



MILLTRONICS USA®
LET'S INVENT

MM3017 A
Mechanical Manual
Use with MP-1258 ATC manual

3-15-2016
Rev 4

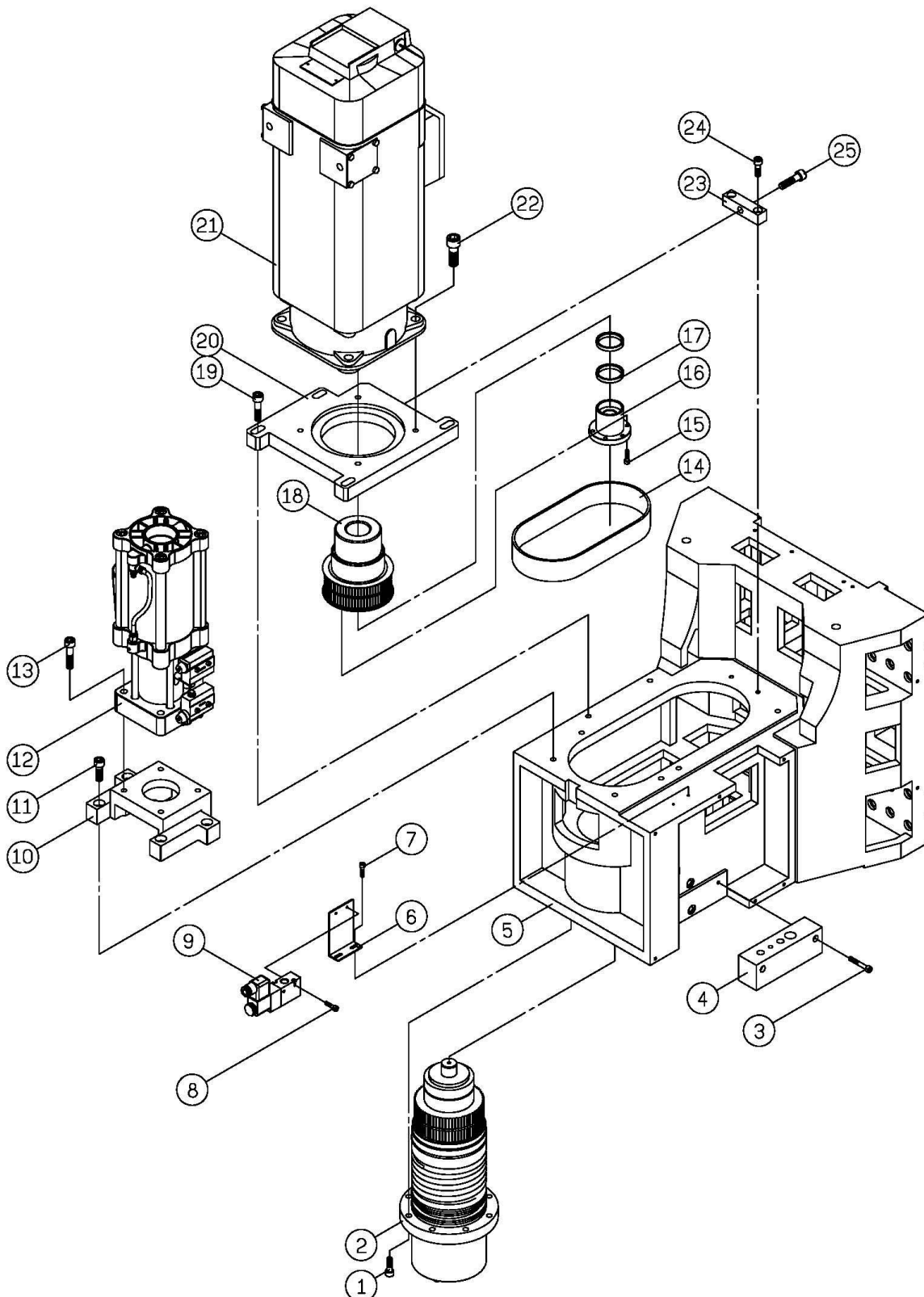
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Manual Discrepancy Sheet

- 1.
- 2.

