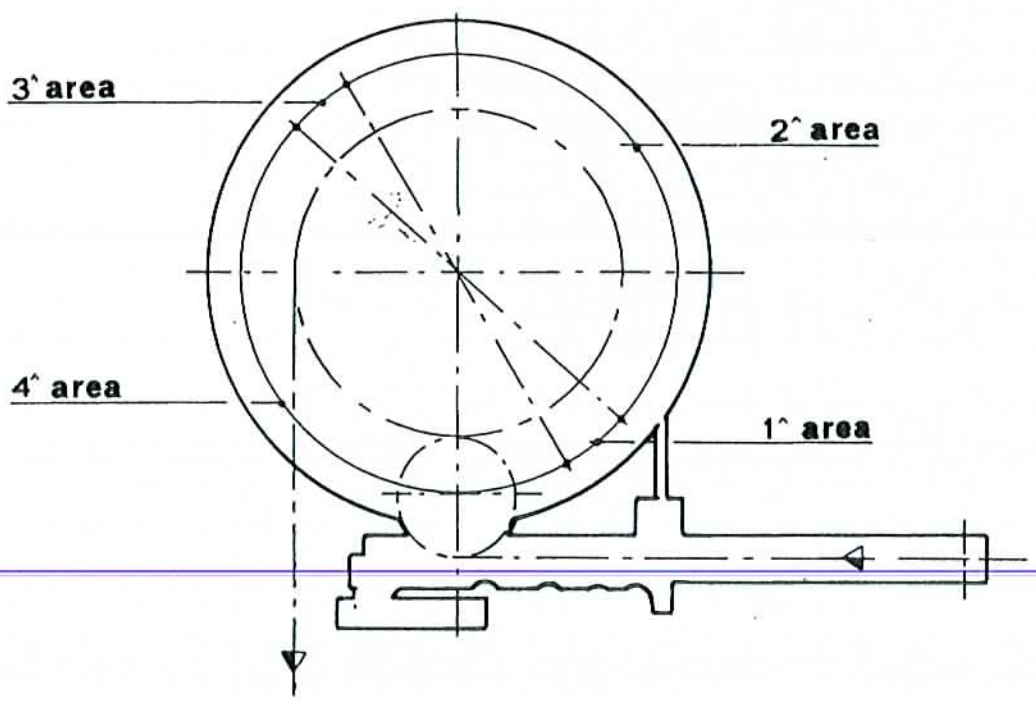
3 nd. area - level cam

It stops the product transfer from the cylinder to the container and the valve, moved by a suitable cam, goes into a position which allows the passage of the product from the bowl to the intake cylinder.

4 th. area - upward sloping cam

The piston, on descending, intakes a quantity of product which corresponds to the volume of the cylinder.
The duration of the upward and downward strokes (4 th. and 2 nd. area) corresponds approx to half a revolution of the bowl.

The containers are discharged in a straight line and a proper saber device moves them into the conveyor of the closing machine.



IV INSTALLATION

The piston filler is very firm and there are no problems in its positioning; it can work well even sited upon the floor.
On the other hand, the levelling is very important and can be done using a simple spirit level.
If the filler is linked up to other machines, they will be sited upon a common base on which they are already levelled. In this case, it will be necessary to level the common base.

SUPPLY SERVICE CONNECTIONS

Compressed air

The piston filler is equipped with 3 services, there are:

- no can - no fill device, it is composed of pneumatic piston;
- the "can-stop", it is composed of pneumatic piston;
- the liquid level control inside the tank;

Consumption is 100 NL/1' and pressure required is 6 Bar.

Eletric energy

It is necessary to connect the electric board to the machine through wires which are suitable for transmitting the electric power shown.

NOTE - On the connection, please check that the line voltage is the same as that for which the electric board has been prepared.

At the end, the can feeding line must be connected to the filler feeding belt.

V MACHINE MECHANISMES

The rotary piston filler is principally composed of the following elements:

Filler drive (part. G dwg.nr. 7243/A)

The drive of the rotary piston filler is realised through belts which transmit drive to the central shaft and infeed and discharge star.
For more details see drawing nr. 900.10862/A.

Filler support (part. D - dwg.nr. 7243/A)

The filler base is supported on four feet .

Infeed star (part. E - dwg.nr. 7243/A)

To transfer the cans from the Archimedean screw to the filling valves installed on its own periphery.
It is manufactured in plastic material.
For more details see drawing nr. 900.10858 .

Feeding belt and synchronisation screw (part. F - dwg.nr. 7243/A)

It is composed with a st.st. table top chain and it is motorized by shafts and gears enclosed in a waterproof support.
The table top chain slides on the lanes in PVC.
A shock absorber is placed at the entrance of the synchronisation screw, which has a progressive pitch, to avoid damage to containers.
For more details see drawing nr. 9965 - 9966 - 9978 - 9968/B.

Chapter 7
Spare parts table

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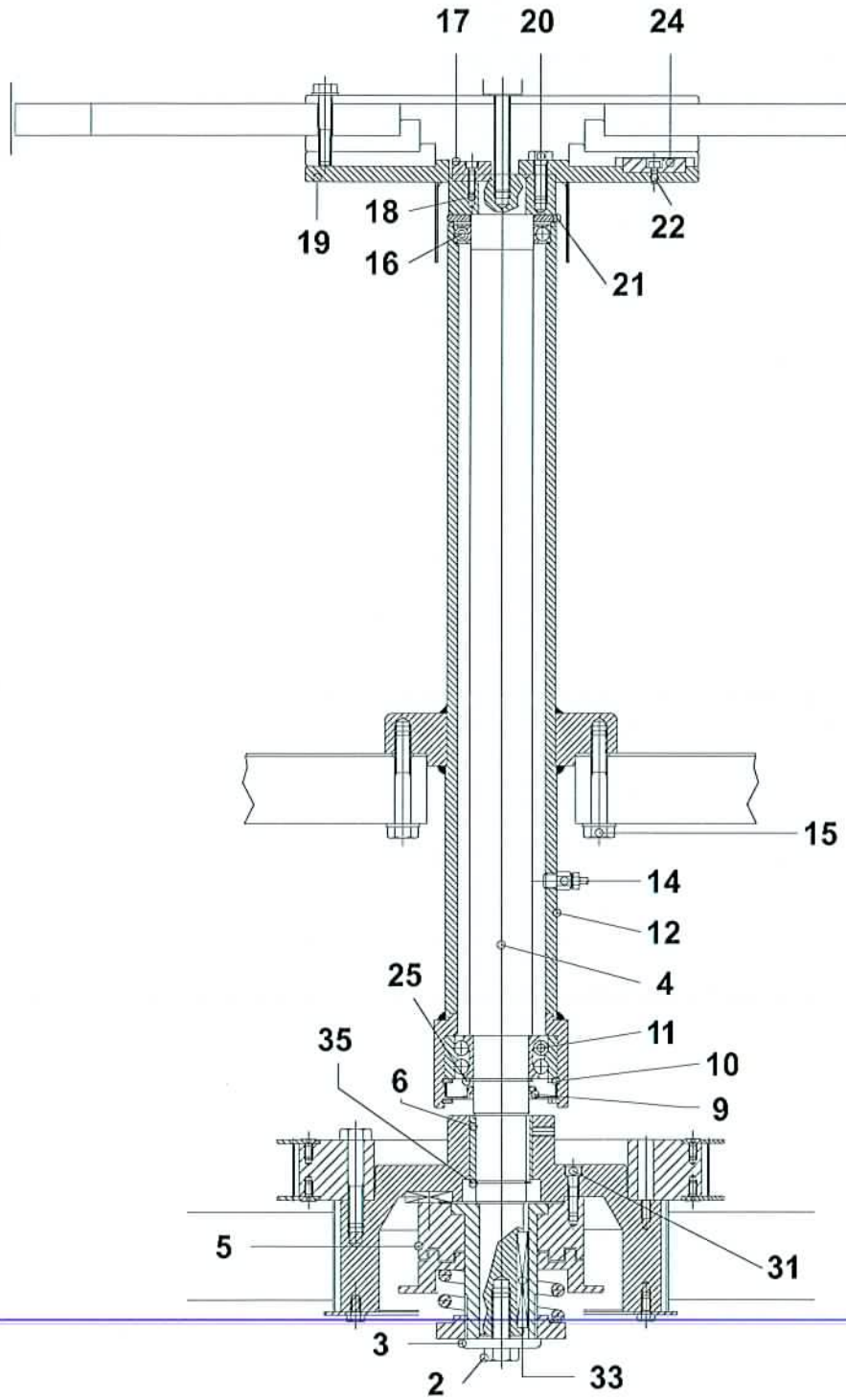
Dwg. 602900683--- GR.STELLA IN-OUT LIMITATORE STAR UNIT



Dwg. reference n° 602900683---
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ITEM	DESCRIPTION	CODE	Q.TY
2	VITE TE M12x35 A.304 U.5739	1W04VTG12035	1
	SCREW		
3	RONDELLA PIANA 12X50 RGS	1W01RP125060	1
	WASHER		
4	ALBERO STELLA PRED.X LIMITAT.	502783389---	1
	SHAFT		
5	LIMITATORE LASS 110 FAS B	510621036---	1
	LIMITER		
6	BRONZINA ØI=32 ØE=40 H=40	502783390---	1
	BUSHING		
9	PARAOLI 35X72X10	1GPN03507210	1
	OIL RETAINER		
10	SEEGER X FORI D.072	1CA-BR072---	2
	ELASTIC RING		
11	CUSCINETTI 3207	1CU--3207---	1
	BALL BEARING		
12	SUPPORTO STELLA	502783119---	1
	SUPPORT		
14	RACCORDO ING. DIRITTO ATT.18G	1PZADMC-0418	1
	CONNECTION		
15	VITE TE M10x60 A.304 U.5737	1W04VTG10060	4
	SCREW		
16	CUSCINETTO 61908-RS1	1CU-61908RS1	1
	BEARING		
17	CHIAVETTA	502014038B--	1
	KEY		
18	VITE TCEI M4x15 A.304 U.5931	1W04VEG04015	1
	SCREW		
19	SUPPORTO STELLE	502336244A--	1
	SUPPORT		
20	VITE TE M8X25 A.304 U.5739	1W04VTG08025	4
	SCREW		
21	DISTANZIERE	502783122---	1
	SPACER		
22	VITE TCEI M4x10 A.304 U.5931	1W04VEG04010	1
	SCREW		

ITEM	DESCRIPTION	CODE	Q.TY
24	CHIAVETTA	502336247---	1
	KEY		
25	SEEGER X ALB. D.035	1CA-WR035---	1
	EXTERNAL RETAINING RING		
31	VITE TCEI M6x25 A.304 U.5931	1W04VEG06025	6
	SCREW		
7 33	LING. A 8x7x60 C40 U.6604	1W40LA-08060	1
	TAB		
35	SEEGER X ALB. D.32 UNI7437	1CA-WR032---	1
	RETAINING RING		

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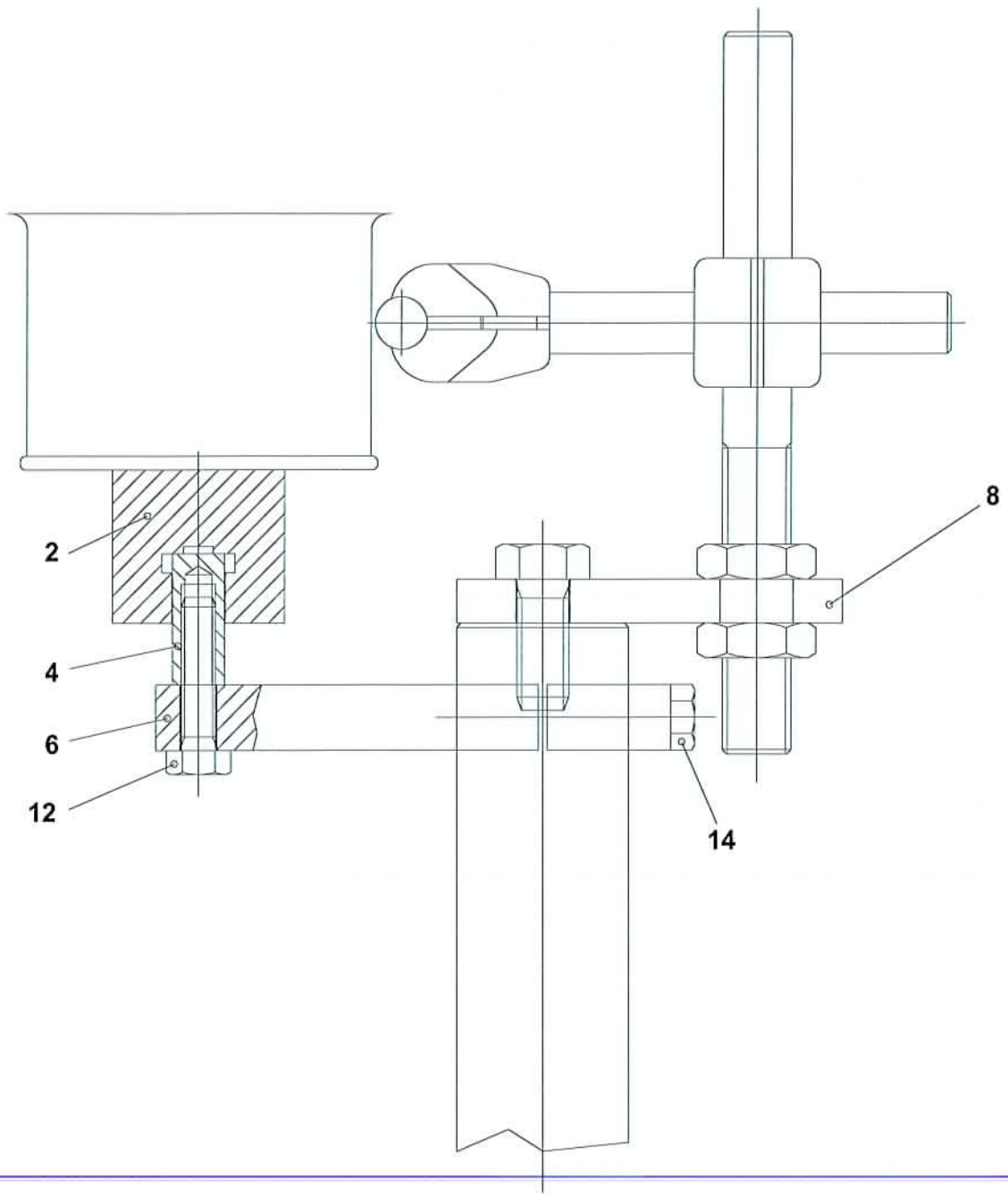
Dwg. 602952075--- MODIFICA PIANO DI LAVORO
WORKING PLAN



Dwg. reference n° 602952075---
Research file 602952075---_0_R00.eps

ITEM	DESCRIPTION	CODE	Q.TY
2	PIANO DI LAVORO	502952046---	1
	WORKING PLAN		
4	PIATTO	502952048---	1
	PLATE		
6	MORSETTO	502952073---	5
	CLAMP		
8	STAFFA	502952074---	5
	BRACKET		
10	### MATERIALI COMM.LI ###	1----------	1
	TRADE MATERIAL		
12	VITE TE M8X35 A.304 U.5737	1W04VTG08035	5
	SCREW		
14	VITE TE M8X50 A.304 U.5737	1W04VTG08050	10
	SCREW		

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Dwg. 602952205--- **GR.NO CAN-NO FILL CAMMA**
NO CAN NO FILL UNIT

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TABLE 1

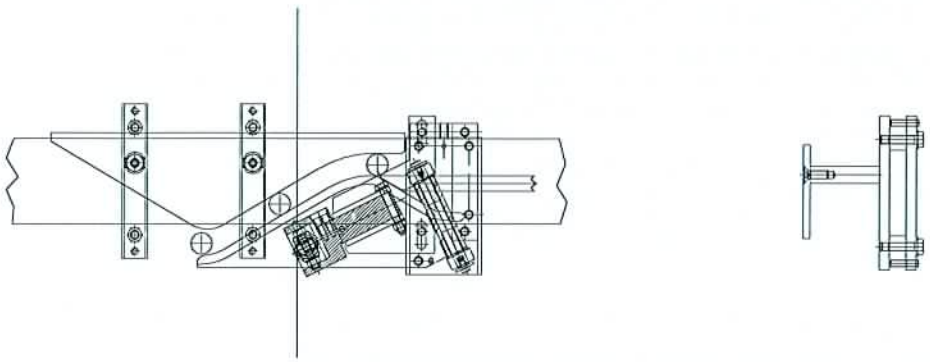
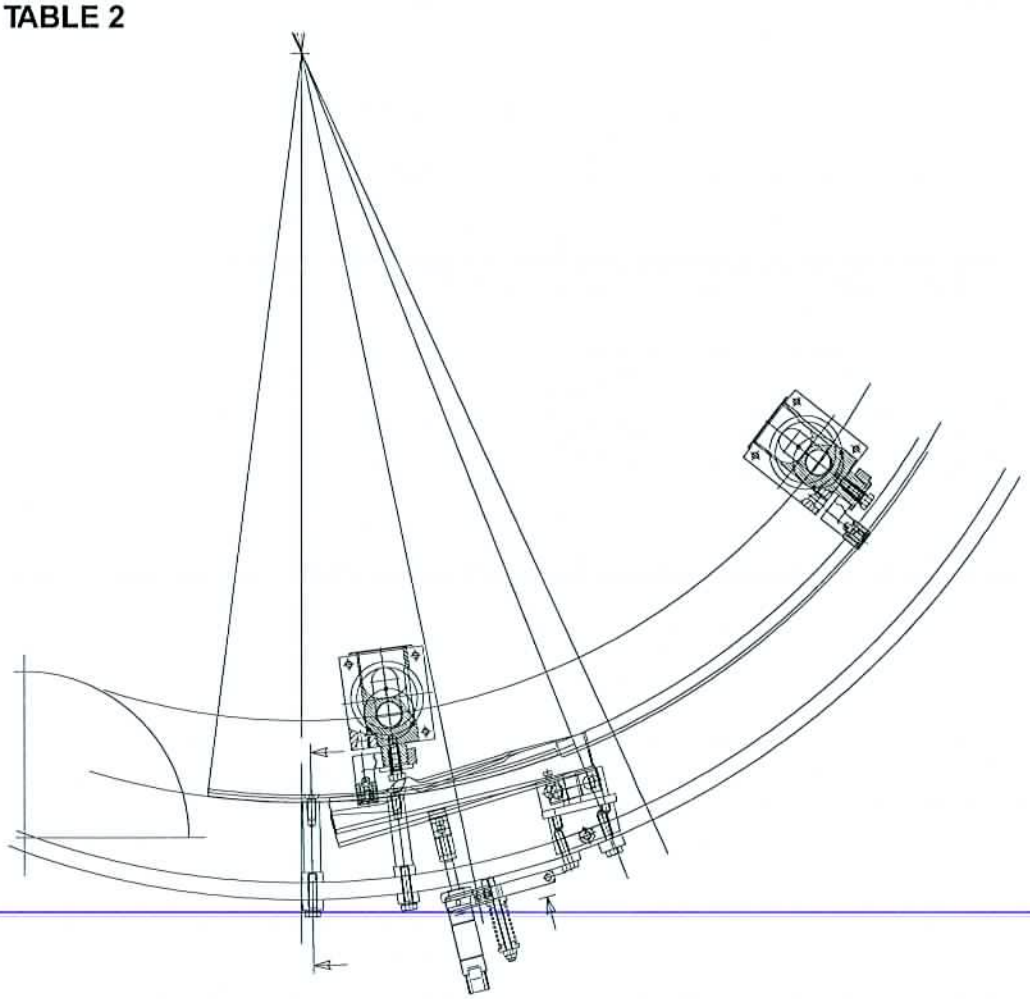