Spindle Head Assembly



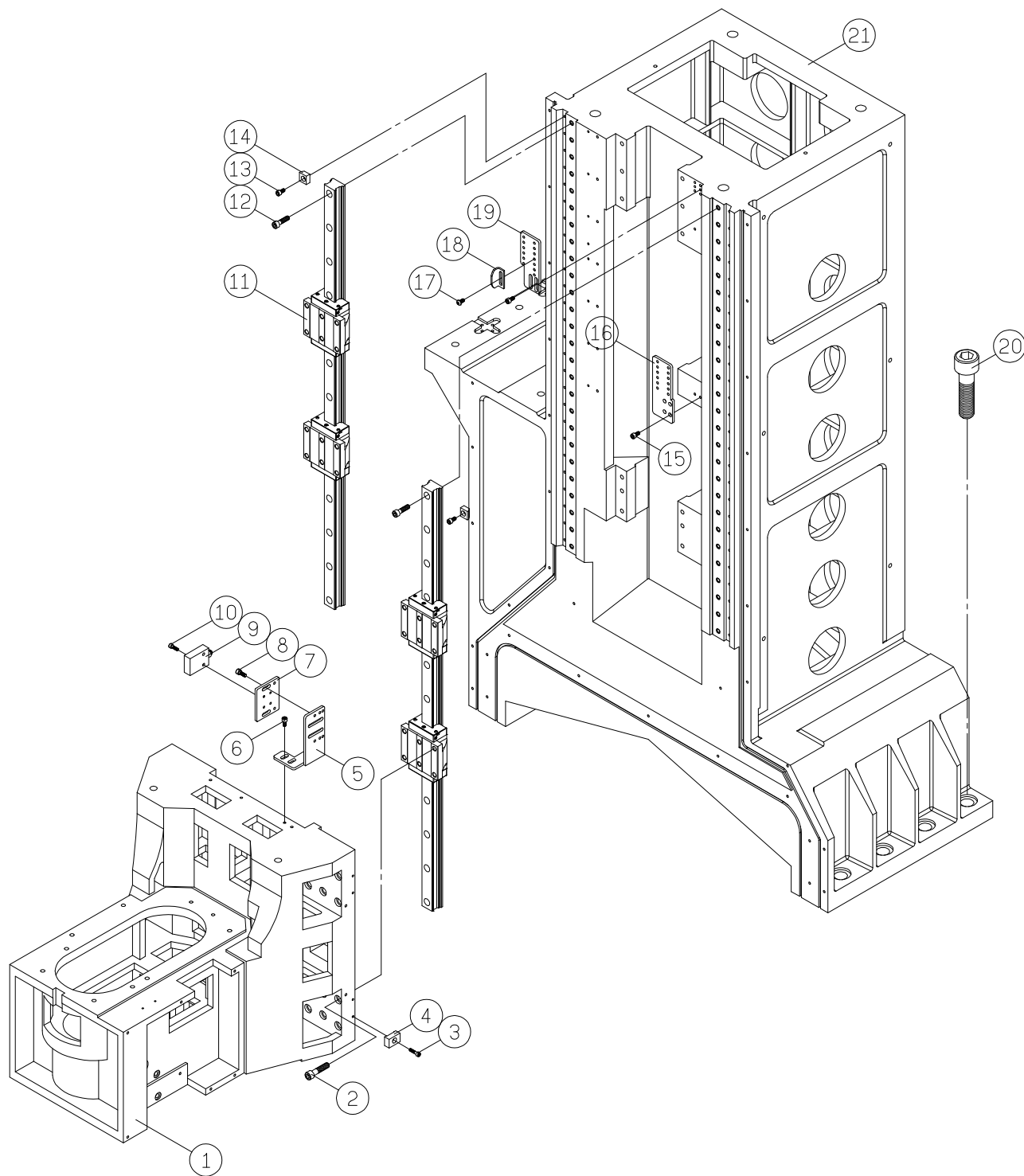
Spindle Head Assembly

Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	-	Hex. socket screw	8	M8XP1.25X25L	
2	M-0205-04-141	Spindle	1	B40-120(8000RPM)	MPMM006
3	-	Hex. socket screw	2	M6XP1.0X40L	
4	E-BLNC-07009-01	Distributor	1		
5	E-BLNC-00001-01	Spindle head	1		
6	E-BLNC-00002-01	Fixing plate	1		
7	-	Hex. socket screw	2	M4XP0.7X8L	
8	-	Hex. socket screw	2	M4XP0.7X30L	
9	Q-0051-00312	Solenoid valve	1	MVSC-220-3E1	
10	E-BLNC-07001-01	Cylinder housing	1		NU-433
11	-	Hex. socket screw	4	M10XP1.5X30L	
12	M-0201-01-001	Cylinder	1	G4000 2.5TX13L	NU-330
13	-	Hex. socket screw	4	M10XP1.5X45L	
14	L-0903-00002	Belt	1	5GT-40-675	BT-133
15	-	Hex. socket screw	6	M5XP0.8X20L	
16	E-BLNC-07062-01	Press plate	1	YASKAWA	MP001301
17	L-1103-00005	Packing toggle	2	YASKAWA	MP001300
18	E-BLNC-07061-01	Pulley	1	YASKAWA	PY00315
19	-	Hex. socket screw	4	M10XP1.5X40L	
20	E-BLNC-07002-01	Motor plate	1		
21	-	Spindle motor	1		10151
22	-	Hex. socket screw	4	M12XP1.75X30L	
	-	Hex. socket screw	4	M10XP1.5X30L	
23	E-BLNC-07007-01	Adjusting plate	1		
24	-	Hex. socket screw	2	M8XP1.25X25L	
25	-	Hex. socket screw	1	M10XP1.5X40L	

Grippers

A	295.240.001.002	DIN Gripper – Cells			TL-120
B	295.240.003.002	MAS 60 Gripper			TL-146
C	295.240.002.002	ANSI 45 Gripper			TL-155

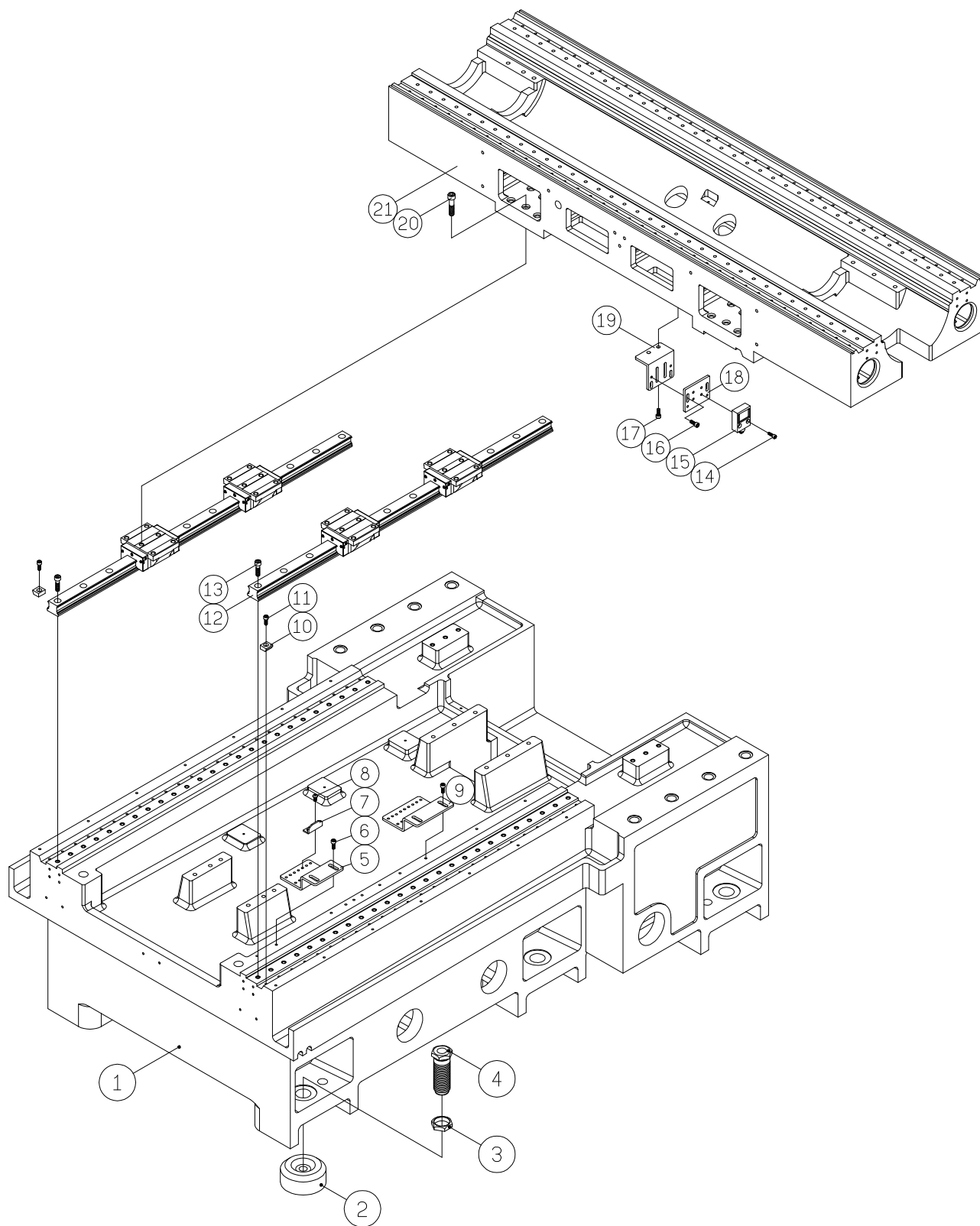
Column Assembly



Column Assembly

Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	E-BLNC-00001-01	Spindle head	1		
2	-	Hex. socket screw	24	M10xP1.5x45L	
3	-	Hex. socket screw	4	M5xP0.8x12L	
4	E-BLNC-51014-01	Press plate	4		
5	E-BLNC-00011-01	L.S bracket	1		MP10387
6	-	Hex. socket screw	2	M6xP1.0x12L	
7	E-BLNC-20003-01	Switch adjustment plate	1		
8		Hex. socket screw	2	M6xP1.0x16L	
9	Q-0228-00502	Limit switch	1		SW-193
10	-	Hex. socket screw	2	M5xP0.8x16L	
11	E-BLNC-53055-01	Linear way	2	KUVE 35 B W2G3V3/990-15/15	
12	-	Hex. socket screw	26	M8xP1.25x30L	
13	-	Hex. socket screw	26	M6xP1.0x12L	
14	E-BLMC-51014-01	Blocker	26		
15	-	Hex. socket screw	2	M6xP1.0x12L	
16	E-BLNC-10012-01	Dog bracket	1		
17	-	Hex. socket screw	2	M6xP1.0x12L	
18	E-BLDH-10011-01	Dog	1		MP-45
19	E-BLNC-10011-01	Dog base	1		
20	-	Hex. socket screw	8	M24xP3.0x70L	
21	E-BLNC-10101-01	Column	1		

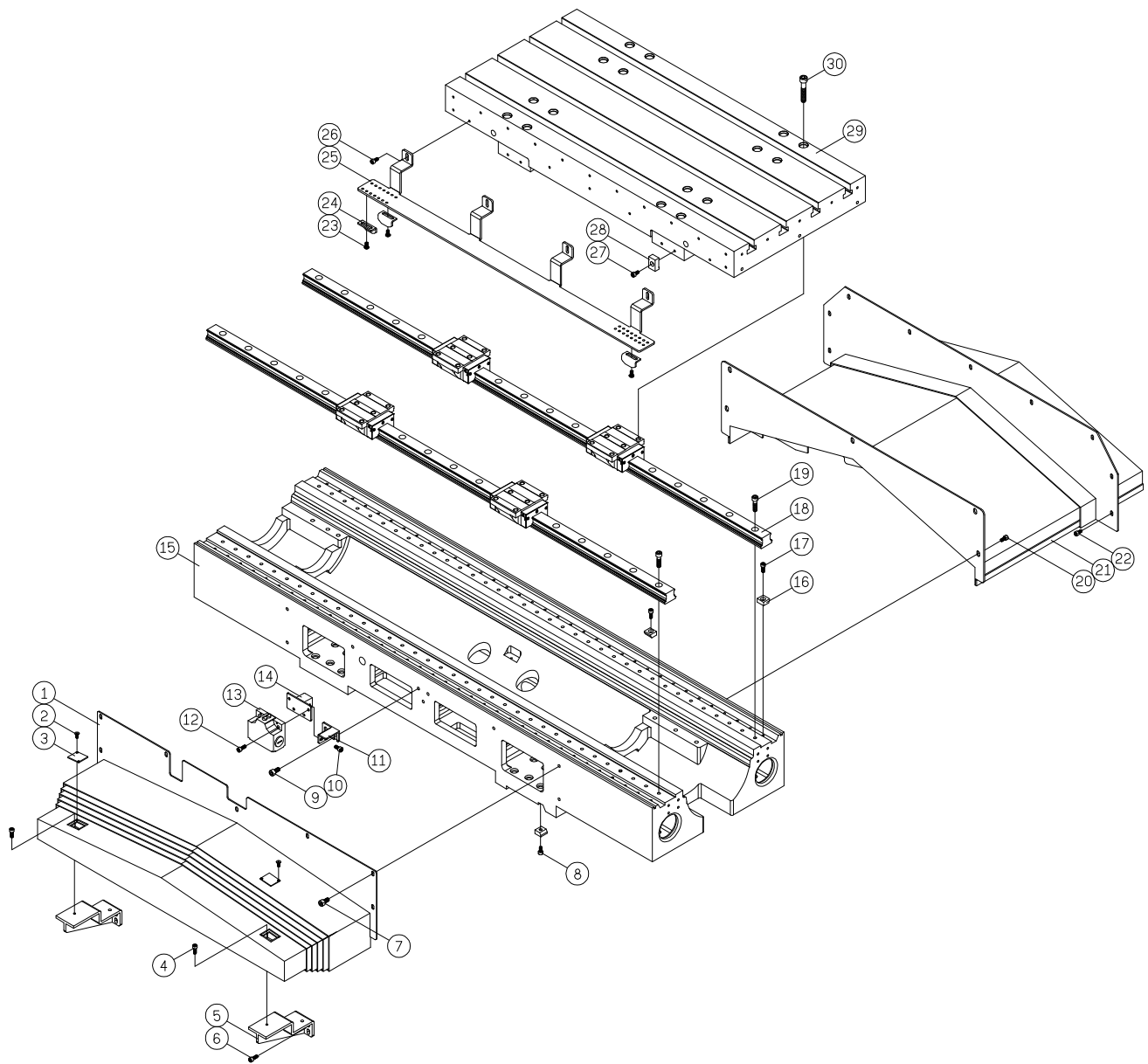
Base Assembly



Base Assembly

Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	E-BLNC-40101-01	Base	1		
2	E-DRAD-40008-01	Foundation pad	6	φ 100x φ 18x45/ hollow	
3	E-BLNE-40013-01	Nut	6	M36XP2.0x10L	
4	E-BLNE-40012-01	Foundation bolt	6	M36xP2.0x110L	
5	E-BLNC-40022-01	Dog bracket	1		
6	-	Hex. socket screw	4	M6xP1.0x12L	
7	E-BLDH-10011-01	Dog	1		MP-45
8	-	Hex. socket screw	2	M6xP1.0x12L	
9	E-BLNC-40021-01	Dog bracket	1		
10	E-BLMC-51014-01	Blocker	24		
11	-	Hex. socket screw	24	M6xP1.0x12L	
12	E-BLNC-51008-01	Linear way	2	KUVE 35 B W2G3V3/1430-35/35	
13	-	Hex. socket screw	24	M8xP1.25x30L	
14	-	Hex. socket screw	2	M5xP0.8x16L	
15	Q-0228-00502	Limit switch	1		SW-193
16		Hex. socket screw	2	M6xP1.0x16L	
17		Hex. socket screw	2	M6xP1.0x12L	
18	E-BLNC-20003-01	Switch adjustment plate	1		
19	E-BLNC-20031-01	L.S bracket	1		MP10387
20		Hex. socket screw	24	M10xP1.5x45L	
21	E-BLNC-20001-02	Saddle	1		

Saddle Assembly



Saddle Assembly

Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	E-BLNC-20011-02	Telescopic cover	1		
2	-	Hex. socket screw	4	M4xP0.7x6L	
3	-	Cover	2		
4	-	Hex. socket screw	2	M6xP1.0x12L	
5	-	Bracket of telescopic cover	2		
6	-	Hex. socket screw	8	M6xP1.0x16L	
7	-	Hex. socket screw	7	M8xP1.25x16L	
8	-	Hex. socket screw	4	M6xP1.0x12L	
9	-	Hex. socket screw	2	M8xP1.25x16L	
10	-	Hex. socket screw	2	M5xP0.8x13L	
11	E-BLNC-51052-01	Bracket of limit switch	1		
12	-	Hex. socket screw	2	M6xP1.0x16L	
13	Q-0228-00003	Limit switch	1		
14	E-BLNC-51051-01	Bracket of limit switch	1		
15	E-BLNC-20001-02	Saddle	1		
16	E-BLMC-51014-01	Blocker	40		
17	-	Hex. socket screw	36	M6xP1.0x12L	
18	E-BLNC-51008-01	Linear way	2	KUVE 35 B W2G3V3/1430-35/35	
19	-	Hex. socket screw	36	M8xP1.25x30L	
20	-	Hex. socket screw	5	M6xP1.0x12L	
21	E-BLNC-20013-01	Telescopic cover	1		
22	-	Hex. socket screw	9	M6xP1.0x12L	
23	-	Hex. socket screw	6	M6xP1.0x12L	
24	E-BLDH-10011-01	Dog	3		MP00045
25	E-BLNC-30004-01	Dog bracket	1		
26	-	Hex. socket screw	4	M6xP1.0x12L	
27	-	Hex. socket screw	4	M6xP1.0x12L	
28	E-BLNC-51014-01	Press plate	4		
29	E-BLNC-30001-02	Table	1		
30	-	Hex. socket screw	24	M10xP1.5x55L	
		Table bolt plugs	16	(not shown)	WX-332