TABLE 2



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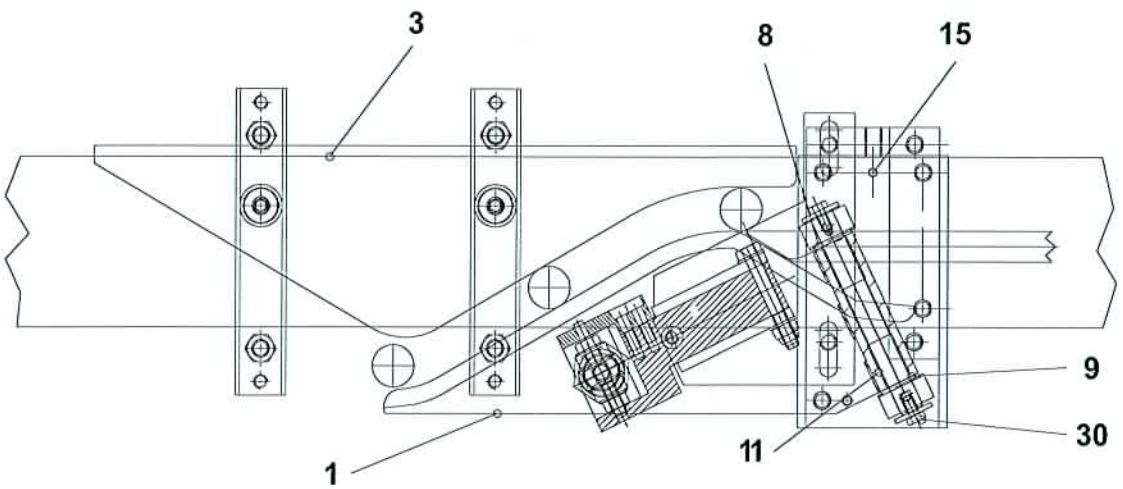
Dwg. 602952205--- **GR.NO CAN-NO FILL CAMMA**
NO CAN NO FILL UNIT

TAB 1



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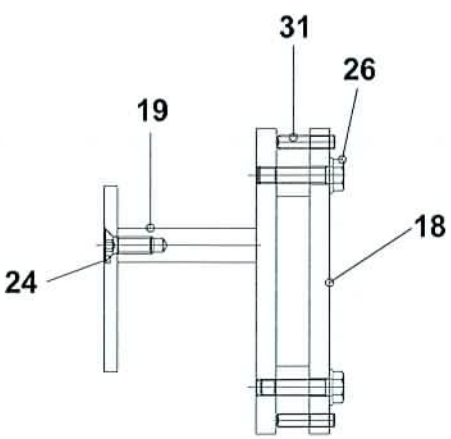

SEZ. B-B

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Dwg. 602952205--- GR.NO CAN-NO FILL CAMMA NO CAN NO FILL UNIT

TAB 2

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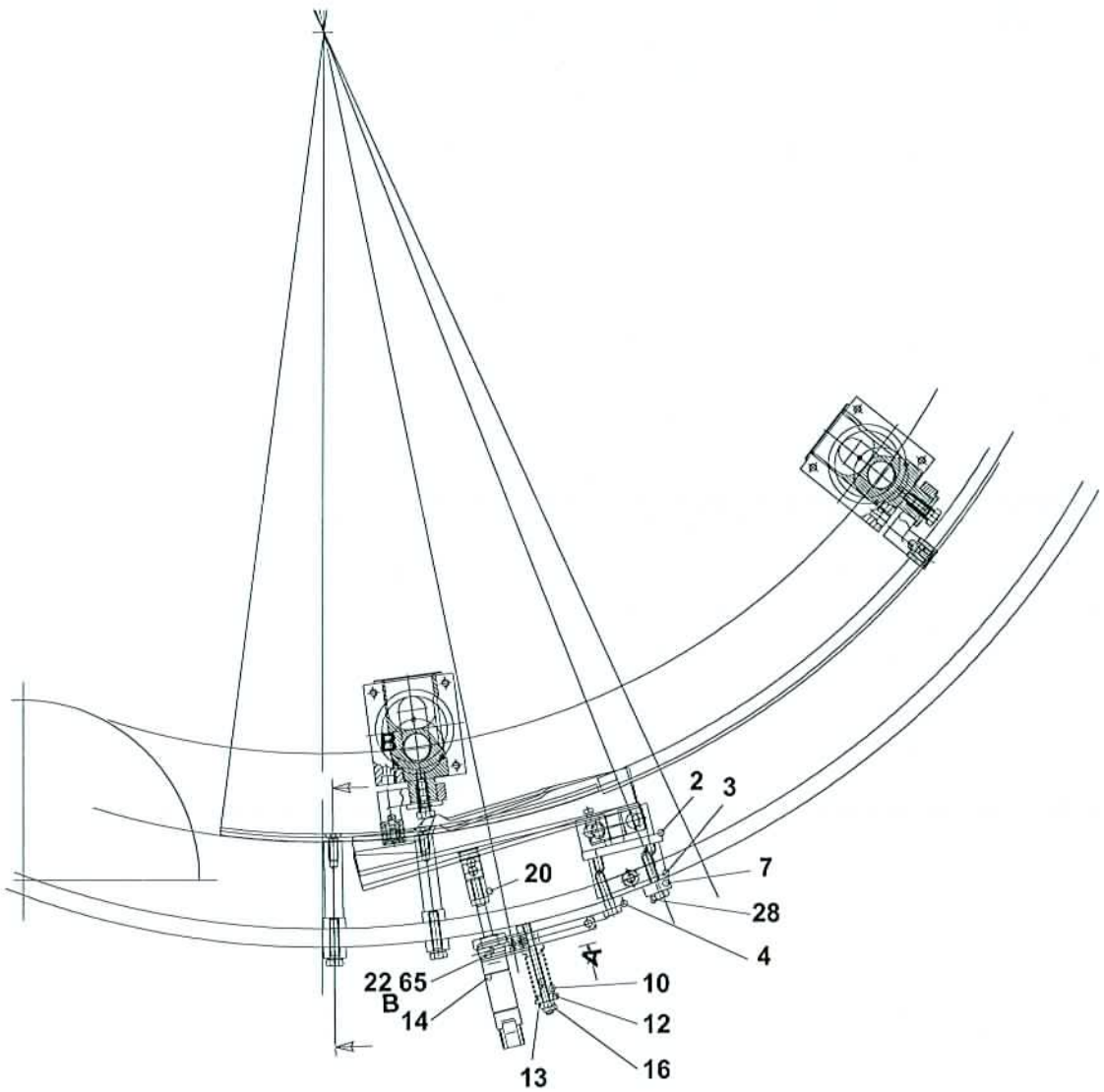

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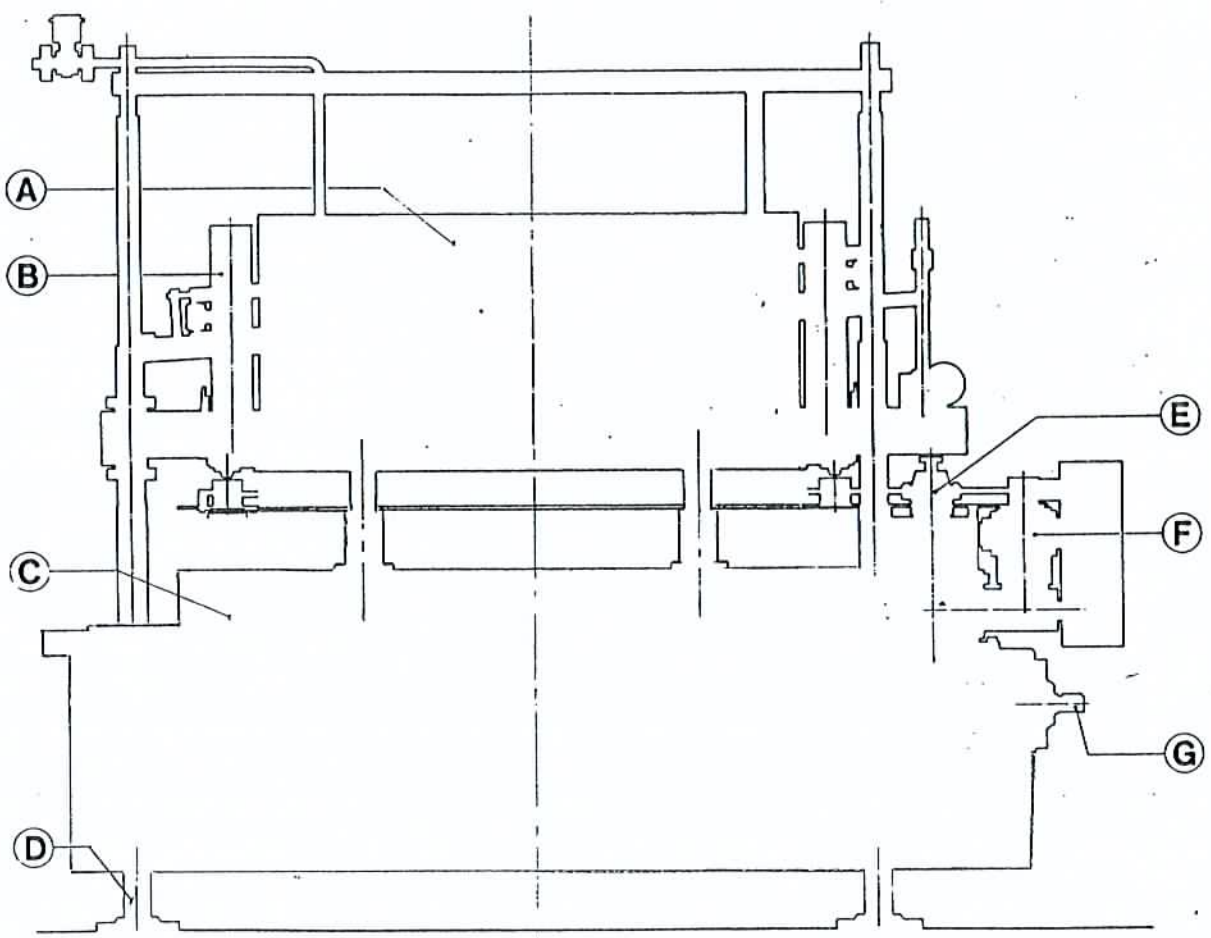
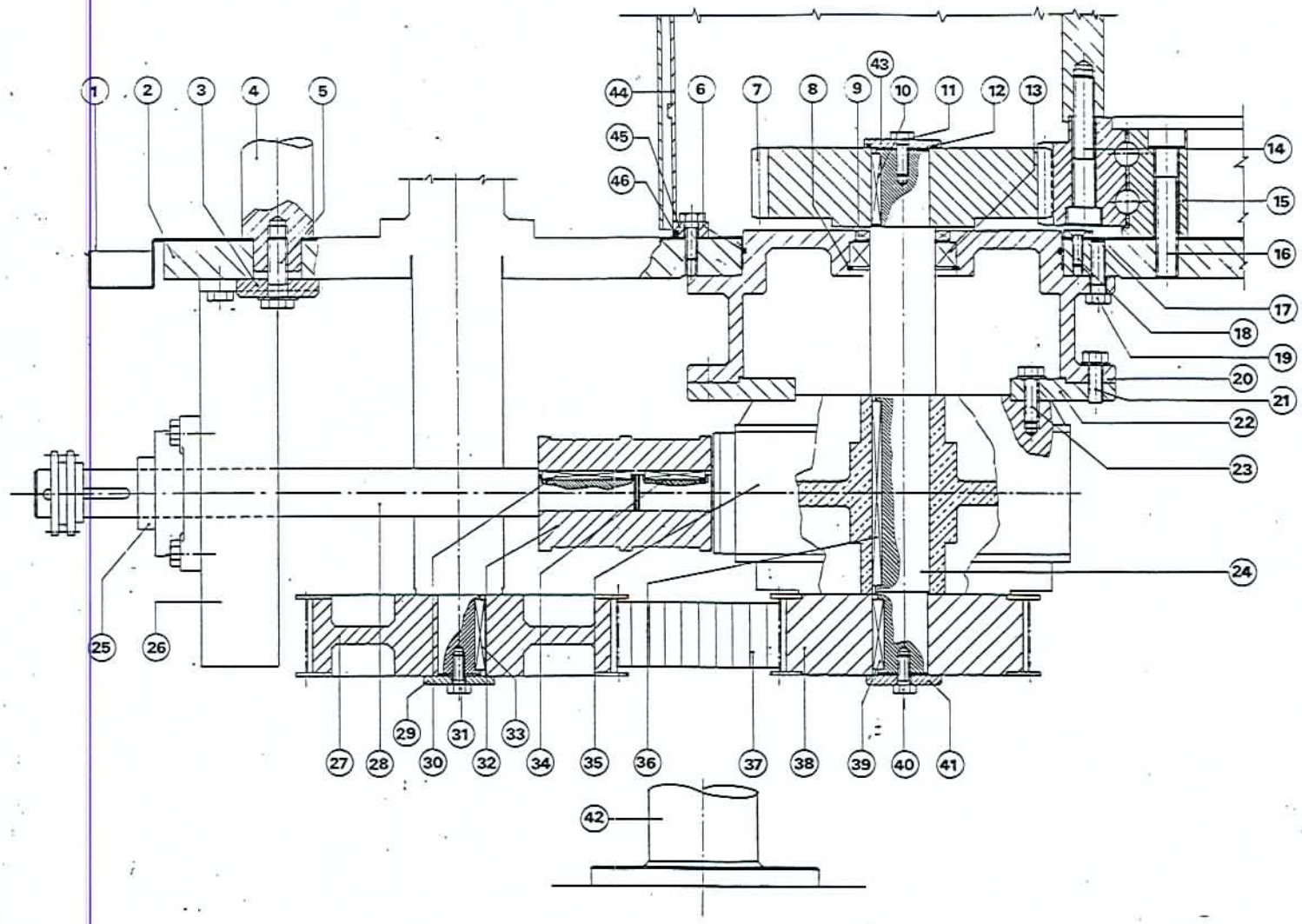
ITEM	DESCRIPTION	CODE	Q.TY
1	CAMMA DI APERTURA	502952212---	1
	CAM		
2	PIASTRA	502894121---	1
	PLATE		
3	PIATTO D'ATTACCO CAMMA	502952206---	1
	PLATE		
4	PIATTO FORCELLA	502952208---	1
	PLATE		
5	FORCELLA	502894119---	1
	FORK		
6	BRACCIO FORCELLA	502894120---	1
	ARM		
7	CONTROPIATTO	502952209---	1
	COUNTERPLATE		
8	DISTANZIERE	502894123---	2
	SPACER		
9	PERNO	502894122---	1
	PIN		
10	MOLLA ØP=20.5 L=60	402883109---	1
	SPRING		
11	BRONZ.GLYCOD.PG141625F	1BNG01401625	2
	BUSHING		
12	RONDELLA	502015202---	2
	WASHER		
13	BARRA FILETTATA M8X90 INOX	502895025---	1
	THREADED BAR		
14	CILINDRI 304 25X10 822034201	1PC025010AOH	1
	PNEUMATIC CYLINDER		
15	SPINE CIL. 6x20 A.304 U.1707	1W04SC060020	2
	PEG		
16	DADO AUTOBL. M8 A.304 U.7473	1W04DAAG08	1
	NUT		
17	CONTROCAMMA DI APERTURA	502952210---	1
	COUNTERCAM		
18	CONTROPIATTO PER CONTROCAMMA	502952211---	2
	COUNTERPLATE		

ITEM	DESCRIPTION	CODE	Q.TY
19	MORSETTO PER CONTROCAMMA	502952207---	2
	CLAMP		
20	FORCELLA M10x1,25 D=10	502910475---	1
	FORK		
22	CERNIERE WBN 25 FESTO	1PDFC-WBN025	1
	HINGE		
7 24	VITE TSPEI M10x30 A.304 U.5933	1W04VSP10030	2
	SCREW		
26	VITE TE M10x45 A.304 U.5737	1W04VTG10045	4
	SCREW		
28	VITE TE M10x30 A.304 U.5739	1W04VTG10030	4
	SCREW		
30	VITE TE M6x12 A.304	1W04VTG06012	2
	SCREW		
31	GRANO STEI M8x35 A.304 U.5923	1W04GEC08035	4
	RETAINER SCREW		



DIS.N
DWG.NR. 7243/A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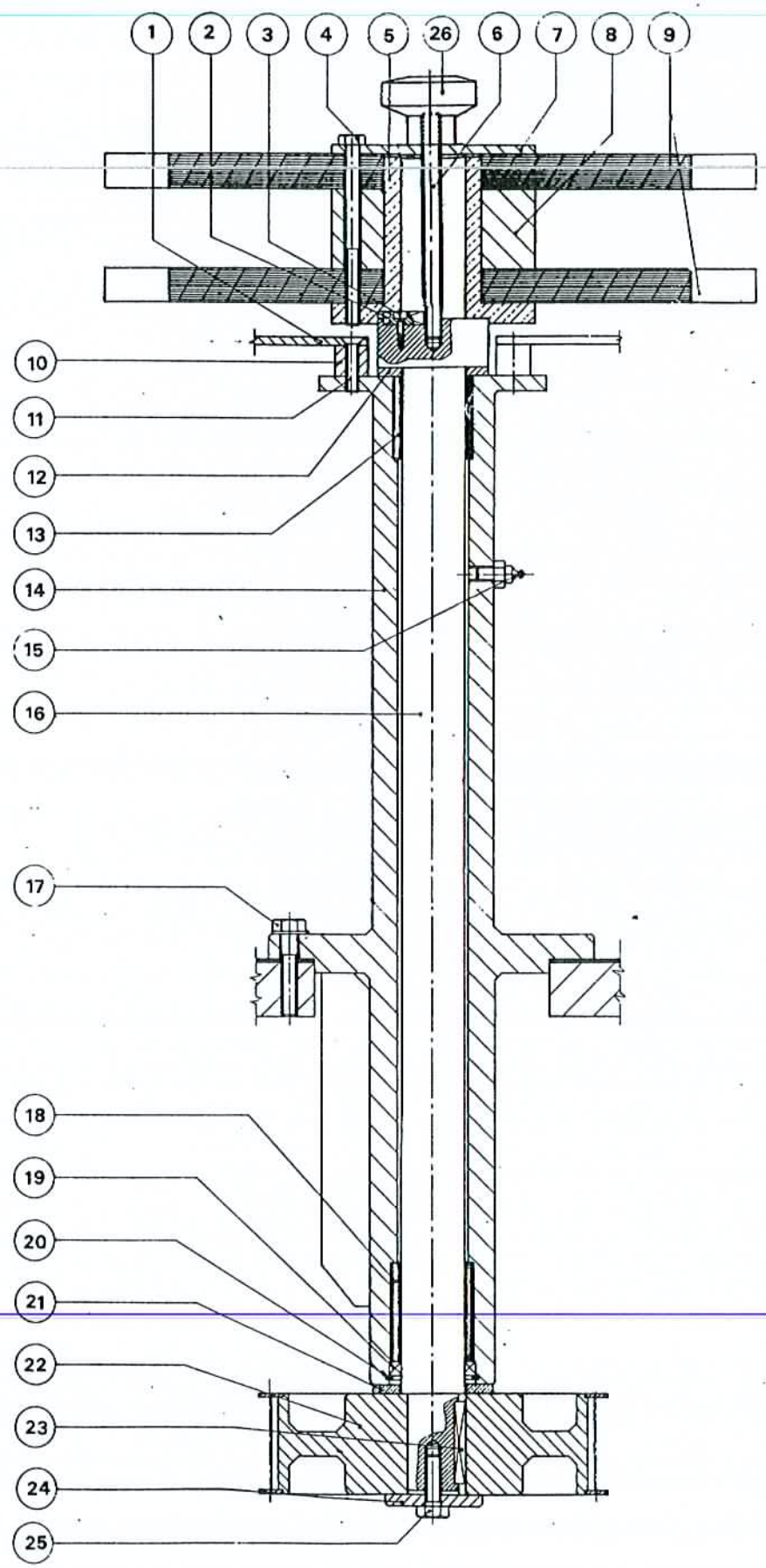
LOWER PART - DWG.NR. 900.10862/A (PART. "C" OF THE DWG.NR. 7243/A)

ITEM	DENOMINATION	NR. OF PART.
1	Base cover	02.95.0019/A
2	Base	02.95.0018/A
3	Washer	02.78.1055
4	Column	02.88.0072 02.88.0072/A
5	Screw TE 20Mx60	Comm.
6	O-Ring diam. 3,53 Sv.1000	Comm.
7	Gear	02.78.1013
8	Circlip for hole diam. 90	Comm.
9	Seal MIM 55-80-8	Comm.
10	Key 14x9x60	Comm.
11	Screw TE 12Mx30	Comm.
12	O-Ring 164	Comm.
13	Ball bearing 6011 2RS	Comm.
14	Screw TCEI 18MAx110	Comm.
15	Ball-bearing center plate E 2.098-240 ROSSI	02.78.1012
16	Screw TCEI 18MAx110	Comm.
17	Ring	02.78.1016
18	Screw TSPEI M8x30	Comm.
19	Screw TE M12x45	Comm.
20	Support	02.78.1015/A
21	Screw M12	Comm.
22	Flange	02.78.1062
23	Screw TE M12x30	Comm.
24	Shaft	02.78.1017/B
25	Support UCF 208 KOYO	Comm.
26	Support	02.78.1039/B
27	Pulley HTD-SBF	02.78.1021/B
28	Shaft	02.78.1038
29	Washer	02.78.1036
30	Key 8x7x70	Comm.
31	Screw TE 10Mx35	Comm.
32	Joint	02.89.0091
33	Key B 10x8x50	Comm.

ITEM	DENOMINATION	NR. OF PART.
34	Key	Comm.
35	Reducer VF 130/P r=1:10	
	B7 - BONFIGLIOLI	Comm.
36	Key 14x9x150	Comm.
37	Belt HTD 50 - Sv.1600 - P8	Comm.
38	Pulley HTD-SBF	02.78.1020/B
39	Key 14x9x50	Comm.
40	Screw TE M12x35	Comm.
41	Washer	02.89.1054
42	Foot	02.95.0028
		02.95.0029
	Beam	02.78.1057
43	Washer	02.71.1031
44	Band	02.95.0014
45	Ring	02.95.0015
46	O-Ring diam. 3,53 - Sv. 4874	Comm.

(Dwg.reference n. 02.95.0000/A)



900.10858

INFEED STAR - DWG.NR. 900.10858 (PART "E" OF THE DWG.NR. 7243/A)

ITEM	DENOMINATION	NR.OF PART.
1	Working plane	502.95.0022/A
2	Key	02.01.4038
3	Screw TCEI M4x15	Comm.
4	Screw TE M8x100	Comm.
5	Hub	02.88.0073
6	Tension rod M10x130	Comm.
7	Star cover	02.15.729
8	Spacer	02.88.0023
9	Star	02.78.0012/40
10	Spacer	02.78.0066
11	Screw TSPEI M8x45	Comm.
12	Spacer	02.78.0016
13	Bushing 191/45 FIPS	Comm.
14	Support	02.78.1034/B
15	Lubricator 1/8"	Comm.
16	Star shaft	02.78.1035/E
17	Screw TE M10x50	Comm.
18	Bushing 191/45 FIPS	Comm.
19	Seal DI 175	Comm.
20	Circlip for hole diam.58	Comm.
21	Spacer	02.78.0016
22	Pulley	02.78.1021/B
23	Key B 10x8x50	Comm.
24	Washer	02.78.1036
25	Screw M10x35	Comm.
26	Knob VC 192/50-B-110 Elesa	Comm.

(Dwg. reference nr. 02.95.0000/A)

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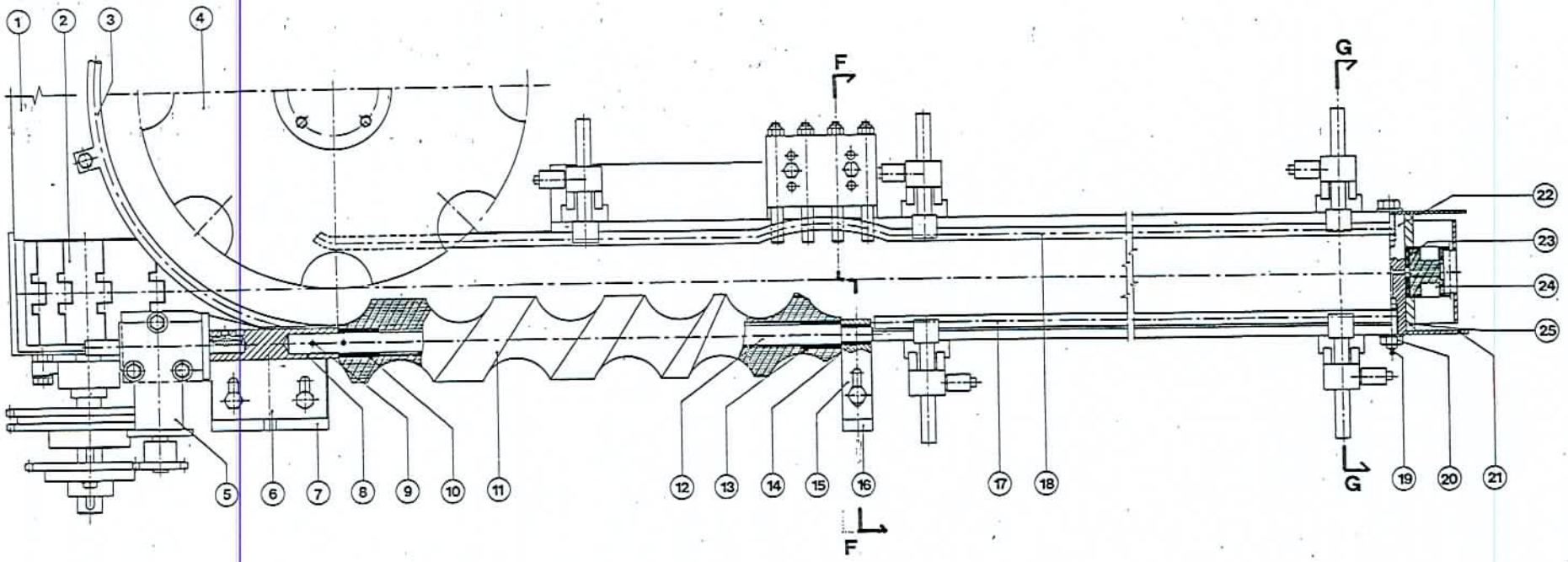

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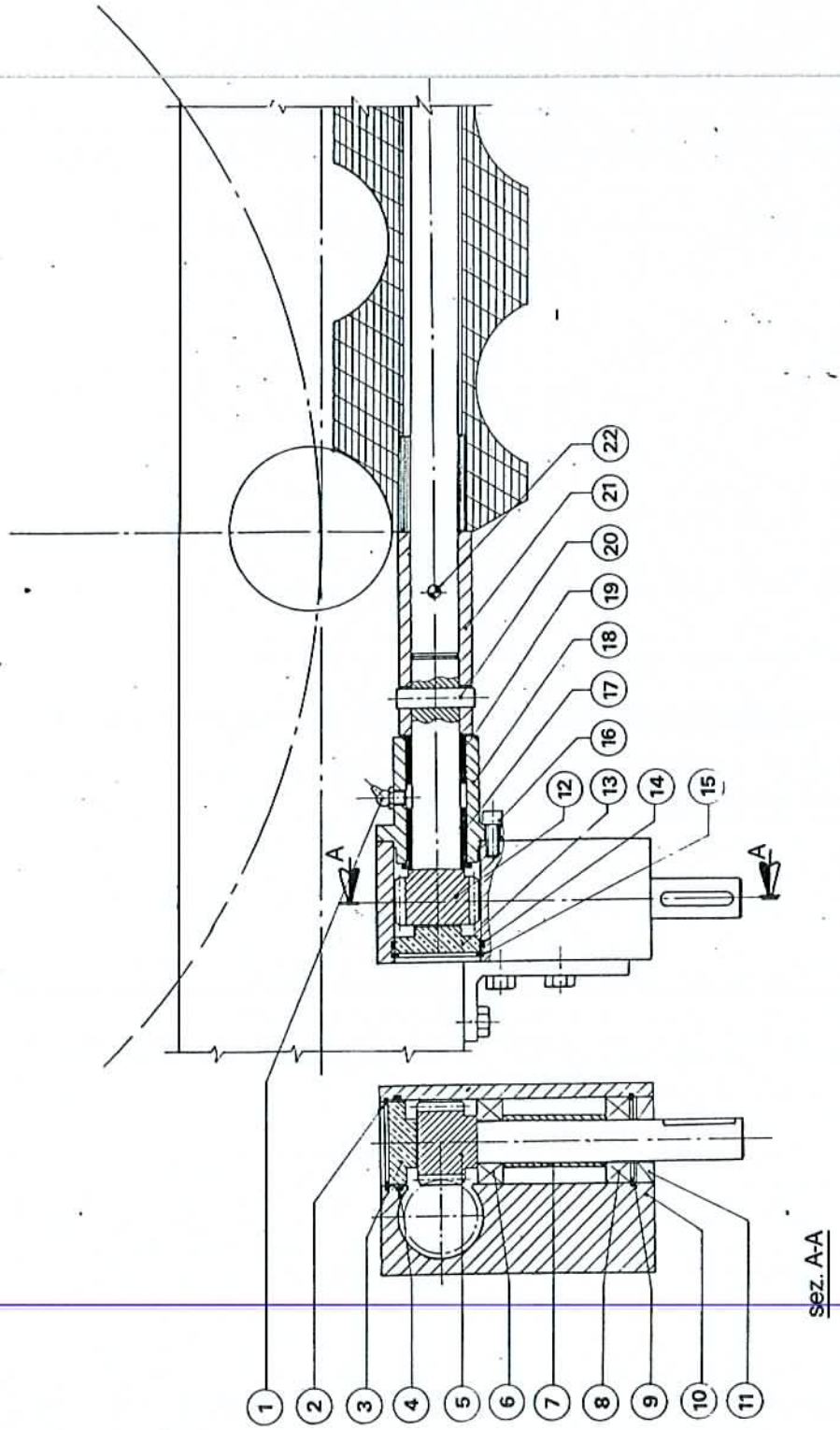
FEEDING BELT - DWG.NR. 9965 (PART. "F" OF THE DWG. NR. 7243/A)

ITEM	DENOMINATION	NR.OF PART.
1	Working plane	502.95.0022/A
2	Table top chain delrin	Comm.
3	Guide diam. 73	02.78.213/E
4	Star	02.78.12/40
5	Transmission group	02.79.0300
6	Support	02.80.1047
7	Not installed	/
8	Joint shaft	02.79.0304/B
9	Spina	Comm.
10	Not installed	/
11	Archimedean screw Diam. 80	02.78.205/D
12	Shaft	02.78.205/D
13	Not installed	/
14	Bushing 1732/15	02.33.821
15	Support	02.64.145
16	Bracket	02.01.1122
17	Guide	/
18	Guide	/
19	Lubricator 6 M	Comm.
20	Screw	02.42.603
21	Belt frame	02.78.0206/C
22	Pin	02.15.491/80
23	Bushing 1515/30 FIPS	Comm.
24	Idler wheel	02.33.2103
25	Spacer	02.15.489/83

(Dwg.reference n.0278.200/G)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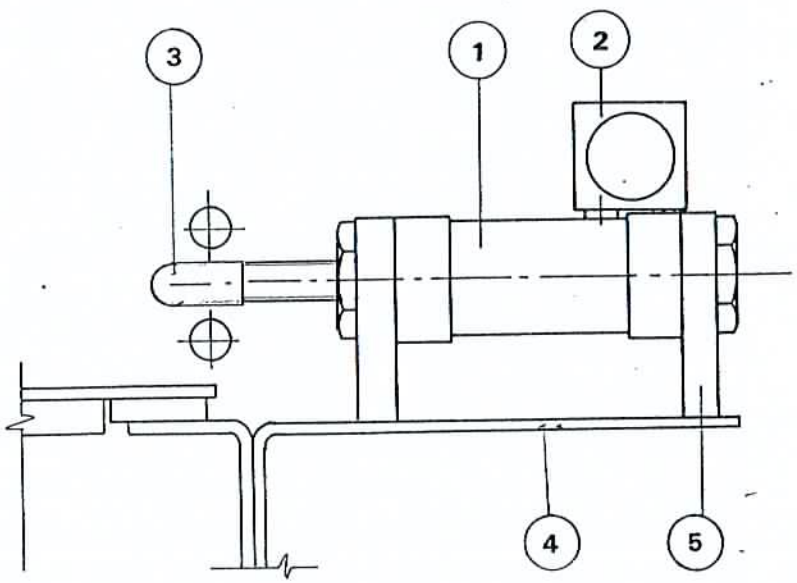
ARCHIMEDEAN SCREW TRANSMISSION GROUP - DWG.N. 900.10864 (ITEM 5 OF THE DWG.N. 9965)

ITEM	DENOMINATION	NR. OF PART.
1	Lubricator	Comm.
2	Circlip	Comm.
3	Cover	02.79.0306
4	O-Ring 028 DOWTY	Comm.
5	Gear	02.79.0308
6	Ball bearing 6003	Comm.
7	Spacer	02.79.0307
8	Ball bearing 6003	Comm.
9	Circlip	Comm.
10	Gear box	02.79.0302
11	Seal MIM 17/35/7	Comm.
12	Gear	02.79.0305
13	Cover	02.79.0306
14	O-Ring 028 DOWTY	Comm.
15	Circlip	Comm.
16	Screw M5	Comm.
17	Bushing 20/25/22	Comm.
18	Support	02.79.0303
19	Bushing 20/25/22	Comm.
20	Pin	Comm.
21	Joint	02.79.0304/B
22	Pin	Comm.