Table Assembly

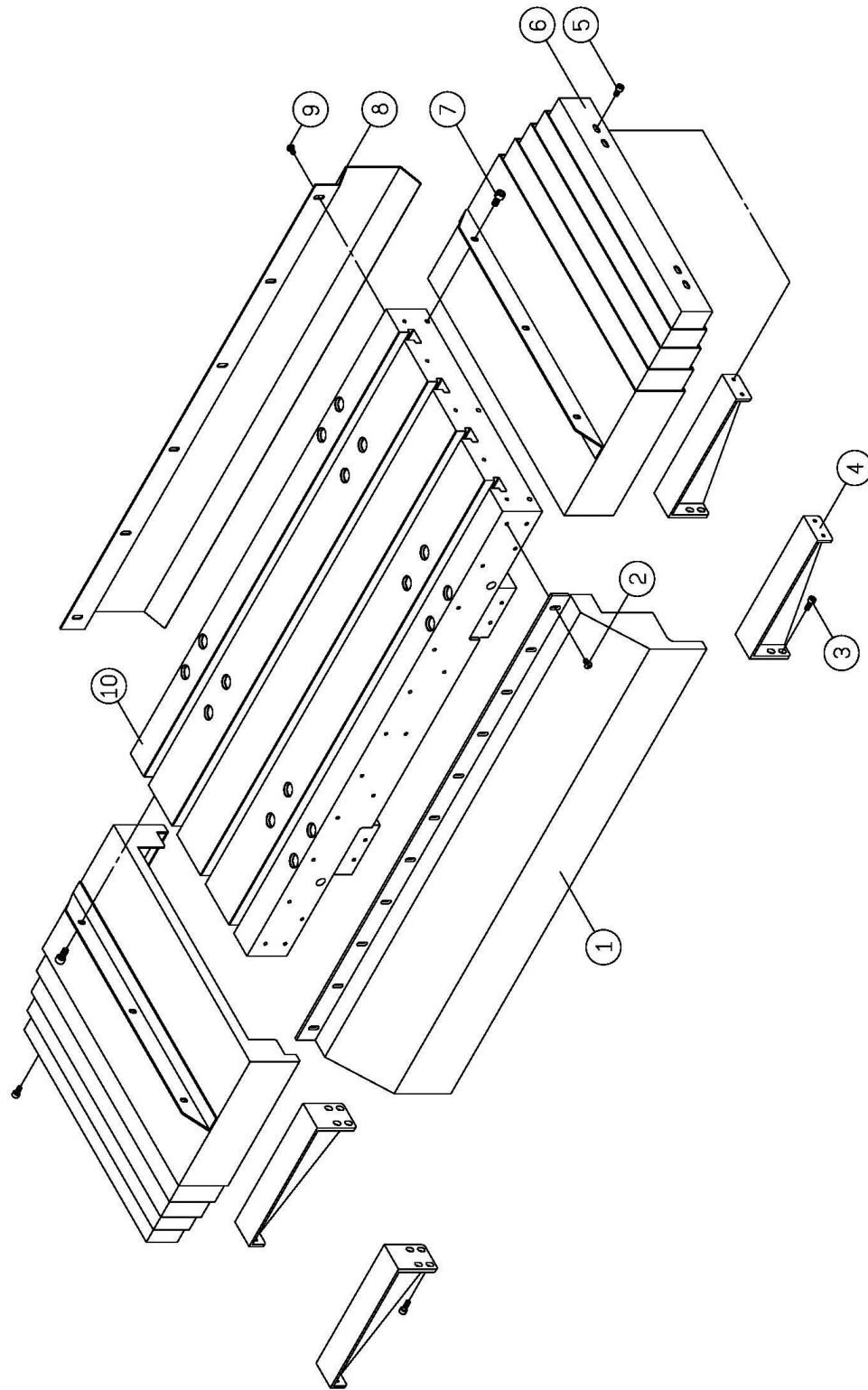
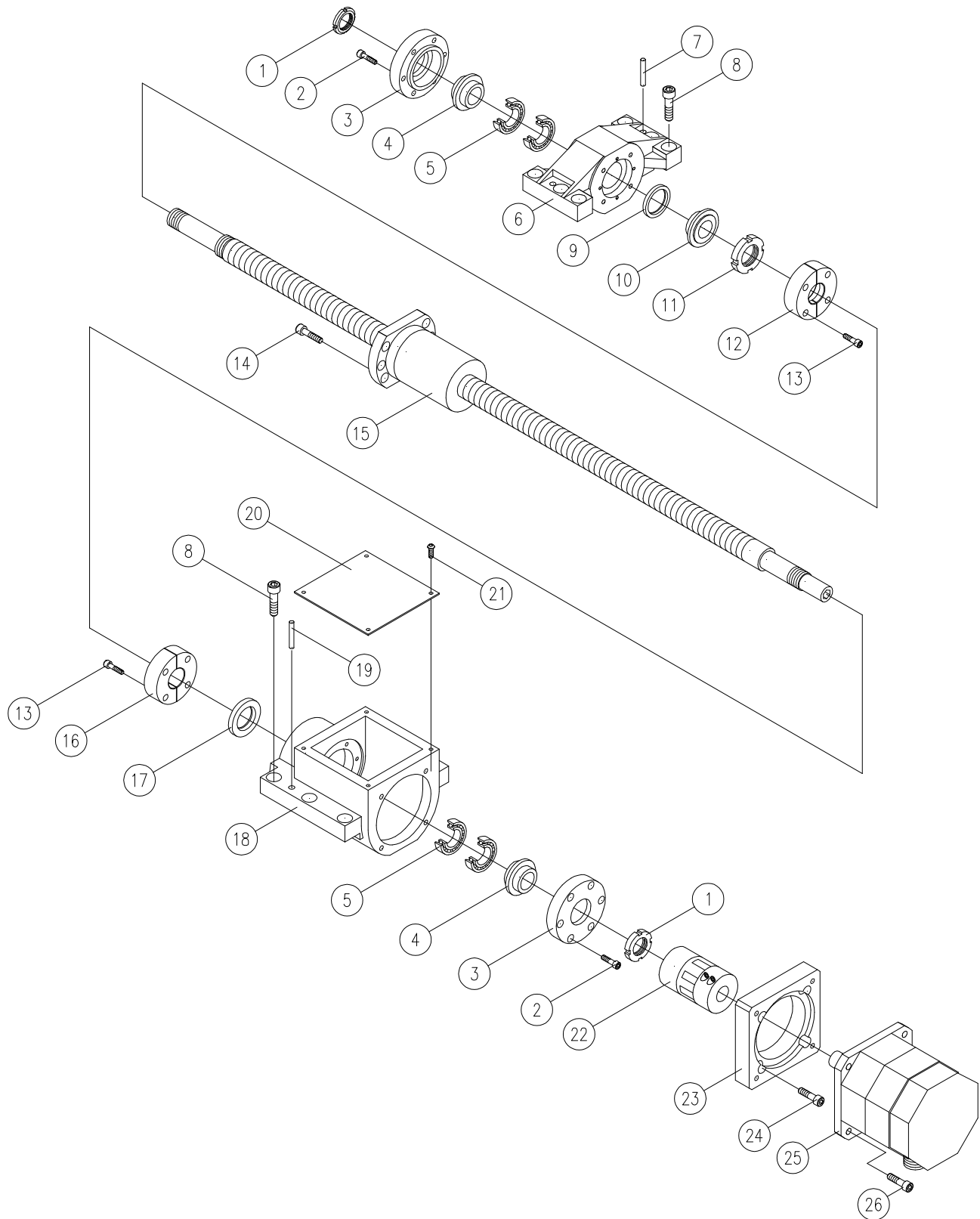


Table Assembly

Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	E-BLNC-300003-01	Front cover	1		
2	-	Hex. socket screw	11	M6xP1.0x12L	
3	-	Hex. socket screw	16	M6xP1.0x16L	
4	-	Bracket of telescopic cover	4		
5	-	Hex. socket screw	8	M6xP1.0x12L	
6	E-BLNC-30012-02	Telescopic cover	2		
7	-	Hex. socket screw	16	M8xP1.25x16L	
8	E-BLNC-30005-01	Rear cover	1		
9	-	Hex. socket screw	6	M6xP1.0x12L	
10	E-BLNC-30001-02	Table	1		