(Dwg. reference n. 02.79.0300)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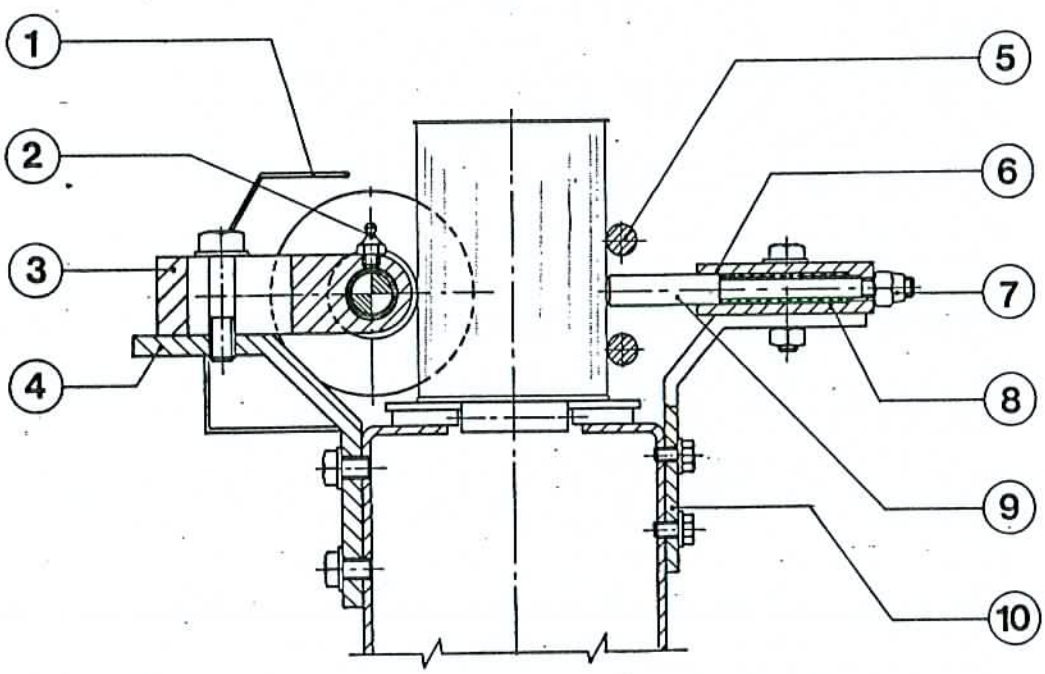
CAN-STOP PARTICULAR - DWG.NR. 10245/B

ITEM	DENOMINATION	NR.OF PART.
1	Pneumatic piston DGS 25-25 FESTO	Comm.
2	Pressure reducer for compressed air type MINI REG 08A-ATLAS	Comm.
3	Point	02.78.234
4	Bracket	02.78.233
5	Support HB 25 FESTO	Comm.

(Dwg. reference nr. 02.78.0232)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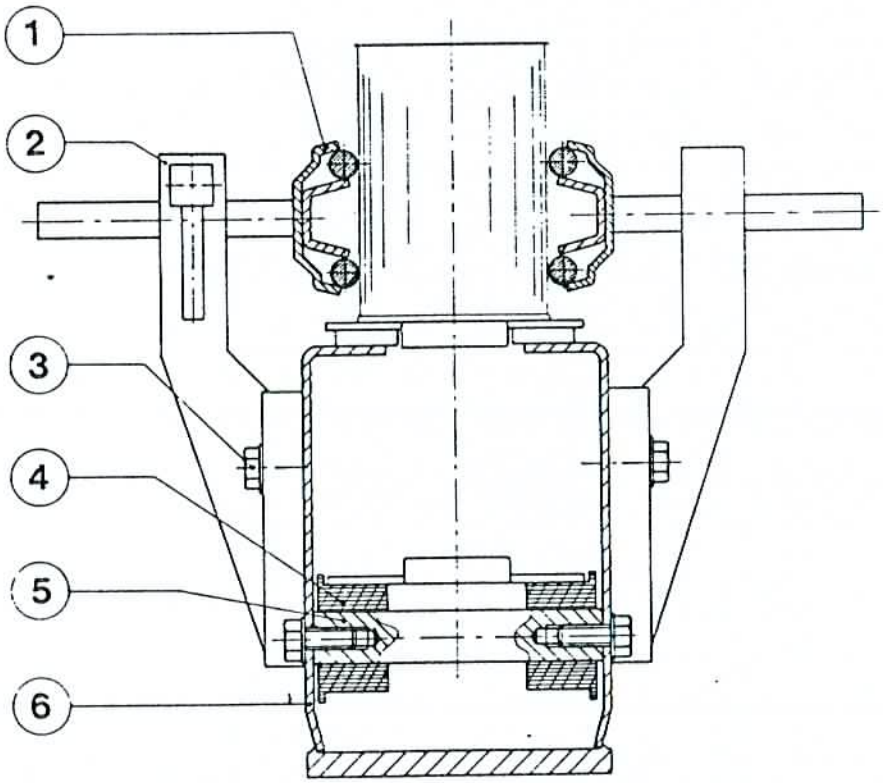
SHOCK ABSORBER - DWG NR. 9966 (SECTION "F-F" OF THE DWG.NR. 9965)

ITEM	DENOMINATION	NR.OF PART.
1	Guard	/
2	Lubricator 6 MA	Comm.
3	Support	02.64.145
4	Bracket	02.01.1122
5	Guide	/
6	Shock absorber	02.15.146
7	Self-locking nut 8 MA	Comm.
8	Spring	02.15.149
9	Pin	02.15.147
10	Bracket	02.15.148

(Dwg. reference n. 02.78.200/G)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GUIDE SUPPORT - DWG.NR. 9978 (SECTION "G-G" OF THE DWG.NR. 9965)

ITEM	DENOMINATION	NR.OF PART.
1	Guide clamp part 50 Art. 5100 MARBETT	Comm.
2	Support part. 89 Art.5075 MARBETT	Comm.
3	Screw	Comm.
4	Roller part. 73 Art.5068 MARBETT	Comm.
5	Pin	02.33.2113
6	Belt frame	02.78.206/C

(Dwg. reference n. 02.78.200/G)

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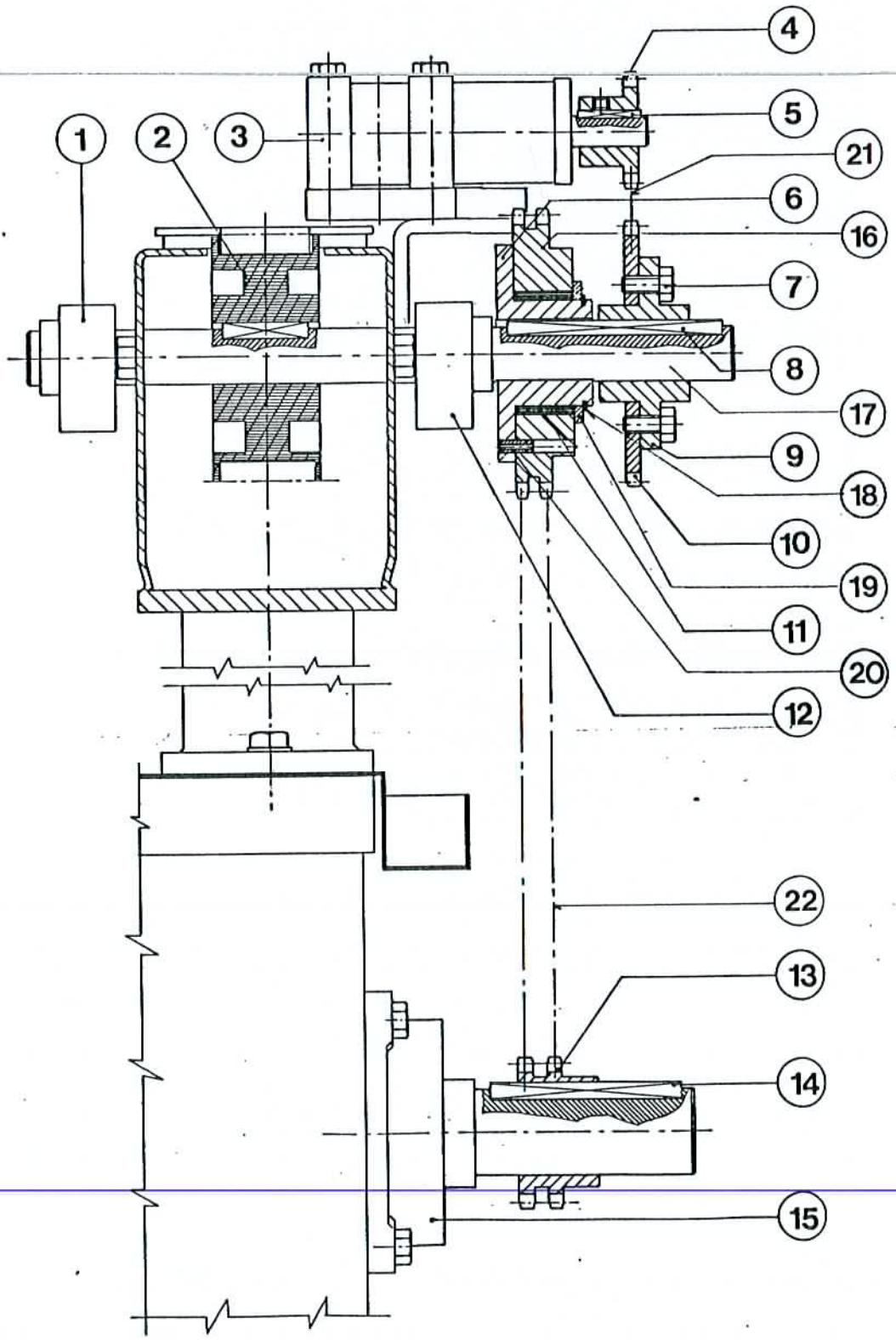


9968/B

ARCHIMEDEAN SCREW AND CONVEYOR BELT MOTORISATION - DWG.NR. 9968/B (PART. "F" OF THE DWG. NR. 7243/A)

ITEM	DENOMINATION	NR. OF PART.
1	Support UCFL 205	Comm.
2	Wheel MARBETT	Comm.
3	Trasmission group	02.79.0300
4	Pinion Z 12 - 1/2" S	02.78.225
5	Key	Comm.
6	Hub	02.78.239
7	Screw	Comm.
8	Key	Comm.
9	Hub	02.78.217
10	Crown gear Z 30 -1/2" S	02.78.226
11	Bushing	02.78.237
12	Support UCFL 205	Comm.
13	Pinion Z 16 - 1/2" D	02.78.208/40
14	Key	Comm.
15	Support UCF 208	Comm.
16	Pinion Z 40 - 1/2" D	02.80.1045
17	Shaft	02.78.207/A
18	Circlip	Comm.
19	Washer	02.78.238
20	Torque pin diam. 4x20	Comm.

(Dwg.reference n. 02.78.200/G)

Upper part (part. A - dwg.nr. 7243/A)

The upper part is made up by tank that is realized in AISI 304 st st., has the plug and pistons installed on the outside.
The piston filler has a probe level regulator which activates a butterfly valve DN 65 with pneumatic activator.

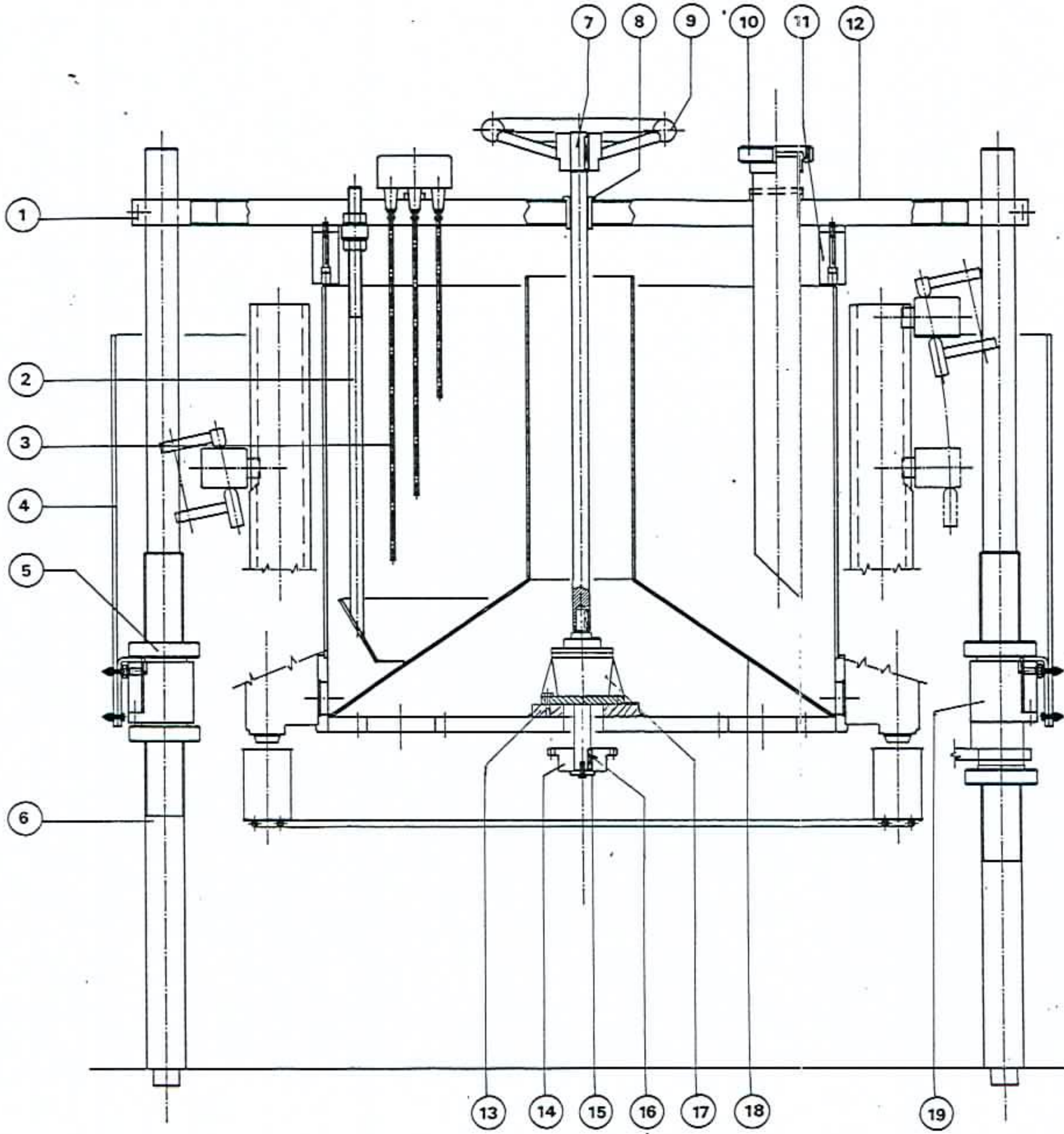
For more details see to dwg.nr. 900.10860/A.

Device to regulate the tank height

It is realized by a reducer, by means of a central handwheel (item 9 dwg. 900.10860/A). This reducer by means of a chain drive rotates, in synchronisation, the threaded rods (item 21 dwg. 900.10869), which, by screwing on to the flywheel (item 31 dwg. 900.10869), raise or lower the valve bearing tank.
For more details, see dwg.n. 900.10869.

Plug and piston (part. B - dwg.nr. 7243/A)

The group is realized in AISI 304 st.st. or other sanitary materials.
For more details refer to drawing n. 900.10646.

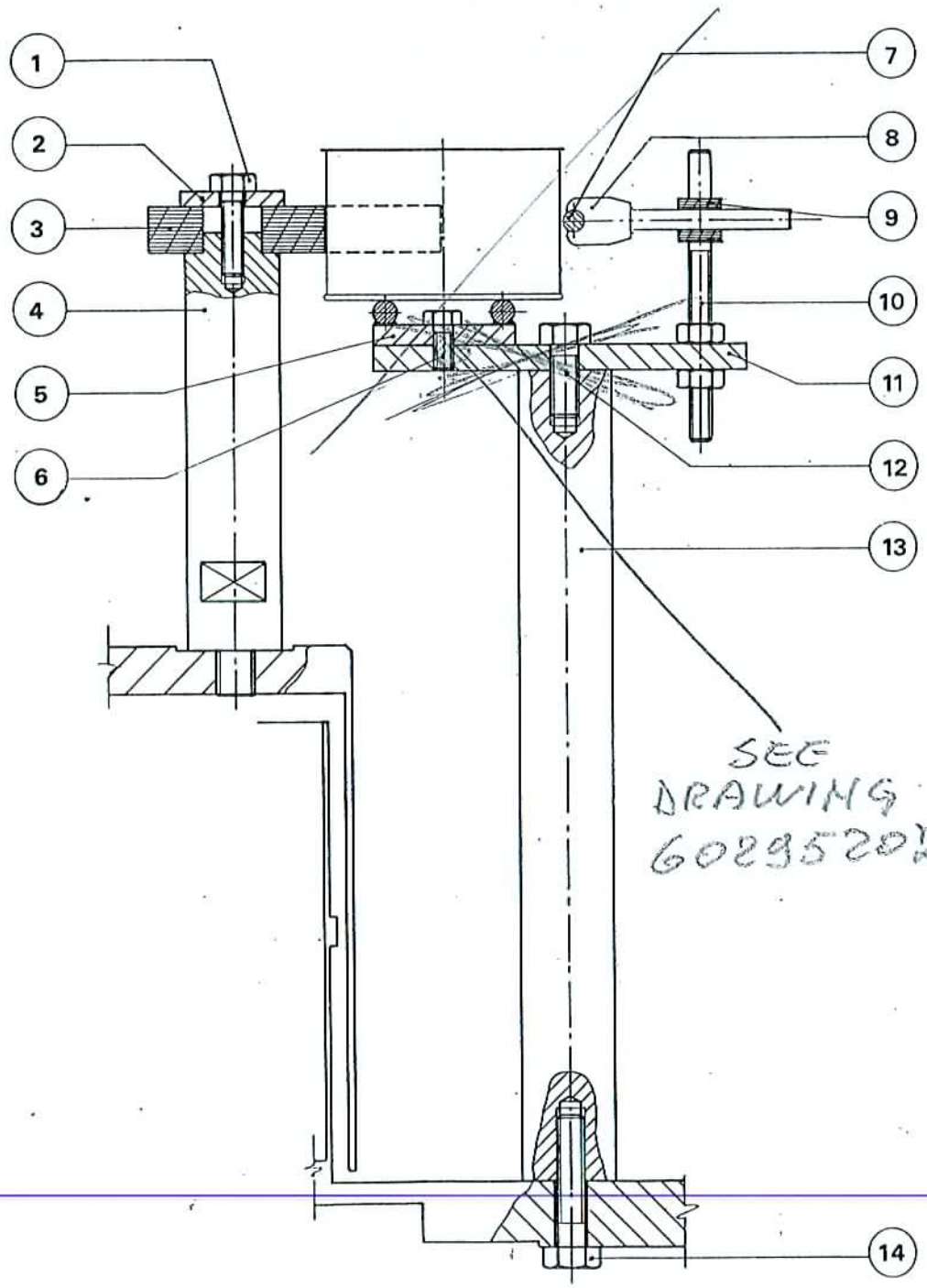


900 10860/A

UPPER PART - DWG.NR. 900.10860/A (PART. "A" OF THE DWG.N. 7243/A)

ITEM	DENOMINATION	NR. OF PART.
1	Clamp	02.95.0115
2	Paddle	02.95.0119
3	Probe	02.95.0121
4	Protection	02.95.0118/A
5	Ring nut	02.42.1093
6	Column extension	02.42.1258
7	Shaft	02.95.0116/A
	Joint	02.78.1183
8	Bushing	02.78.0120/A
9	Hand wheel VR 300 FP	02.64.535/A
10	Product tube	02.89.1111
	Tube support	02.95.0122
11	Sliding block	02.95.0117
12	Beam	02.95.0114/A
13	Flange	/
14	Pinion	02.78.1033
15	Washer	02.88.1031
16	Key	Comm.
17	Reducer AS 20/Fr=1:14 - V1 BONFIGLIOLI	Comm.
18	Tank	02.95.0113
19	Clamp	02.41.345

(Dwg. reference n. 02.95.0100/A)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OUTSIDE GUIDE GROUP - DWG.NR. 900.10482/A

ITEM	DENOMINATION	NR.OF PART.
1	Screw TE M10x40	Comm.
2	Washer	02.89.0048
3	Central star	02.95.0020
4	Column	02.95.0012
5	Working plane	02.95.0023
6	Screw TE M8x20	Comm.
7	Outside guide	02.95.0025
8	Guide clamp part. 82 Art. 66861 MARBETT	Comm
9	Support clamp part. 174 Art. 59301	Comm.
10	Screw	02.76.0070
11	Bracket	02.95.0016
12	Screw TE M12x30	Comm.
13	Column	02.88.1034
14	Screew TE M12x50	Comm.

(Dwg.reference n. 02.95.0000/A)

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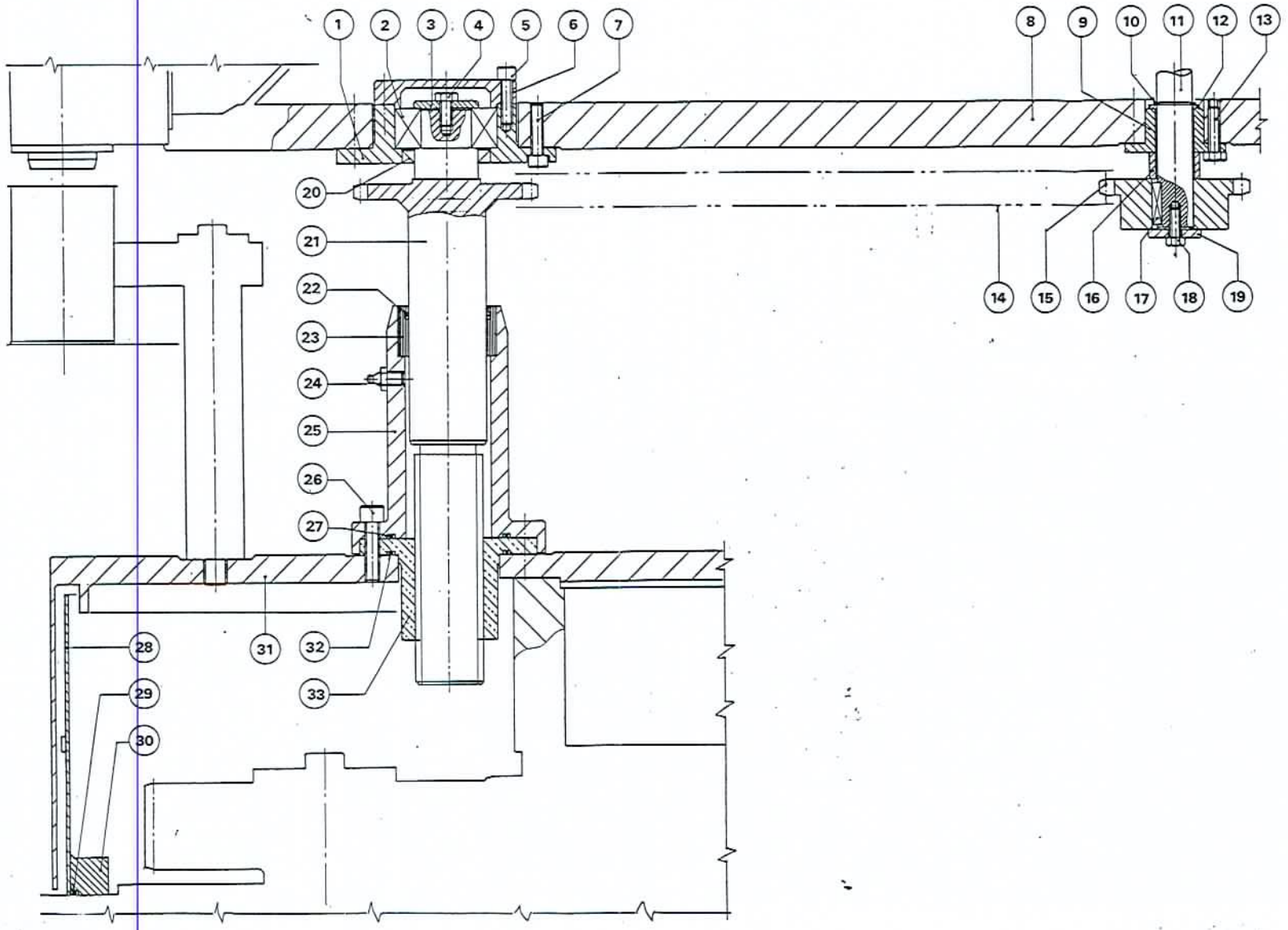
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ADJUSTMENT TANK - DWG.NR. 900.10869

ITEM	DENOMINATION	NR. OF PART.
1	Support	02.88.1025
2	Ball bearing 3207	Comm.
3	Washer	02.78.1028
4	Screw TE M10x15	Comm.
5	Screw TCEI M8x25	Comm.
6	Cover	02.88.1026
7	Screw TCEI M8x30	Comm.
8	Tank	02.95.0113
9	Not installed	/
10	Not installed	/
11	Not installed	/
12	Not installed	/
13	Not installed	/
14	Chain 3/4" S - 4 mt.	Comm.
15	Pinion	02.78.1033
16	Spacer	02.95.0027
17	Key 8x7x30	Comm.
18	Screw TE M6x35	Comm.
19	Washer	02.88.1031
20	Seal 45/62/8 STEFA	Comm.
21	Adjustment screw	02.95.0013
22	O-Ring 3212	Comm.
23	Bushing	02.78.1026
24	Lubricator M 10	Comm.
25	Support	02.78.1025
26	Screw TCEI M10x40	Comm.
27	O-Ring 4312	Comm.
28	Ring	02.95.0014
29	O-Ring 3,53 Sv. 4874	Comm.
30	Ring	02.95.0015
31	Flywheel	02.95.0024
32	O-Ring 4312	Comm.
33	Nut screw	02.78.1024

(Dwg. reference n. 02.95.0000/A)

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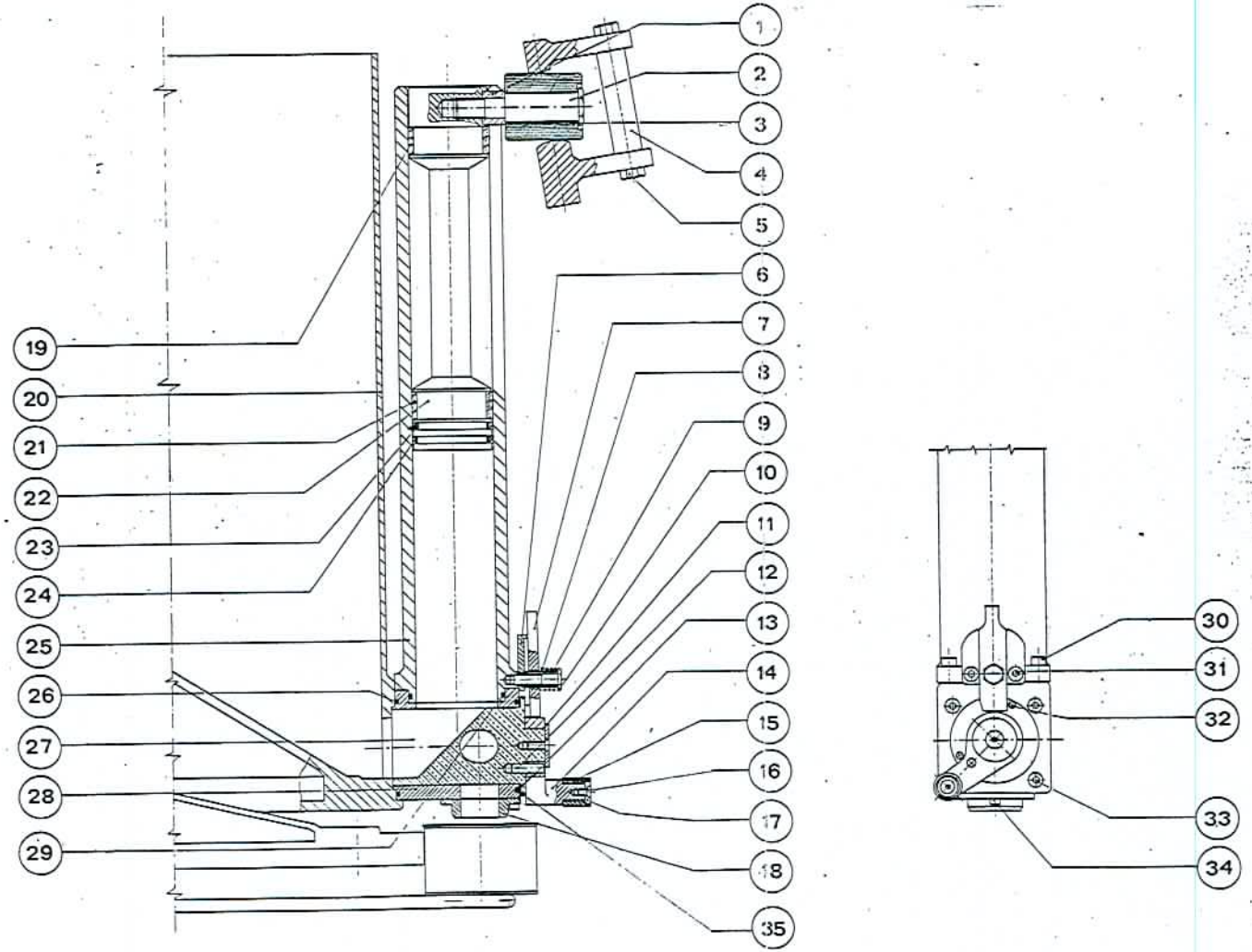
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PLUG AND CYLINDER - DWG.NR. 900.10646 (PART. "B" OF THE DWG. NR. 7243/A)

ITEM	DENOMINATION	NR.OF PART.
1	Spacer	02.89.1096/A 02.89.1096
2	Pins for piston roller	02.57.106/G
3	Piston rollers	02.57.107/A
4	Spacer	8918
5	Screw	Comm.
6	Support	02.57.123/C
7	Lever	02.57.541/A
8	Spring	02.42.669
9	Spacer	02.57.108
10	Screw TE M12x40	Comm.
11	Washer	02.42.1135
12	Pin diam. 8x30	Comm.
13	O-Ring 174 1GON-00174	Comm.
14	Roller lever	02.57.542
15	Rollers	02.40.74/79
16	Screw TSPEI M6x12	Comm.
17	Washer	02.41.104
18	Nozzle	02.57.537/A
	Nozzle gasket	02.57.577/B oppure 02.57.577
	Nozzle bushing	02.57.537/M
19	Sliding pads	402.57.127--K
20	Tank	02.95.0113
21	Sliding pads	402.57.127--K
22	Piston	02.95.0112
23	Spring	402.42.1024--K
24	Compression ring	402.42.1023--K
25	Cylinder	02.95.0111
26	O-Ring 4325	Comm. 1GON-04325
27	Plug	02.42.1253
28	Body plug	02.42.1254
29	O-Ring 3250	Comm. 1GON-03250
30	Screw TCEI M8x25	Comm.
31	Screw TCEI M8x15	Comm.
32	Pin diam. 6x20	Comm.
33	Screw M8x110 TCEI	Comm.
34	Screw TCEI M6x10	Comm.
35	Spacer	02.57.565

(Dwg. reference n. 02.42.05/F)

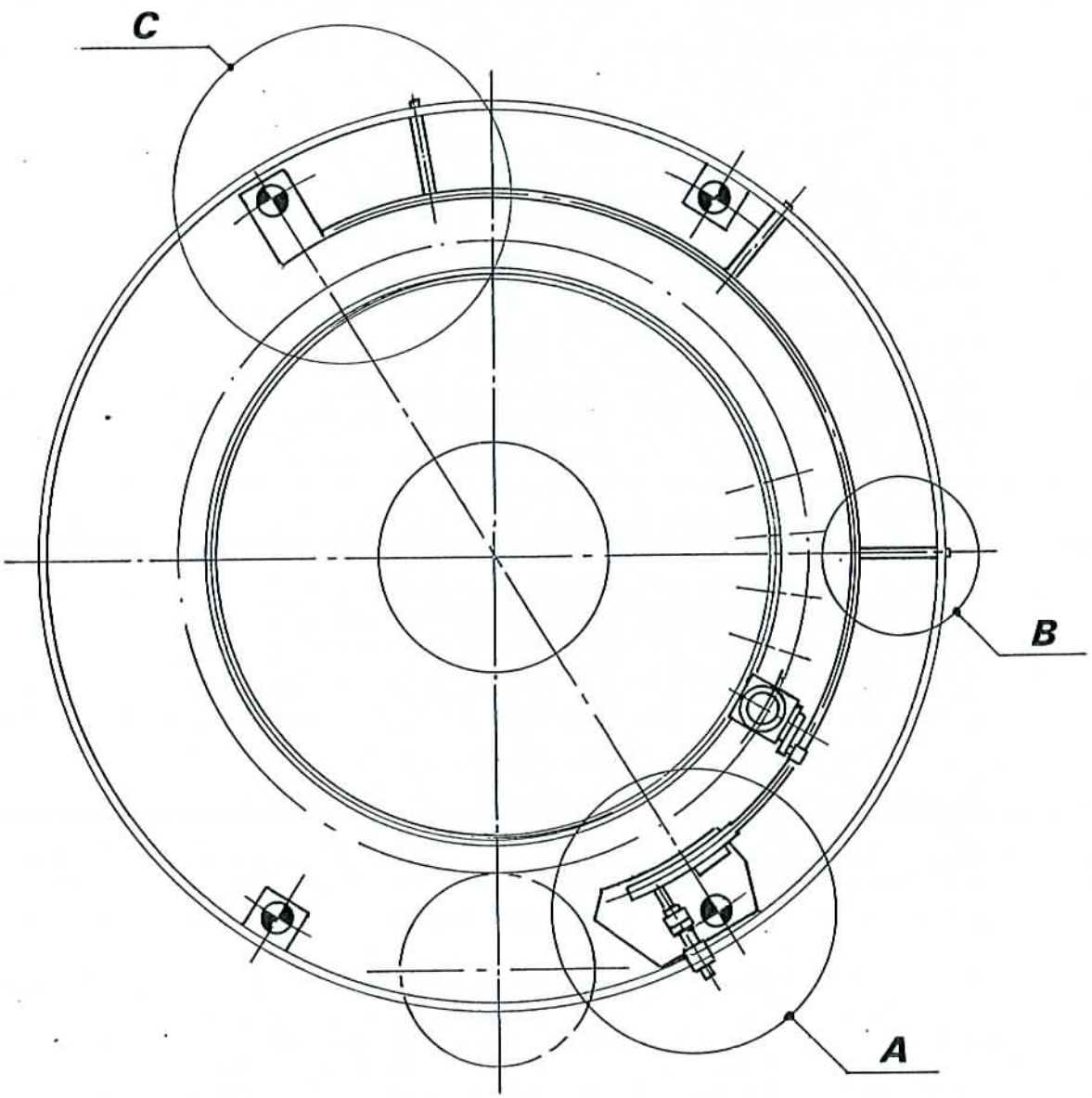
Drawing n. 8717 shows the roller guide of the plug.

No can-no fill and guide support (part. A-B of the dwg.n. 8717)

The filler is supplied with ''no can-no fill'' device that stops the dosage when there are no cans.
It is principallly composed of a mobile can driven throught a pneumatic piston.
The presence of the can, surveyed by detector, permits that the cam is in the position shown in the drawing and for this reason the rollers, following its own circular path, rises, changing the plug position.
On the contrary, if the can is not present, the mobile part of the cam does not interfere with the roller path and for this reason the plug does not alter the phase.
It will be the detector located in correspondance with the screw that will keep the signal for the cam positioning up to the intervention of different conditions.
For more details refer to drawing n. 8738/A.

Cam positioner

When the dosage is finished, the valve commutation is made by the cam (item 2 dwg. 7409) that returns the roller to the low position which corresponds to the suction phase.
If the can is not present, the roller is already in the low position and for this reason it does not interference with the cam.
For more details see drawing n. 7409.