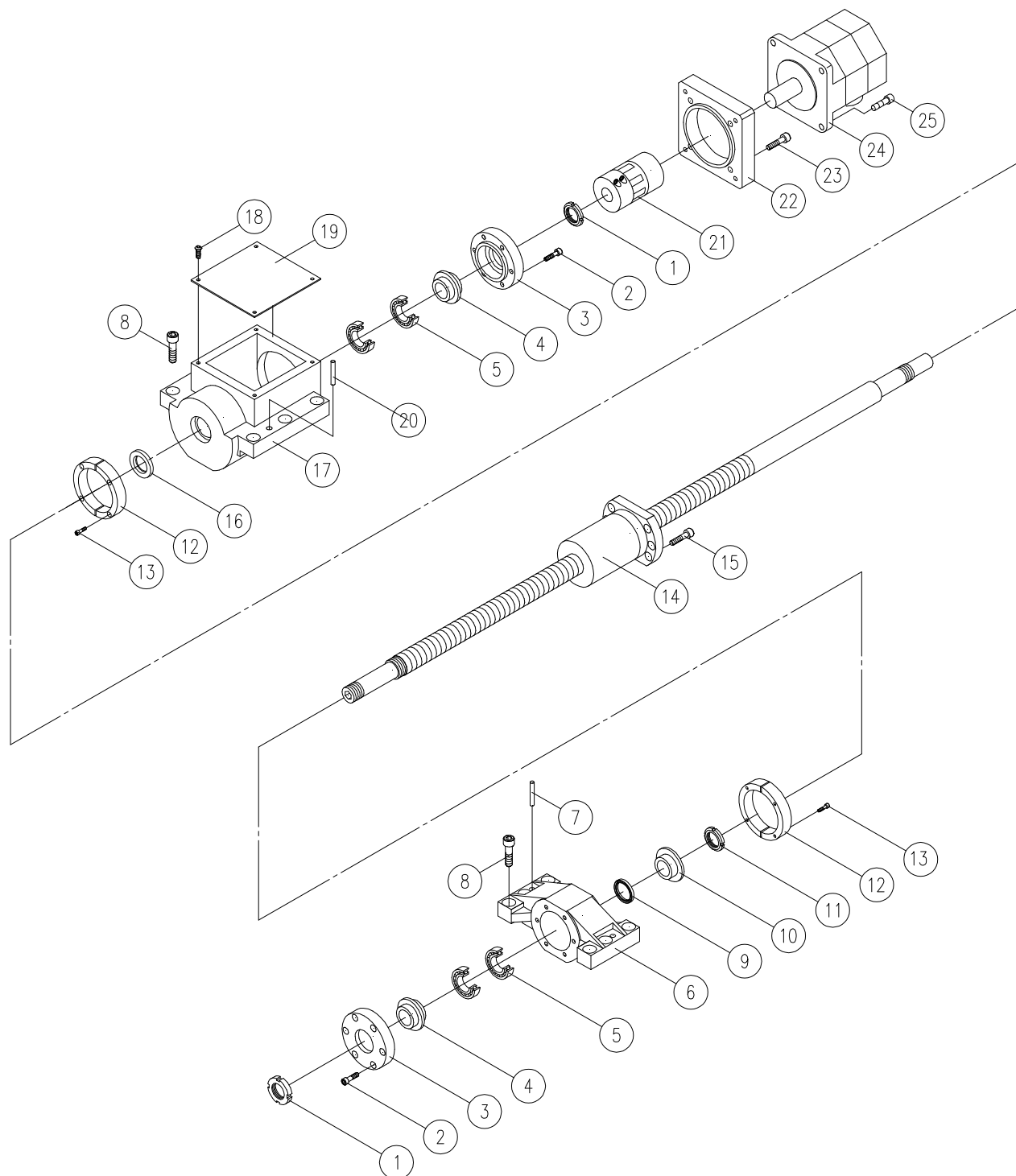
X-Axis Assembly



X-Axis Assembly

Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	L-0253-00002	Lock nut	2	YSR M25xP1.5	MBC0145
2	-	Hex. socket screw	12	M6xP1.0x25L	
3	E-BLNC-51006-01	Bearing cap	2		
4	E-BLNC-51007-01	Spacer	2		
5	L-0404-00054	Bearing	4	25TAC62BSUC10PN7B	10020
6	E-BLNC-51005-01	Bearing housing	1		
7	-	Pin	2	#6x40L	
8	-	Hex. socket screw	12	M10xP1.5x30L	
9	L-0604-00038	Oil seal	1	TC-354505	
10	E-BLNC-51009-01	Spacer	1		
11	L-0253-00003	Lock nut	1	YSR M30xP1.5	
12	E-BLNC-51012-01	Stopper	1		
13	-	Hex. socket screw	8	M6xP1.0x25L	
14	-	Hex. socket screw	6	M8xP1.25x20L	
15	E-BLNC-51001-02	Ballscrew	1	R32-08E1-FSWE-945-1195-0.008	MPMM003
16	E-BLNC-51011-01	Stopper	1		
17	L-0604-00047	Oil seal	1	TC-325207	
18	E-BLNC-51003-02	Motor housing	1		
19		Taper pin	2	#6x40L	
20	E-BLNC-51013-01	Cover plate	1		
21	-	Hex. socket screw	4	M6xP1.0x10L	
22		Coupling	1	19mm w/key x 22mm	MA00240
23	E-BLNC-51031-01	Motor plate	1	Yaskawa	MPMM045
24	-	Hex. socket screw	4	M8xP1.25x25L	
25	-	Motor	1		MO00244
26	-	Hex. socket screw	4	M8xP1.25x20L	

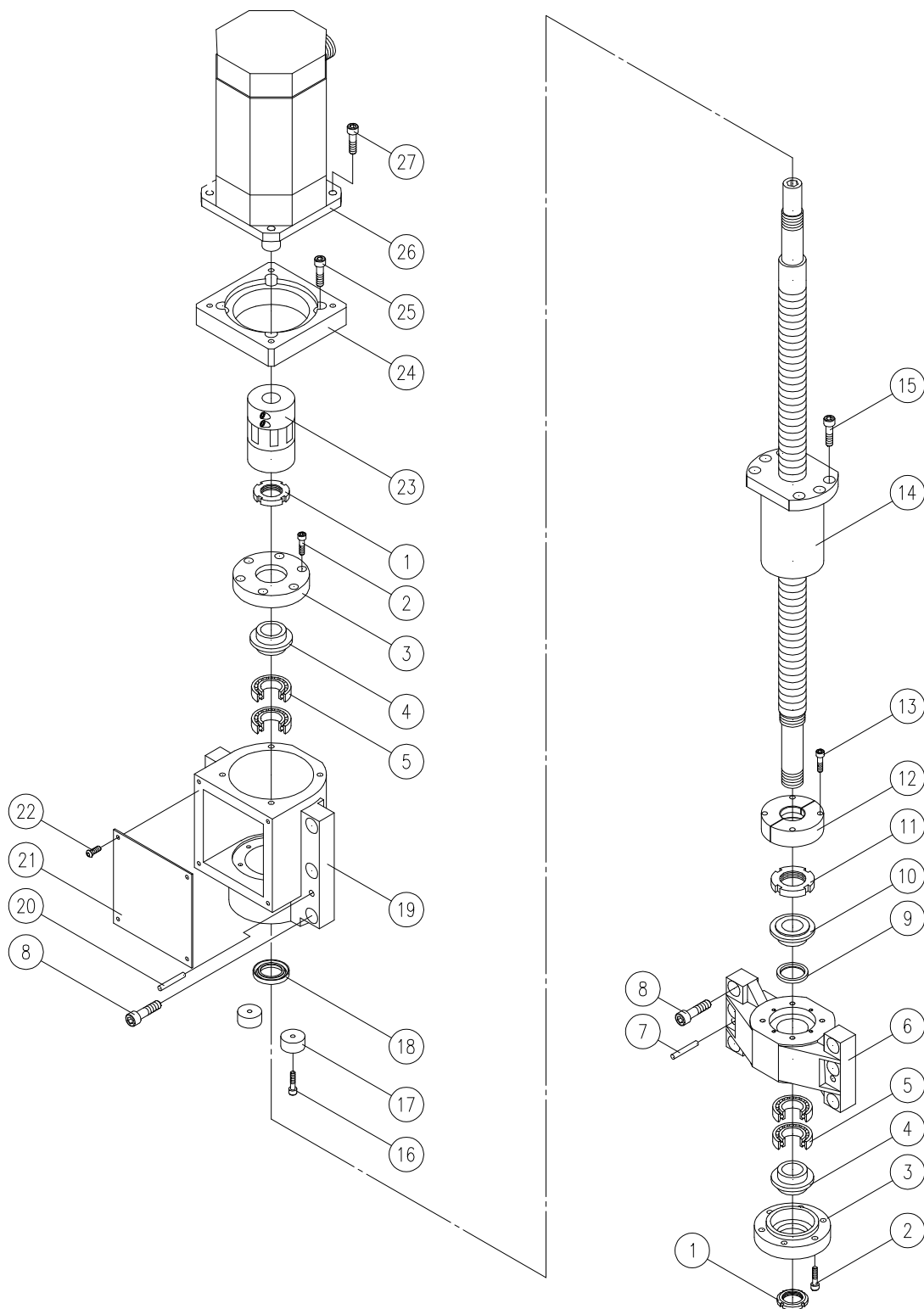
Y-axis Assembly



Y-axis Assembly

Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	L-0253-00002	Lock nut	2	YSR M25xP1.5	MBC0145
2	-	Hex. socket screw	12	M6xP1.0x25L	
3	E-BLNC-51006-01	Bearing cap	2		
4	E-BLNC-51007-01	Spacer	2		
5	L-0404-00054	Bearing	4	25TAC62BSUC10PN7B	10020
6	E-BLNC-51005-01	Bearing housing	1		
7	-	Pin	2	#6x40L	
8	-	Hex. socket screw	12	M10xP1.5x30L	
9	L-0604-00038	Oil seal	1	TC-354505	
10	E-BLNC-51009-01	Spacer	1		
11	L-0253-00003	Lock nut	1	YSR M30xP1.5	
12	E-BLNC-52012-01	Stopper	2		
13	-	Hex. socket screw	8	M4xP0.7x16L	
14	E-BLNC-53051-02	Ballscrew	1	R32-08G1-FSWE-615-865-0.008	
15	-	Hex. socket screw	6	M8xP1.25x20L	
16	L-0604-00047	Oil seal	1	TC-325207	
17	E-BLNC-51003-02	Motor housing	1		
18	-	Hex. socket screw	4	M6xP1.0x10L	
19	E-BLNC-51013-01	Cover plate	1		
20	-	Taper pin	2	#6x40L	
21	L-1101-00044	Coupling	1	19mm w/key x 22mm	MA00240
22	E-BLNC-51031-01	Motor plate	1	Yaskawa	MPMM045
23	-	Hex. socket screw	4	M8xP1.25x25L	
24	-	Motor	1		MO00244
25	-	Hex. socket screw	4	M8xP1.25x20L	

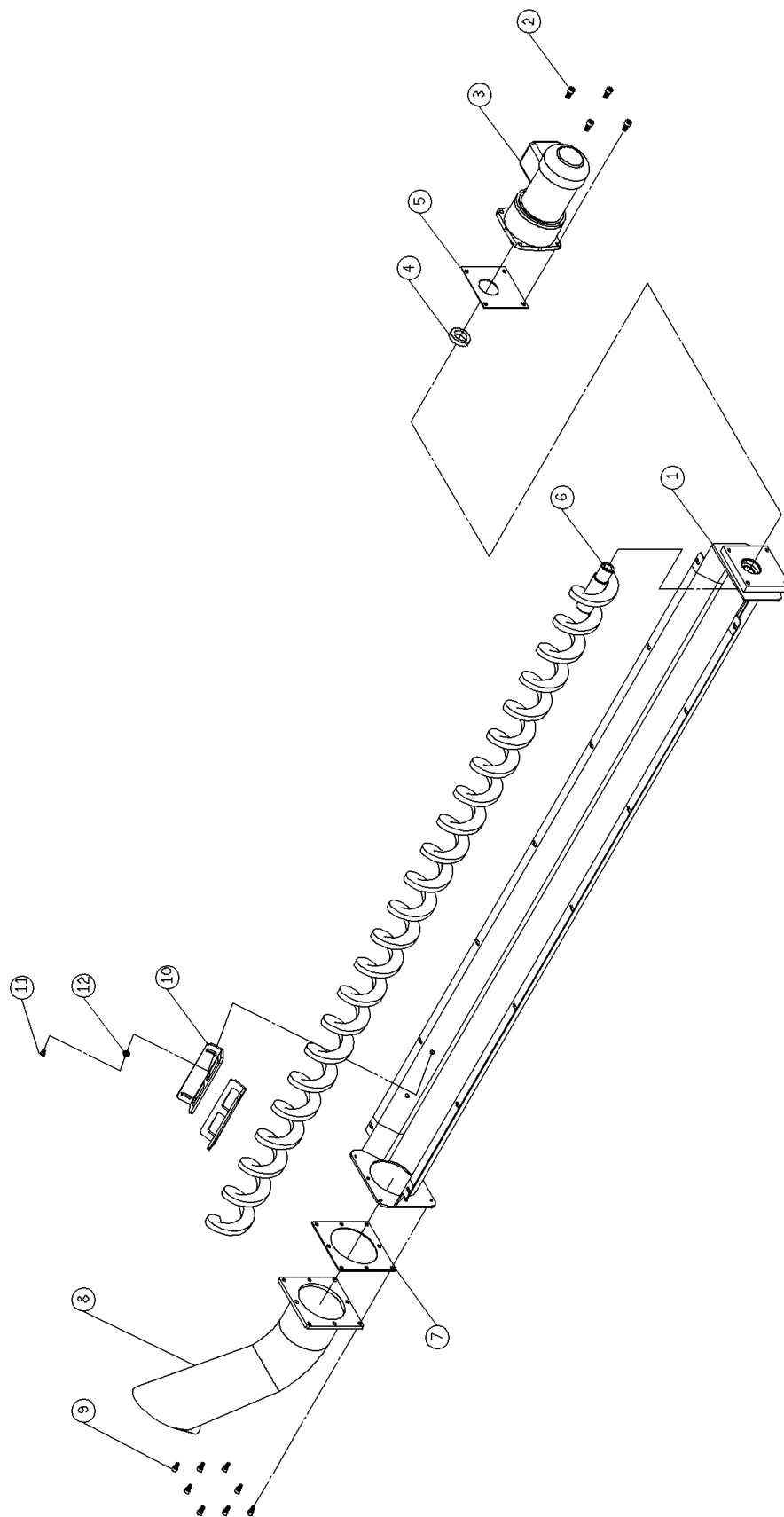
Z-axis Assembly



Z-axis Assembly

Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	L-0253-00002	Lock nut	2	YSR M25xP1.5	MBC0145
2	-	Hex. socket screw	12	M6xP1.0x25L	
3	E-BLNC-51006-01	Bearing cap	2		
4	E-BLNC-51007-01	Spacer	2		
5	L-0404-00054	Bearing	4	25TAC62BSUC10PN7B	10020
6	E-BLNC-51005-01	Bearing housing	1		
7	-	Pin	2	#6x40L	
8	-	Hex. socket screw	12	M10xP1.5x30L	
9	L-0604-00038	Oil seal	1	TC-354505	
10	E-BLNC-51009-01	Spacer	1		
11	L-0253-00003	Lock nut	1	YSR M30xP1.5	
12	E-BLNC-51012-01	Stopper	1		
13	-	Hex. socket screw	4	M6xP1.0x25L	
14	E-BLNC-53051-02	Ballscrew	1	R32-08G1-FSWE-615-865-0.008	MPMM005
15	-	Hex. socket screw	6	M8xP1.25x20L	
16	-	Hex. socket screw	2	M6xP1.0x16L	
17	E-BLNC-53008-02	Stopper	2		
18	L-0604-00047	Oil seal	1	TC-325207	
19	E-BLNC-51003-02	Motor housing	1		
20	-	Taper pin	2	#6x40L	
21	E-BLNC-51013-01	Cover plate	1		
22	-	Hex. socket screw	4	M6xP1.0x10L	
23		Coupling	1	22mm w 6mm key x 22mm	MA00352
24	E-BLNC-51031-01	Motor plate	1	Yaskawa	MPMM045
25	-	Hex. socket screw	4	M8xP1.25x25L	
26	-	Motor	1		MO00247
27	-	Hex. socket screw	4	M8xP1.25x25L	