DIS. N. / DWG.N.	8717

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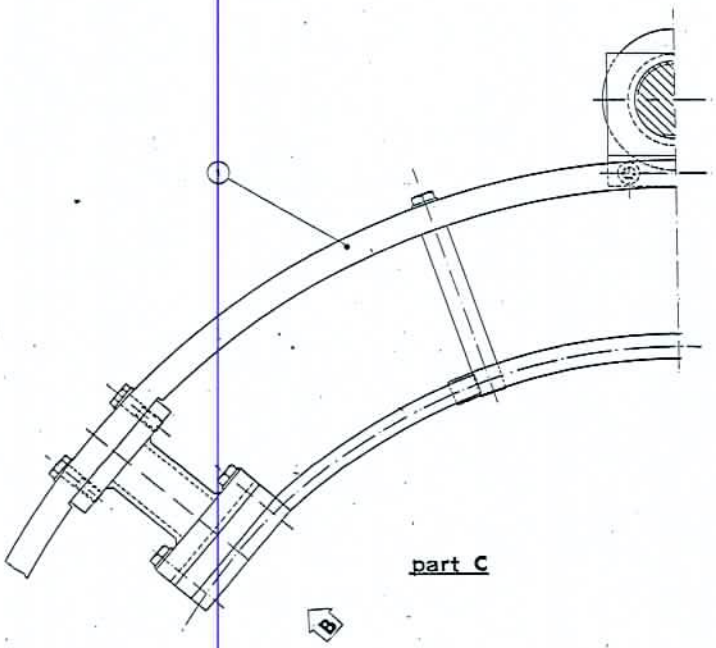
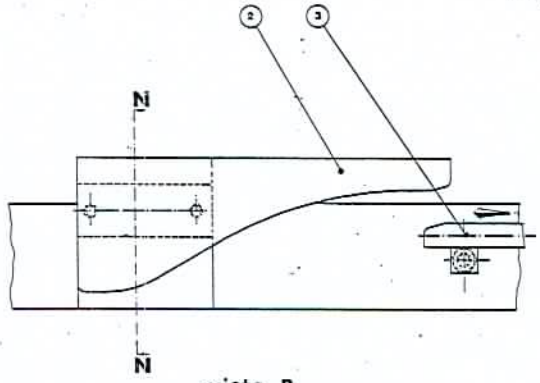


part C



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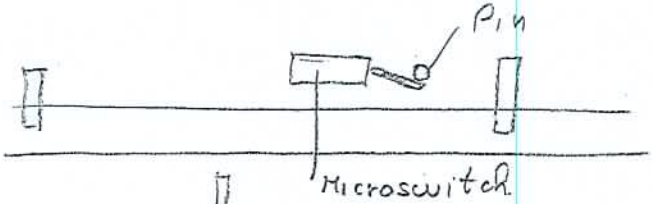
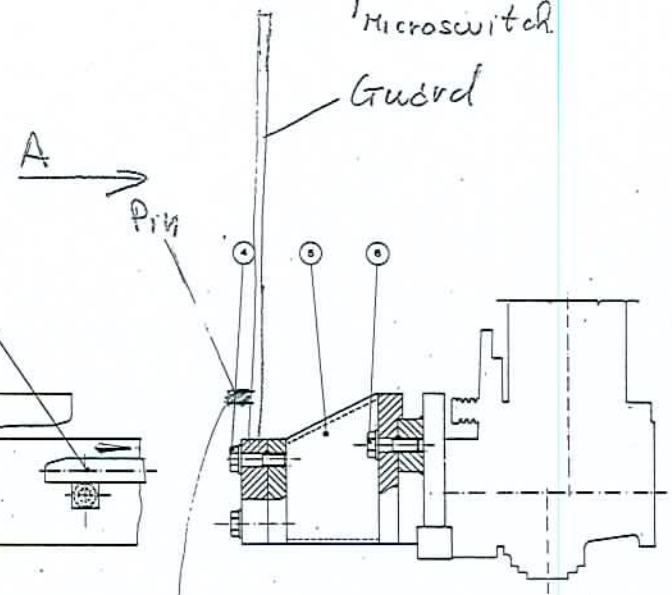
View A





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This pin must push down the lever of a microswitch

DIS.N. 7409
DWG.NR.

PLUG CLOSING CAM - DWG.N. 7409 (PART. "C" OF THE DWG.NR. 8717)

ITEM	DENOMINATION	NR.OF PART.
1	Ring	02.95.0311/C
2	Cam	02.95.0255
3	Roller support guide	02.95.0256
4	Screw	Comm.
5	Cam support	02.95.0259
6	Screw	Comm.

(Dwg. reference n. 02.95.0250)

Drawing nr. 7239 shows the piston-lifting cam.

Cam back clamping (part. "A" dwg.n. 7239)

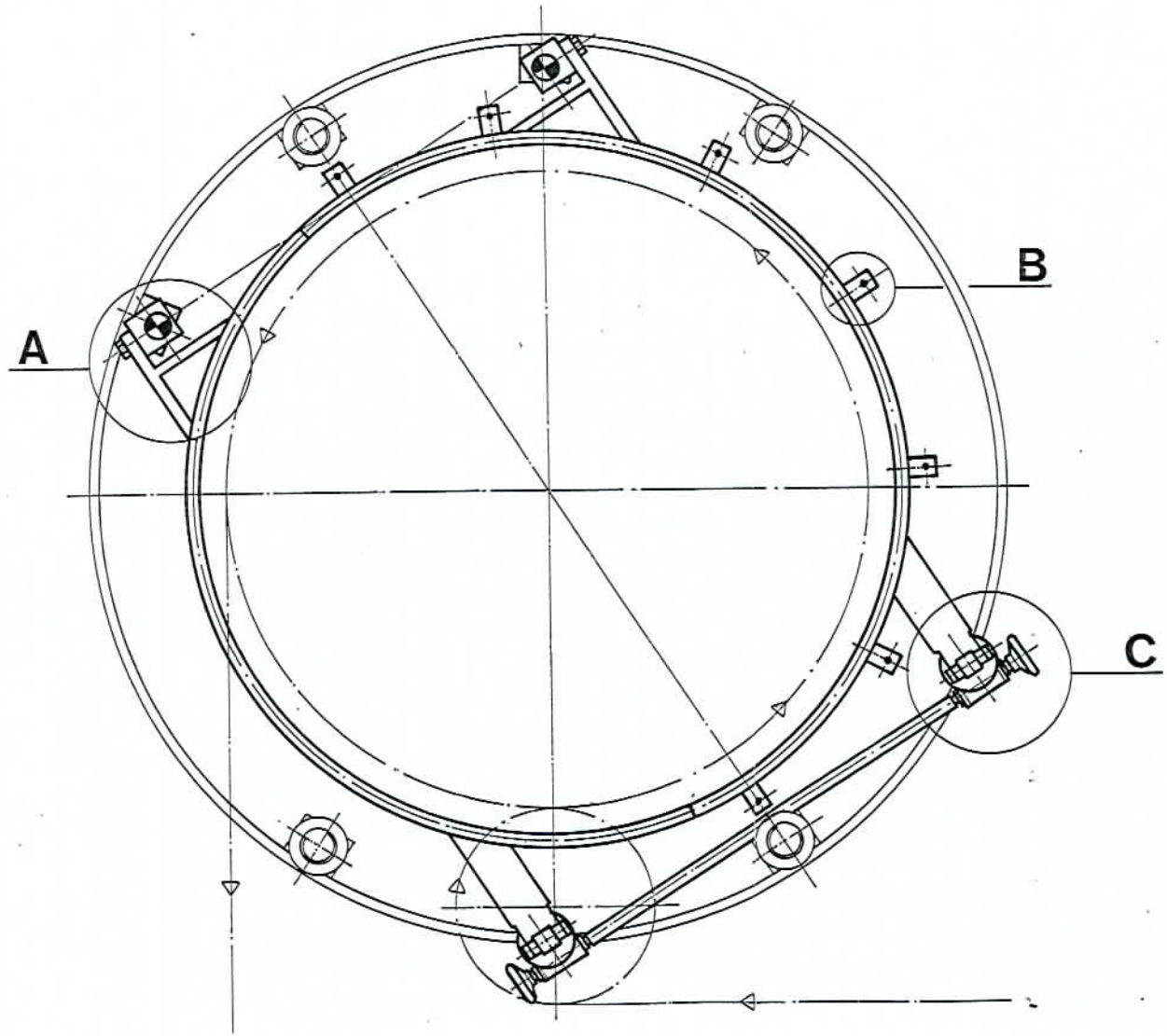
The lifting cam is supported in 4 points; two stationery on the back and two movable on the front.
For more details see drawing n. 7244.

Cam front clamping

On the front, the cam is supported on two threded columns, which rotate in step thus moving the cam in height.
For more details see drawing n. 7245.

Counter-cam (part. "B" dwg.n. 7239)

The roller that drives the piston during the downward stroke, is driven by a counter-cam.
For more details see drawing n. 7242.



DIS.N. 7239
DWG NR

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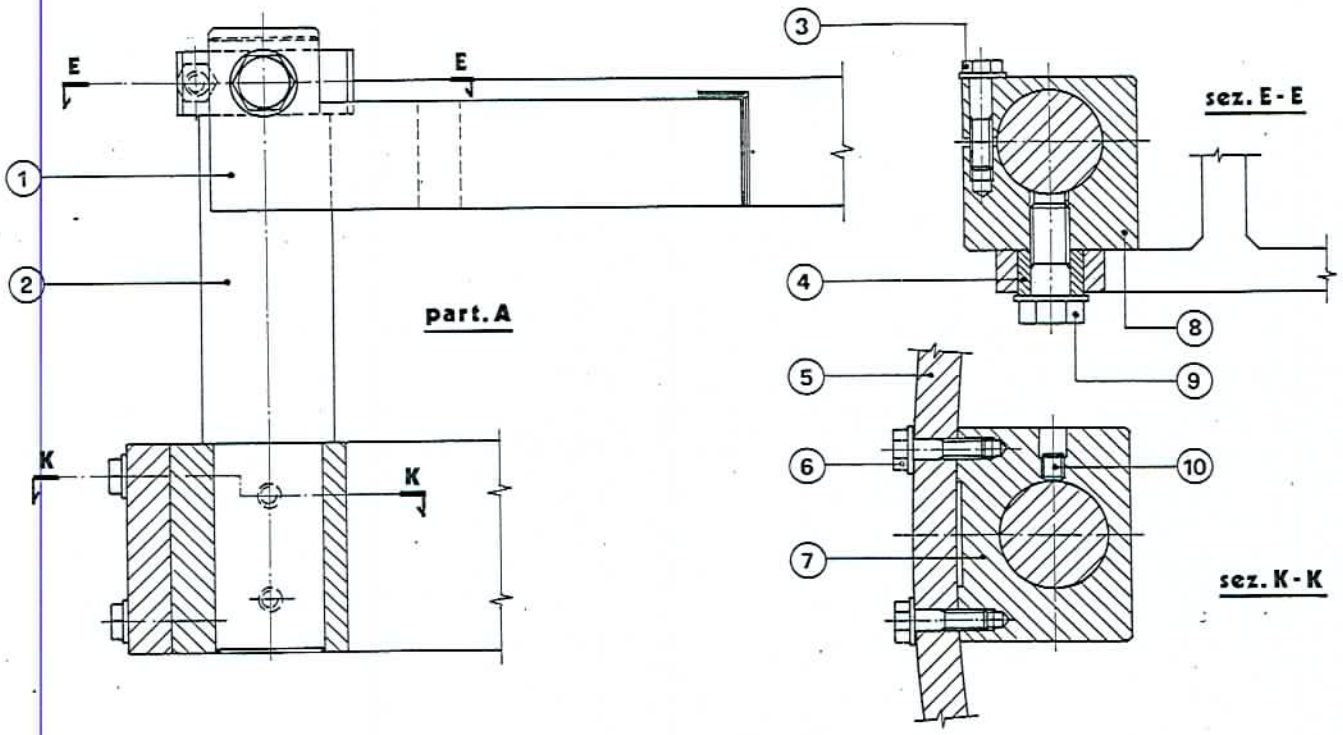


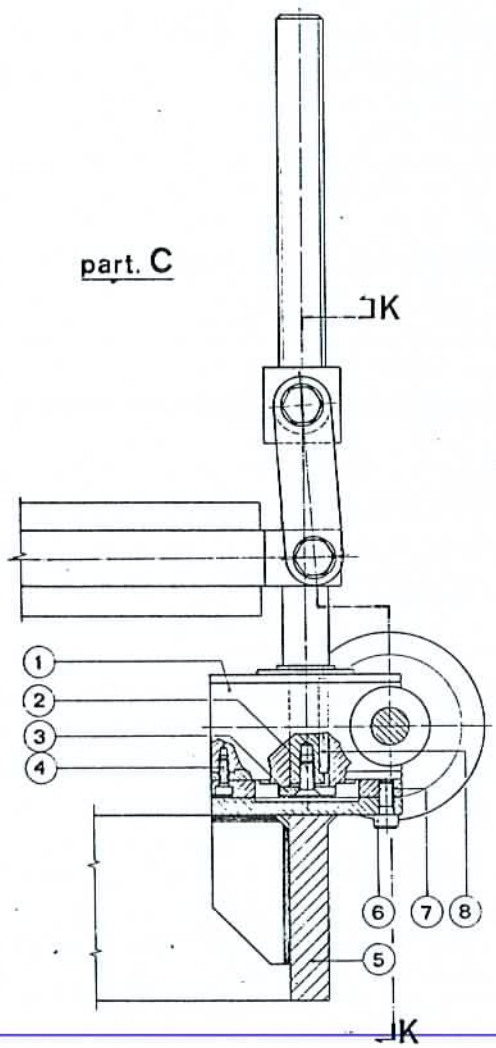
DIS.N.
DWG.N. 1244

LIFTING CAM SUPPORT - DWG.NR. 7244 (PART. "A" OF THE DWG.NR. 7239)

ITEM	DENOMINATION	NR.OF PART.
1	Cam	02.95.0313
2	Pin	02.95.0320/A
3	Screw	Comm.
4	Bushing	02.57.0306
5	Ring	02.95.0311/C
6	Screw TE M10x40	Comm.
7	Support	02.95.0321
8	Support	02.57.0316
9	Screw TE M18x45	Comm.
10	Dowel M10x12	Comm.

(Dwg. reference n. 02.95.0300/A)

part. C



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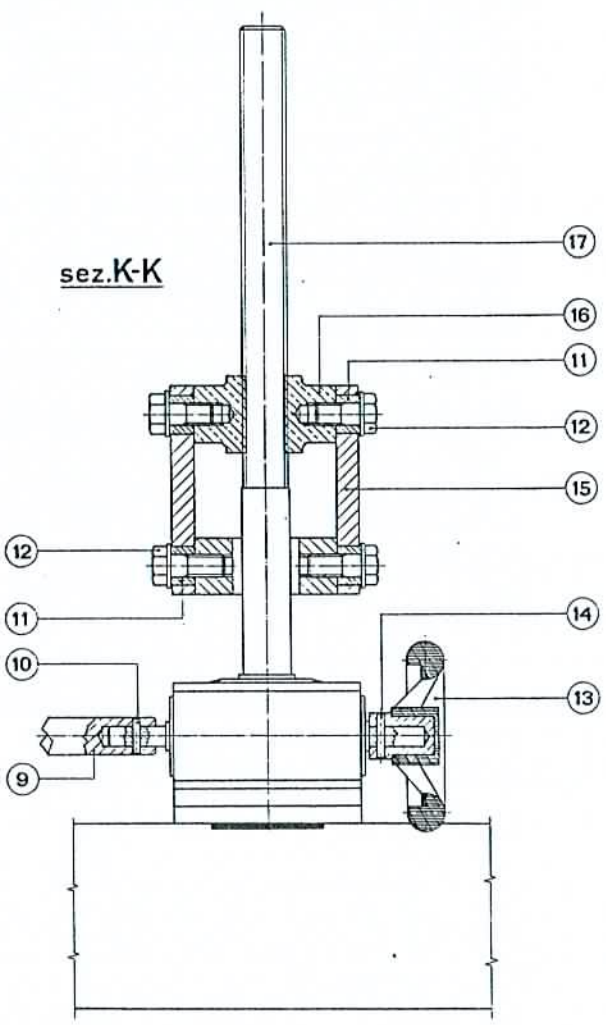
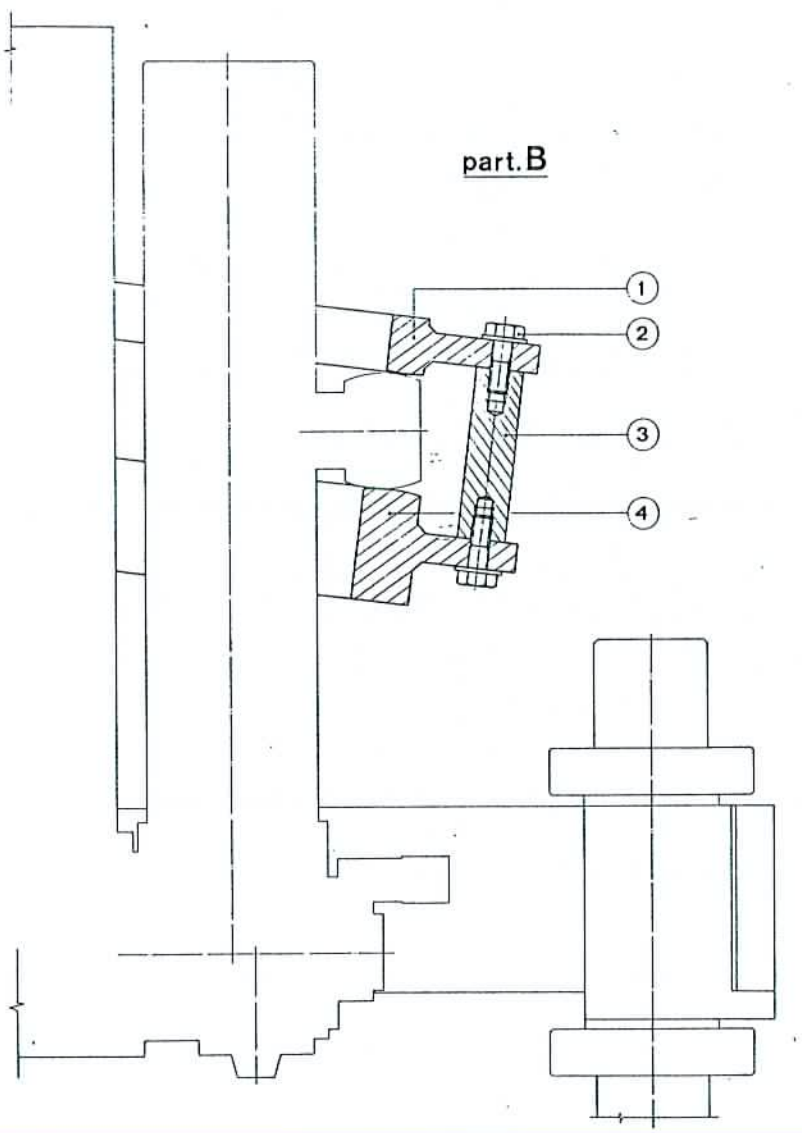


DIS. N. 7245
DWG. NR.

CAM ADJUSTMENT - DWG.NR. 7245 (PART. "C" OF THE DWG.NR. 7239)

ITEM	DENOMINATION	NR. OF PART.
1	Reducer VF 49/P r=1:7 BONFIGLIOLI	Comm.
2	Screw M8	Comm.
3	Washer TGS 8x40 DESERTI	Comm.
4	Screw M6	Comm.
5	Ring	02.95.0311/C
6	Screw M8	Comm.
7	Flange	02.95.0314
8	Key 8x7x70	Comm.
9	Shaft	02.95.0317
10	Dowel M3x20	Comm.
11	Spacer	02.57.307
12	Screw TE M12x25	Comm.
13	Handwheel VR 140 ELESA	02.95.0319
	Spacer	02.95.0318
14	Pin diam. 3x30	Comm.
15	Connecting rod	02.57.308
16	Nut screw	02.95.0316
17	Adjustment screw	02.95.0315

(Dwg. reference n. 02.95.0300/A)



DIS.N
DWG.NR. 7242

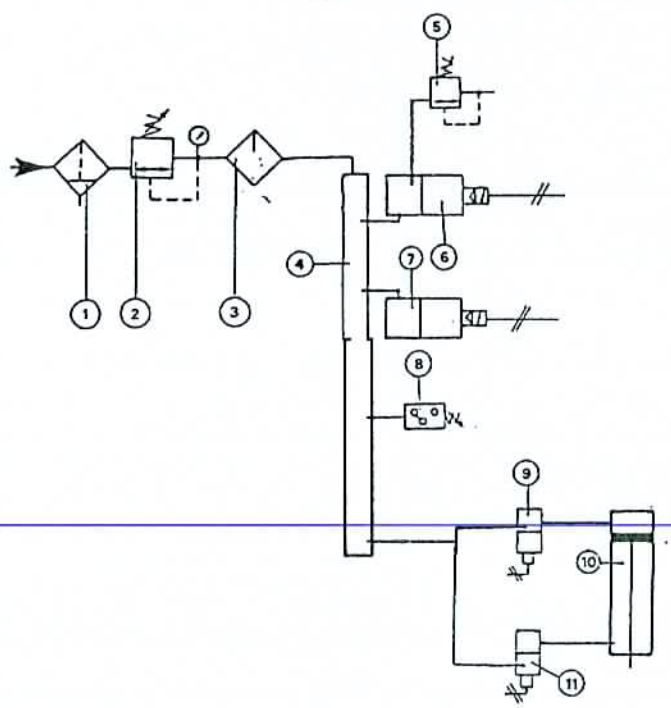
CAM AND COUNTER-CAM - DWG.NR. 7242 (PART. "B" OF THE DWG.NR. 7239)

ITEM	DENOMINATION	NR. OF PART.
1	Counter-cam	02.95.0312
2	Screw	Comm.
3	Spacer	8918
4	Cam	02.95.0313

(Dwg. reference n. 02.95.0300/A)

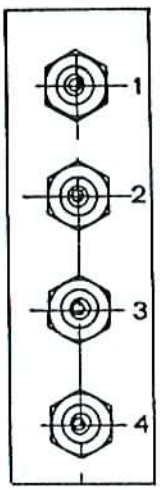
PNEUMATIC DIAGRAM

ITEM	DENOMINATION
1	Filter for compressed air type MINI FIL 08A 1/4" ATLAS
2	Pressure reducer for compressed air type MINI REG 08A ATLAS
3	Lubricator for compressed air type MINI DIM 08A 1/4" ATLAS
4	Connection block PAL 5-1/4" 4 FESTO
5	Pressure reducer for compressed air type MINI REG 08A ATLAS
6	Five-way valve MFH 5 -1/4" FESTO (for control the infeed of product)
7	Five-way valve MFH 5 -1/4" FESTO (for can-stop)
8	Pressure switch PEV 1/4" B FESTO
9	Solenoid valve MCH 3-1/8" FESTO
10	Solenoid valve MOCH 3-1/8" FESTO
11	Pneumatic piston for no can-no fill



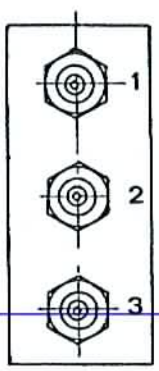
LUBRICATOR DIAGRAM

ON THE CONVEYOR BELT (distributor dis.n. 02.78.240)



- Support (item 1 dwg. 9968/B)
- Support (item 12 dwg. 9968/B)
- Infeed star support (item 15 dwg. 900.10858)
- Support (item 25 dwg. 900.10869)

ON THE MACHINE (distributor dis. 02.78.240)



- Filler drive support (item 25 dis. 900.10862/A)
- Ball bearing center plate (item 15 dwg. 900.10862/A)
- Chain (dwg. 9968/B)

VI CHECK BEFORE START UP

At the first start, check that:

a) the a.m. connections are made and the value of the service fluids are correct;

b) the line voltage is the same for which is provided the electric board;

c) all the moving parts, subject to wear, have been greased;

d) the direction of rotation and possible accessories are correct;

e) the equipment installed on the machine is of the same type and corresponds to the can size to handle;

f) the oil level necessary to lubricate the gears is sufficient;

g) the dosed volume of the machine corresponds to that required inside the container, if not, act on the handwheel, positioning the cam in such a way that the course of the piston, i.e. the distance between the top dead centre and the bottom dead centre, corresponds to the volume which one wishes to dose.

VII ADJUSTMENTS AND CONTROLS DURING THE RUNNING

Output adjustments

To change the output speed of the machine, if the same is driven be a self-contained motovaryspeed, it is necessary to operate on the driving handwheel of the same; on the contrary, if the filler is linked up with a closing machine, it is necessary to change the speed of the latter.

Measure adjustment

To change the measure it is necessary to operate on the handwheel that produces a micrometric measurement change.

Controls during the operation

During the operation it is necessary to check:

- that the metered product corresponds exactly to the fixed quantity, if not, adjust the metering;
- the absence of vibration or normal noises;
- the absorbed motor horsepower, when the filler is equipped with its own drive;
- the absence of condensation at the inlet of the compressed air.

Product level adjustment

The product level change is obtained operating on the height of the probes.

VIII CAN SIZE CHANGE

The can size change can be of 3 different types:

A) Containers with the same diameter and different height

It is important to differentiate two cases:

A.1) The new can is height that the present one:

All the plugs must be closed; the roller of the plug must be in the low position.

- loosen the upper ring nut (item 5 dwg. 900.10860/A)

- loosen the clamp (item 19 dwg. 900.10860/A) and rotate the lower ring nut to permit the ring support to reach the height difference of the two cans

- turn the handwheel adjusting (item 6 dwg. 900.10860/A) which raises or lower the tank (item 18 dwg. 900.10860/A) by means of reducer (item 17 dwg. 900.10860/A)

The positioning of the bowl is correct when the dead centre of the piston touches the bottom of the cylinder and when, in the same time, the roller that drives the piston is positioned by a clearance between cam and counter-cam (dwg.n. 7242).
A further check of the correct positioning of the cam ring as regards the bowl, is made by checking that the pins , both in position of intake and delivery, do not strike against the cam locator , but are at approx. 1 mm. distance from it.

A.2) The new can is lower that the present one:

All the above mentioned operations are necessary in this case, it will be necessary to lower first the tank (item 18 dwg. 900.10860/A) and then the ring.
The correct height of the tank is that which produces compatibility with the container passage, the minimum distance between the containers and the plug discharge nozzles.

B) Containers with different diameter and same height

- adjust the infeed conveyor guides (item 17-18-3 dwg. 9965)
- replace the infeed star (item 9 dwg. 900.10858) and outside guide (item 7 dwg. 900.10482/A).
The star is timed with the whole machine.
In any way, it is possible to adjust the phase, slackening the screw and operating the star.
On the feeding star there are some numbers which correspond to the diameter to which the are suited.

- replace the central star (item 3 dwg. 900.10482/A); this central star is divided into 2 sectors and on each of these, besides the can diameter to which it is suited, is marked a number 1 and 2.
The sector must be assembled so that each one is put against the number marked on the support.

- adapt the position of the infeed shock absorber (item 6 dwg. 9966) so that the pin is aligned with the guides at the infeed.

- replace the Archimedean screw (item 11 dwg. 9965) taking care to fit together the references on the Archimedean screw and on the support.

- adjust the Archimedean screw position.
The new Archimedean screw is already timed with the other parts of the machine and so there no problems of phase.
It is possible to adjust timing, operating on the gear (item 10 dwg. 9968/B) and slackening, before, the locking screw (item 7 dwg. 9968/B).

C) Cans with different height and diameter

To change the can size, repeat all the operations mentioned in items A and B.

Generally, each size change corresponds to a dosage change that will be made operating on the handwheels (item 10 dwg. 7245) that raise or lower the cam, to obtain a dosage as requested.

IX CLEANING

At the beginning and at the end of each operation phase, also daily, the filler must be carefully washed.

When all the product is completely removed from the bowl, the same must be filled with hot water and then, you have to operate the switch (put in manual position) to cancel the "no can-no fill" device.
By rotating the filler, the pistons completely perform the operating cycle, so cleaning the plug.

NOTE - Engage and disengage the switch that cancels the "no can-no fill" device only when the filler is stopped.

A careful cleaning of the measurement chambers can be made by removing the piston from cylinders.

During re-assembling, each piston must be assembled into its own seat (see numeration) amd maximum caution is recommended to avoid demage to the compression rings.

Every time the filler is disassembled for the necessary cleaning, it is recommended to examine all pieces, to note any irregular damage or wear.

X MAINTENANCE AND LUBRICATION

The good operation and life on the filler depend upon the maintenance and on the care with which the same is cleaned and lubricated.
At the end of each production day the unit must be flushed with care removing all the product particles from the machine.

After every 8 hours of operation

General lubrication, by injecting in the proper lubricators.
Check he compressed air filter-cleaner and remove any accumulated condensation.

Every week

Control the tension of the feed table top conveyor.
Control the oil level in the base of the machine, and replace it every 400 working hours or at least once a year.

XI SPECIFICATIONS TO ORDER SPARE PARTS

When customer wishes to order spare parts, has to specify:

- type of the machine
- number of the register
- year of construction
- short description of the requested piece
- examine also the drawings.

Locate if possible the piece and communicate the reference following the enclosed legend.

ZACMI®
FOOD & BEVERAGE PLANTS

UPDATES FOR

ROTATING VALVE PISTON FILLER

CE

Project:	**-**
Serial Number:	**0295-N-040/0003**
Item:	**1**
Year:	**1991**
Customer:	**CASTELBERRY -USA-**
Country:	**USA**

Rev. 01

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TABLE INDEX

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Chapter 7
Spare parts table

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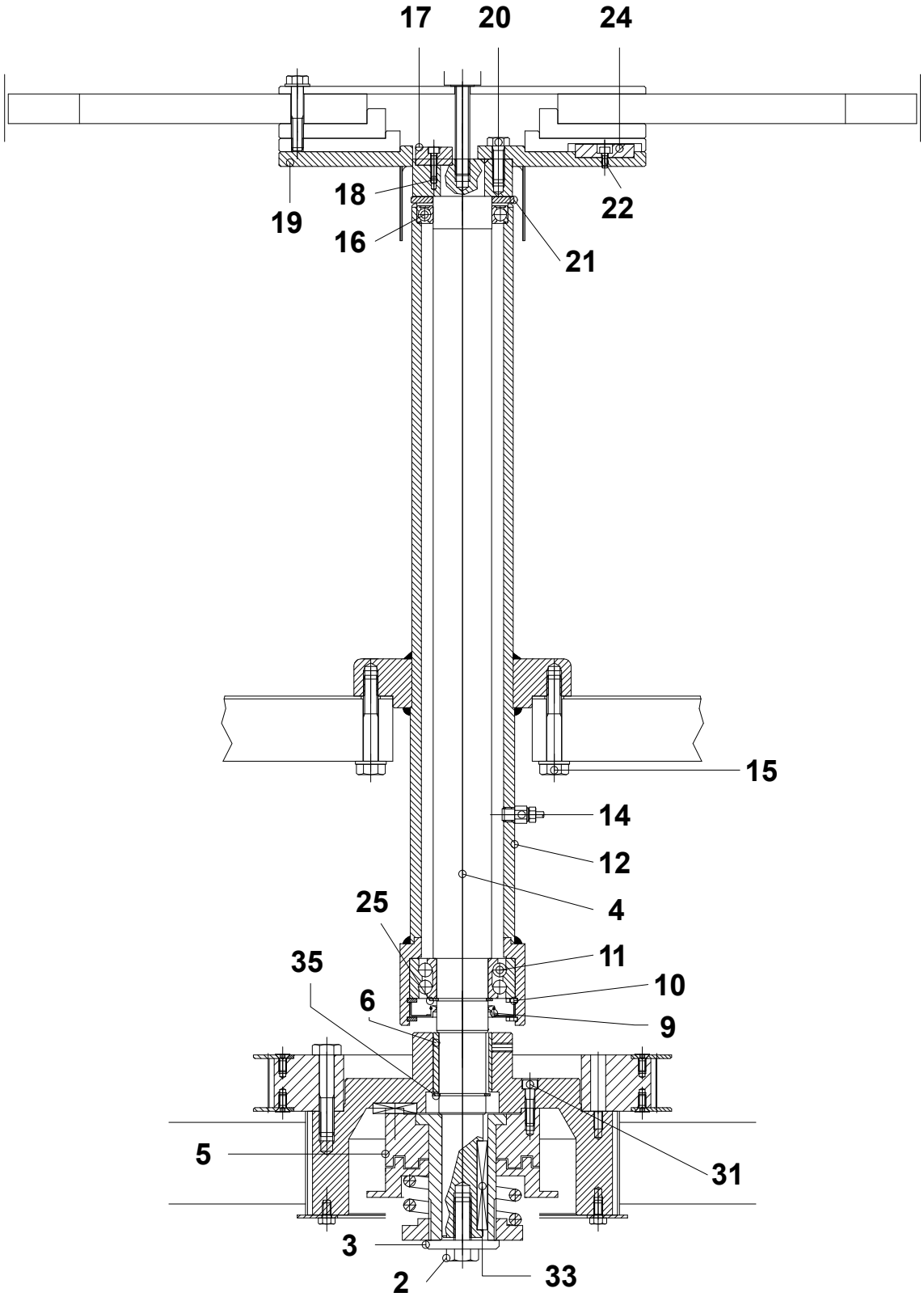
Dwg. 602900683--- GR.STELLA IN-OUT LIMITATORE STAR UNIT



Dwg. reference n° 602900683---

Research file 602900683---_0_R00.eps

ITEM	DESCRIPTION	UM	CODE	Q.TY
2	VITE TE M12x35 A.304 U.5739 ..... SCREW	NM	1W04VTG12035 .	1
3	RONDELLA PIANA 12X50 RGS ..... WASHER	NM	1W01RP125060 ..	1
4	ALBERO STELLA PRED.X LIMITAT. ..... SHAFT	NM	502783389---	1
5	LIMITATORE LASS 110 FAS B ..... LIMITER	NM	510621036---	1
6	BRONZINA ØI=32 ØE=40 H=40 ..... BUSHING	NM	502783390---	1
9	PARAOLI 35X72X10 ..... OIL RETAINER	NM	1GPN03507210 ..	1
10	SEEGER X FORI D.072 ..... SNAP RING	NM	1CA-BR072---	2
11	CUSCINETTI 3207 ..... BALL BEARING	NM	1CU--3207---	1
12	SUPPORTO STELLA ..... SUPPORT	NM	502783119---	1
14	RACCORDO ING. DIRITTO ATT.18G ..... FITTING	NM	1PZADMC-0418 ..	1
15	VITE TE M10x60 A.304 U.5737 ..... SCREW	NM	1W04VTG10060 .	4
16	CUSCINETTO 61908-RS1 ..... BEARING	NM	1CU-61908RS1 ...	1
17	CHIAVETTA ..... KEY	NM	502014038B--	1
18	VITE TCEI M4x15 A.304 U.5931 ..... SCREW	NM	1W04VEG04015 .	1
19	SUPPORTO STELLE ..... SUPPORT	NM	502336244A--	1
20	VITE TE M8X25 A.304 U.5739 ..... SCREW	NM	1W04VTG08025 .	4
21	DISTANZIERE ..... SPACER	NM	502783122---	1
22	VITE TCEI M4x10 A.304 U.5931 ..... SCREW	NM	1W04VEG04010 .	1

ITEM	DESCRIPTION	UM	CODE	Q.TY
24	..... CHIAVETTA	NM	502336247---	1
	..... KEY			
25	..... SEEGER X ALB. D.035	NM	1CA-WR035---	1
	..... EXTERNAL SNAP RING			
31	..... VITE TCEI M6x25 A.304 U.5931	NM	1W04VEG06025 .	6
	..... SCREW			
33	..... LING. A 8x7x60 C40 U.6604	NM	1W40LA-08060 ...	1
	..... TAB			
35	..... SEEGER X ALB. D.32 UNI7437	NM	1CA-WR032---	1
	..... SNAP RING			