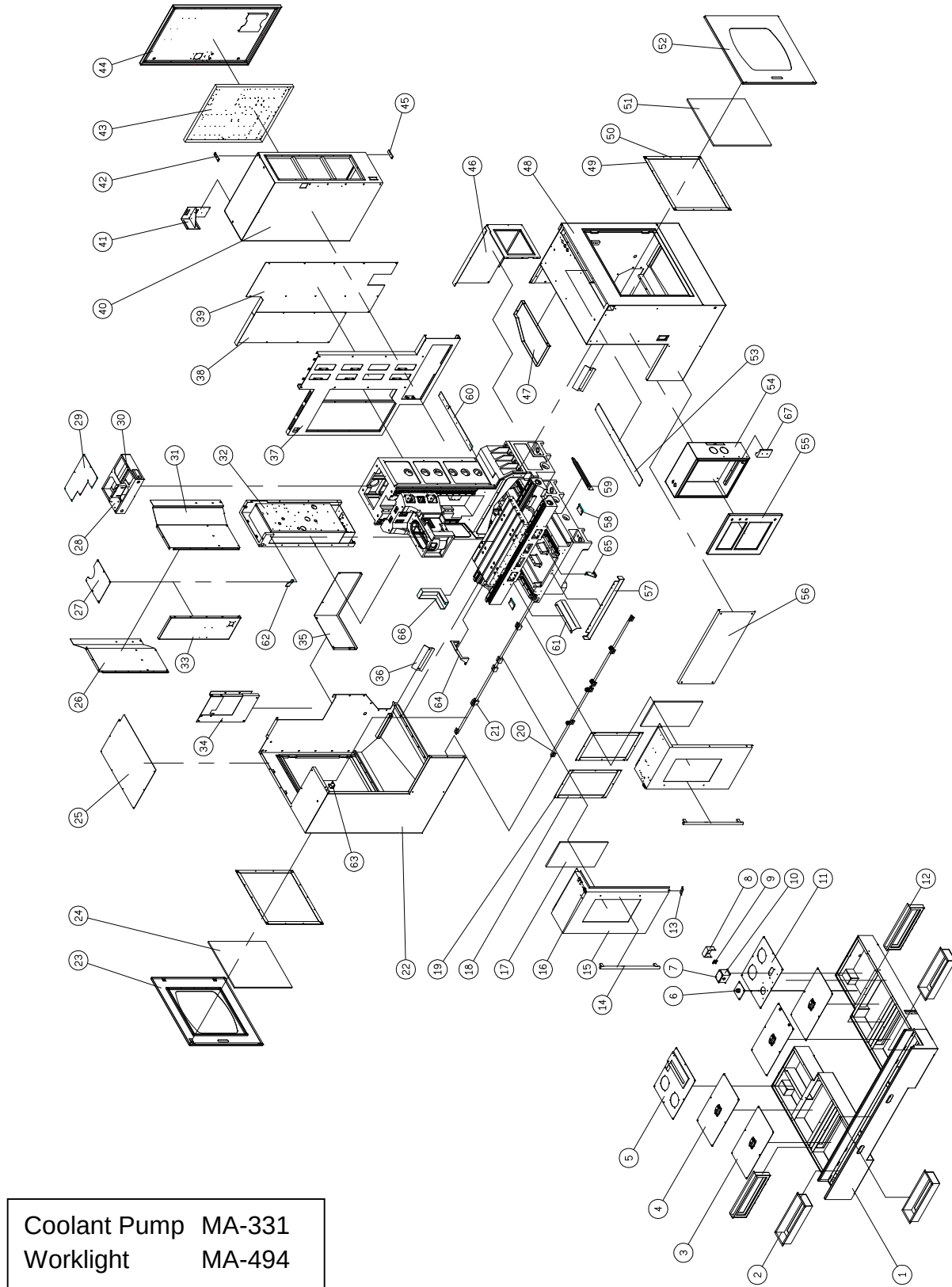
Auger Assembly



Auger Assembly

Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	-	Inner groove	1		
2	-	Hex. socket screw	4	M10xP1.5x20L	
3	-	Motor, Auger	1	1/4HP AEV200	
	-	Gearbox, Auger	1	1/4HP FME22	
4	-	Seal	1	36 x 55 x 12	
5	-	Motor spacer	1		
6	-	Screw	1		
7	-	Plate	1		
8	-	Pipe	1		
9	E-BLNC-51009-01	Hex. socket screw	8	M10xP1.5x30L	
10	-	Fixed plate	2		
11	E-BLNC-51012-01	Hex. socket screw	4	M8xP1.5x25L	
12	-	Washer	4		

Enclosure Assembly



Enclosure Assembly

Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	MFA-A09	Coolant tank	1	Length:2200	
2	MFA-010	Strainer box	3	690x252xT:2	
3	MFA-008	Coolant tank cover	2	685x383xT:2	
4	MFA-009	Coolant tank cover	2	685x383xT:2	
5	MFA-012	Coolant tank motor panel (Left)	1	541x495xT:2	
6	L-5911-00011	Adapter board	1	Water gun return	
7	VM-3100073	Upper cover of coolant tank junction box	1	83x110xT:2	
8	VM-3100075	Rear cover of coolant tank junction box	1	94x53xT:2	
9	VM-3100074	Cable board of coolant tank junction box	2	39x36xT:2	
10	VM-3100073	Coolant tank junction box	1	80x132xT:2	
11	MFA-012	Coolant tank motor panel (Right)	1	541x495xT:2	
12	MFA-A10	Filter	2	611x182xT:2	
13	MFA-031	Mounted plate for roller wheel	4	90x36xT:5	
14	L-5901-00012	Handle	2	tube/1310-500 (length 600)	
15	MFA-A04	Left front door	1	623x1121.5xT:2	
16	MFA-017	Mounted sheet metal for door lock	1	50x30xT:3	
17	L-5904-00057	Glass window	2	355x610x15	
18	MFA-030	Binder plate for glass window of automatic door	4	579x40xT:2	
19	MFA-029	Binder plate for glass window of automatic door	4	405x40xT:2	
20	L-0451-00001	Shaft type guideway	2	TAC-LMC-C12-B4-900-CRS	
21	L-0451-00002	Shaft type guideway	1	TAC-LMC-C12-B3-1300-CRS	
22	MFA-A02	Left front cover	1	-	
23	MFA-A06	Left window	1	980x930xT:2	
24	L-5904-00067	Glass window	2	670x730x15	
25	E-BLNC-70003-01	Upper cover for carousel ATC	1	565x838xT:2	
26	MF-43029	Sheet Metal –spindle head (left)	1	Length:816 T:2	
27	MF-43031	Sheet Metal –spindle head (upper)	1	304x330xT:2	
28	MFA-021	Cover plate of cable tray box for column chain carrier (1)	1	150x156xT:2	
29	MFA-019	Cover plate of cable tray box for column chain carrier (2)	1	500x345xT:2	
30	MFA-018	Metal guard of cable tray box for column chain carrier	1	110x500xT:2	
31	MF-43030	Sheet metal-spindle head(Right)	1	Length:816 T:2	
32	MFA-A13	Air conditioning unit metal guards	1	1338xT:2	
33	MF-43032	Sheet metal-spindle head (Front)	1	Length:816 T:2	