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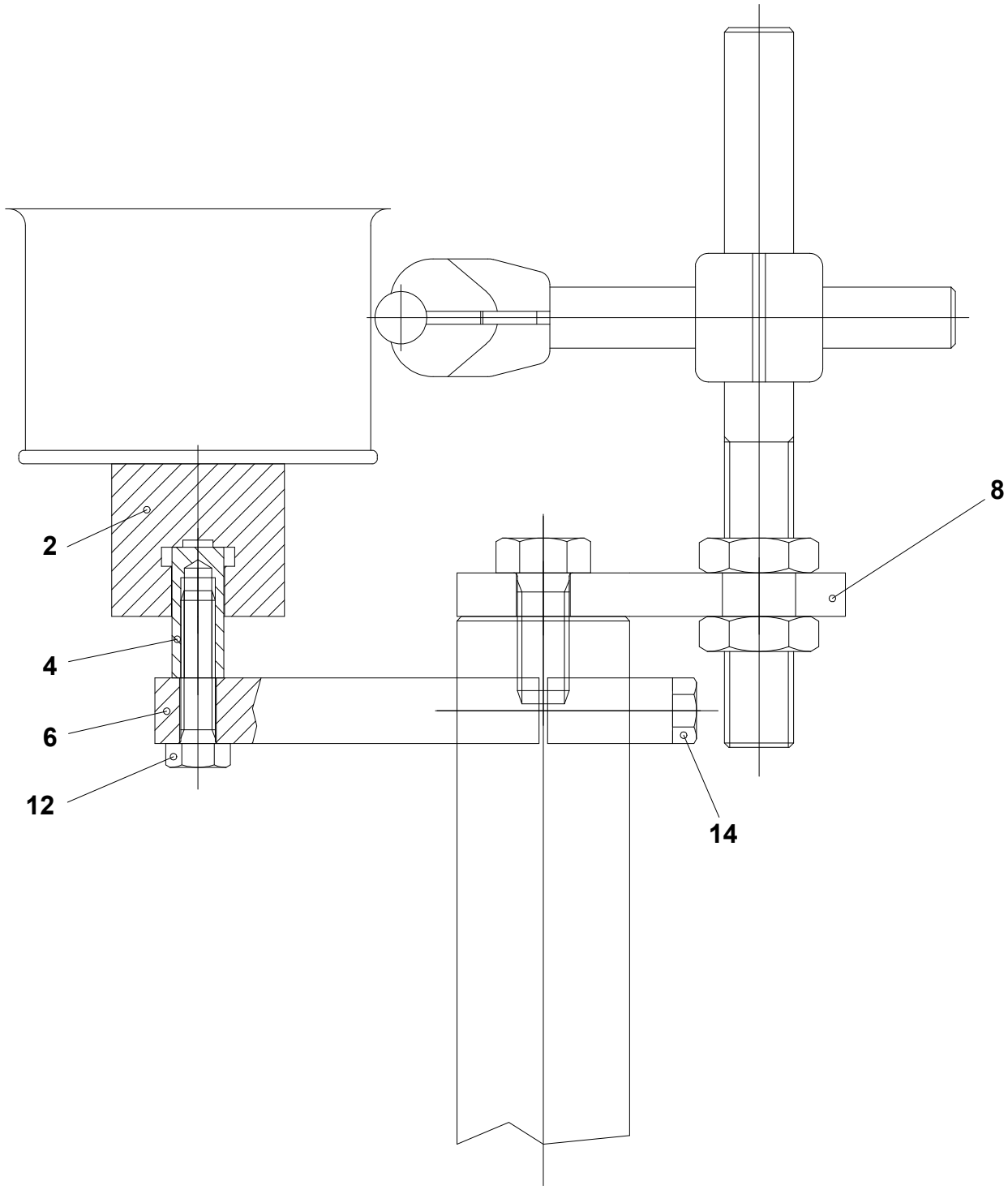
Dwg. 602952075--- MODIFICA PIANO DI LAVORO
WORKING PLAN



Dwg. reference n° 602952075---

Research file 602952075---_0_R00.eps

ITEM	DESCRIPTION	UM	CODE	Q.TY
2	PIANO DI LAVORO	NM	502952046---	1
	WORKING PLAN			
4	PIATTO	NM	502952048---	1
	PLATE			
6	MORSETTO	NM	502952073---	5
	CLAMP			
8	STAFFA	NM	502952074---	5
	BRACKET			
10	### MATERIALI COMM.LI ###	NM	1----------	1
	COMMERCIAL COMPONENTS			
12	VITE TE M8X35 A.304 U.5737	NM	1W04VTG08035 .	5
	SCREW			
14	VITE TE M8X50 A.304 U.5737	NM	1W04VTG08050 .	10
	SCREW			

Dwg. 602952205--- GR.NO CAN-NO FILL CAMMA
NO CAN NO FILL UNIT

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TABLE 1

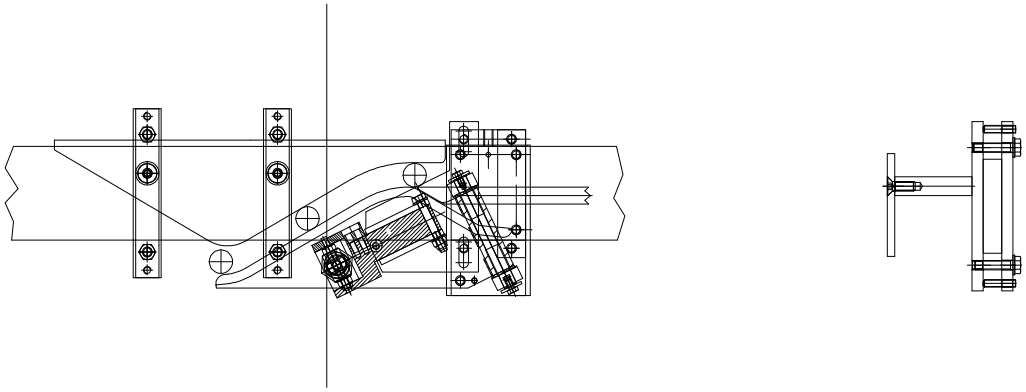
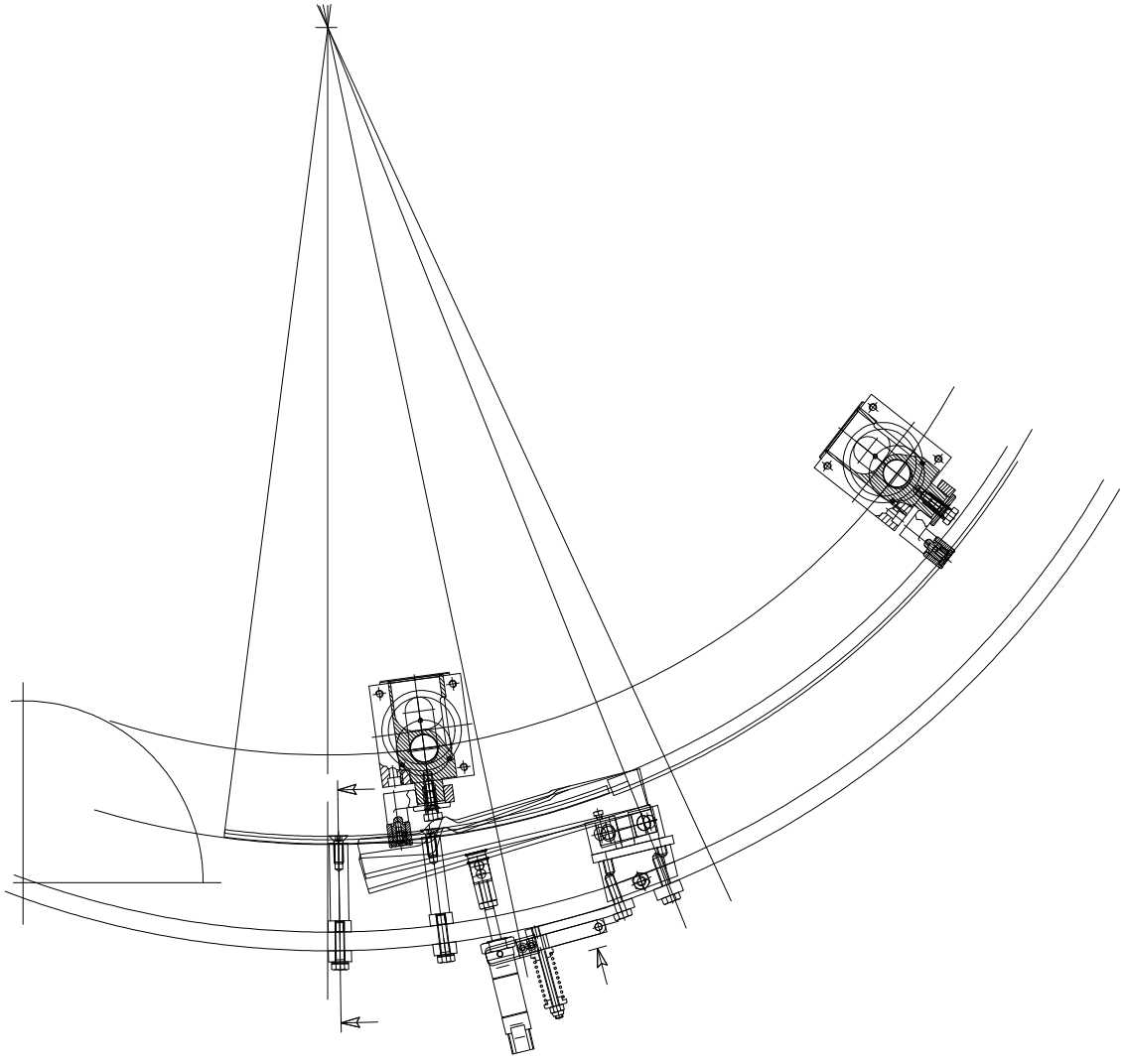


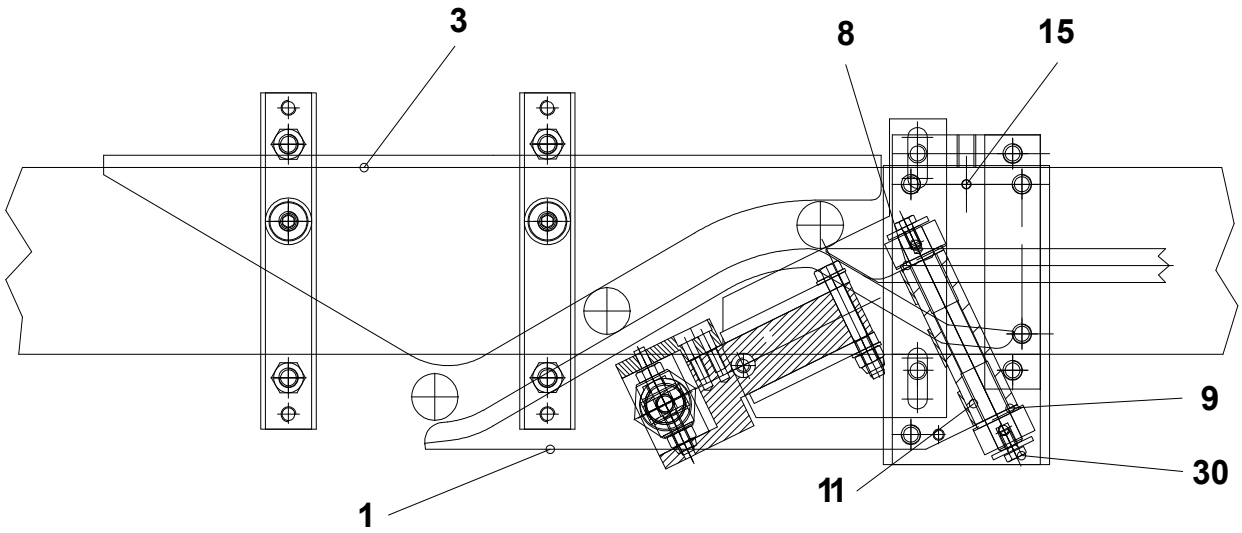
TABLE 2



Dwg. reference n° 602952205---
Research file 602952205---_0_R00.eps

Dwg. 602952205--- GR.NO CAN-NO FILL CAMMA
NO CAN NO FILL UNIT

TAB 1



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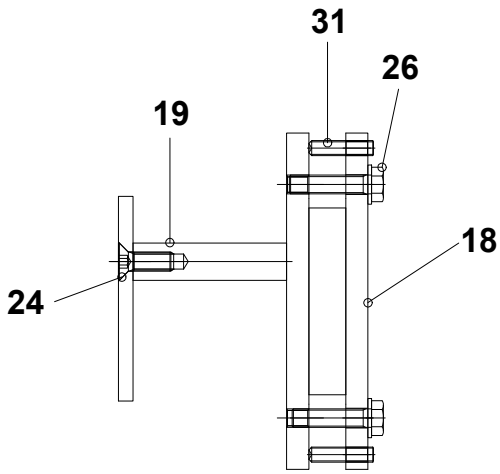

SEZ. B-B

Dwg. reference n° 602952205---
Research file 602952205---_1_R00.eps

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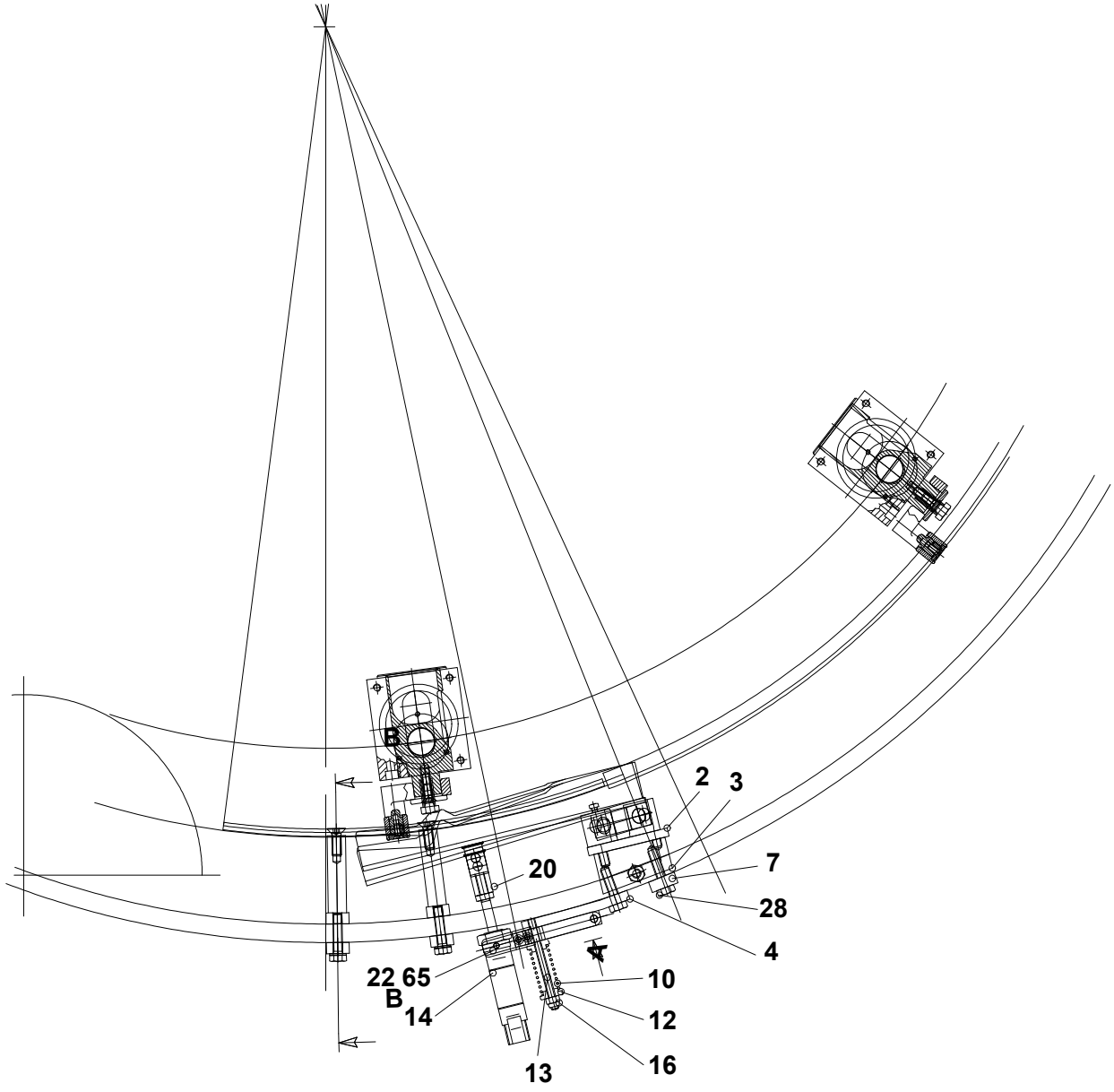
Dwg. 602952205--- GR.NO CAN-NO FILL CAMMA
NO CAN NO FILL UNIT

TAB 2



Dwg. reference n° 602952205---

Research file 602952205---_2_R00.eps

ITEM	DESCRIPTION	UM	CODE	Q.TY
1	CAMMA DI APERTURA CAM	NM	502952212---	1
2	PIASTRA PLATE	NM	502894121---	1
3	PIATTO D'ATTACCO CAMMA PLATE	NM	502952206---	1
4	PIATTO FORCELLA PLATE	NM	502952208---	1
5	FORCELLA FORK	NM	502894119---	1
6	BRACCIO FORCELLA ARM	NM	502894120---	1
7	CONTROPIATTO COUNTERPLATE	NM	502952209---	1
8	DISTANZIERE SPACER	NM	502894123---	2
9	PERNO PIN	NM	502894122---	1
10	MOLLA ØP=20.5 L=60 SPRING	NM	402883109---	1
11	BRONZ.GLYCOD.PG141625F BUSHING	NM	1BNG01401625 ..	2
12	RONDELLA WASHER	NM	502015202---	2
13	BARRA FILETTATA M8X90 INOX THREADED BAR	NM	502895025---	1
14	CILINDRI 304 25X10 822034201 PNEUMATIC CYLINDER	NM	1PC025010AOH .	1
15	SPINE CIL. 6x20 A.304 U.1707 DOWEL PIN	NM	1W04SC060020 ..	2
16	DADO AUTOBL. M8 A.304 U.7473 NUT	NM	1W04DAAG08	1
17	CONTROCAMMA DI APERTURA COUNTERCAM	NM	502952210---	1
18	CONTROPIATTO PER CONTROCAMMA COUNTERPLATE	NM	502952211---	2

ITEM	DESCRIPTION	UM	CODE	Q.TY
19	MORSETTO PER CONTROCAMMA CLAMP	NM	502952207---	2
20	FORCELLA M10x1,25 D=10 FORK	NM	502910475---	1
22	CERNIERE WBN 25 FESTO HINGE	NM	1PDFC-WBN025 .	1
24	VITE TSPEI M10x30 A.304 U.5933 SCREW	NM	1W04VSP10030 .	2
26	VITE TE M10x45 A.304 U.5737 SCREW	NM	1W04VTG10045 .	4
28	VITE TE M10x30 A.304 U.5739 SCREW	NM	1W04VTG10030 .	4
30	VITE TE M6x12 A.304 SCREW	NM	1W04VTG06012 .	2
31	GRANO STEI M8x35 A.304 U.5923 RETAINER SCREW	NM	1W04GEC08035 .	4

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