Item	Part no.	Description	Q'ty	Remark	Milltronics #
34	E-BLNC-70004-01	Tool magazine cover	1	for carousel style tool magazine	
35	MFA-A17	Fender skirts sheet metal (Under Air conditioning unit)	1	624x287xT:2	
36	MFA-006	Rear guard (Left & right)	2	Length:325	
37	MFA-A14	Column metal guard set	1	1410xT:2	
38	MFA-A16	Column metal guard set-cover plate (1)	1	1487x443xT:2	
39	MFA-A15	Column metal guard set-cover plate (2)	1	1675x725xT:2	
40	MFA-001	Electrical box	1	850x1368xT:2	
41	MFA-004	Power switch bracket	1	170x100xT:3	
42	MFA-002	Upper anchor block	1	103x30xT:6	
43	E-BLNC-73011-01	Electrical distribution board (Full guard)	1	MILLTRONICS	
44	MFA-005	Electrical box cover	1	848x1364.2xT:2	
45	MFA-003	Lower anchor block	1	103x30xT:6	
46	MFA-A11	Fender skirts sheet metal (under Electrical box)	1	848xT:2	
47	MF-43105	Upper cover for right front cover	1	664xT:2	
48	MFA-A01	Right front cover	1		
49	MFA-028	Binder plate for glass window of side door (1)	4	720x40xT:2	
50	MFA-027	Binder plate for glass window of side door (2)	4	780x40xT:2	
51	L-5904-00067	Glass window	2	670x730x15	
52	MFA-A07	Right window	1	980x930xT:2	
53	MFA-A03	Cable tray cover plate (Right front)	1	1119x88xT:2	
54	MFA-A08	Operation box	1	573.5x670.5xT:2	
55	MF-43025A	Operation box panel	1	573x670xT:2	
56	-	Ornamental plate for front door	1	-	
57	MFA-025	Base water guiding-plate	1	880xT:2	
58	MFA-035	Mounting metal plate for chain carrier	3	100x70xT:2	
59	MFA-037	Waterproof sheet metal under saddle (Right)	1	410xT:2	
60	MFA-039	Mounting metal plate for chain carrier	1	-	
61	MFA-036	Waterproof sheet metal under saddle (L)	1	410xT:2	
62	MF-43042	Mounting metal plate for chain carrier	1	310.5x150xT:4	
63	MFA-032	Shipping mounting bracket	2	60x44xT:3	
64	E-BLNC-70008-01	Shipping mounting bracket	1	For X-axis	
65	E-BLNC-70009-01	Shipping mounting bracket	1	For Y-axis	
66	E-BLNC-70010-01	Shipping mounting bracket	1	For spindle head	
67	MFA-033	Hand wheel mounting plate	1	150x100xT:2	

Chain Carrier Assembly And Window Glass



Chain Carrier Assembly And Window Glass

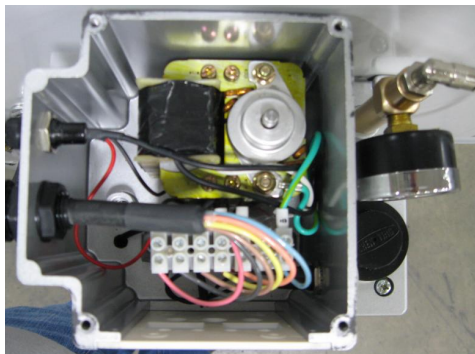
Item	Part no.	Description	Q'ty	Remark	Milltronics #
1	E-BLNC-94013-01	Chain carrier	1	Y-axis	
2	E-BLNC-94017-02	Chain carrier	1	X-axis	
3	E-BLNC-94018-01	Chain carrier	1	Z-axis	
4	L-5904-00057	Glass window	2	Front door	MPMM044
5	L-5904-00067	Glass window	2	Side window	

Waylube Pump MA00458

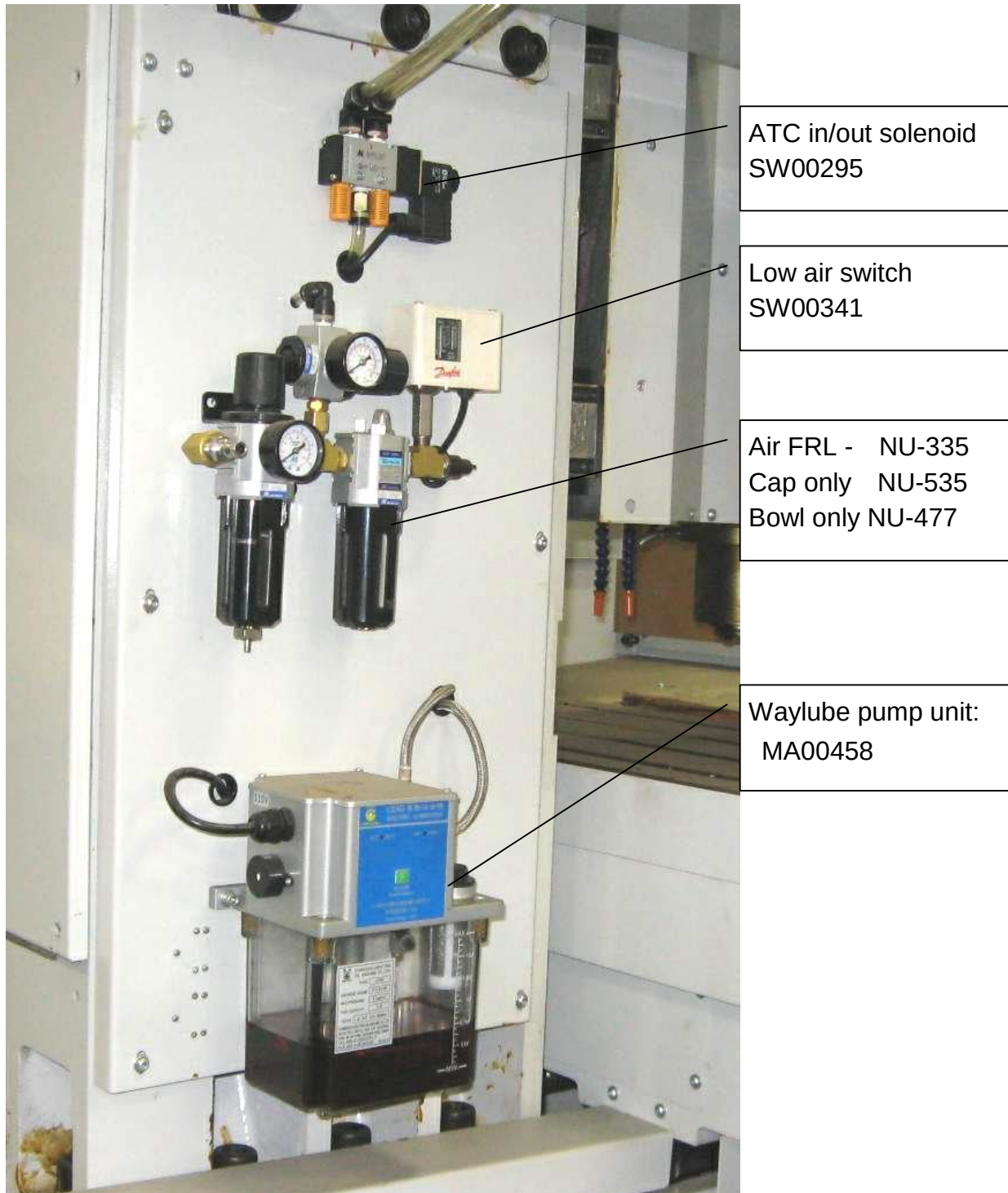
The on time and off time can be adjusted using MISC control parameters “Way Lube ON time (sec)”, and “Way Lube OFF time (min)”.

Model #	CEN01
Part #	MA00458
Timer function ON/OFF	Via CNC #66
Audible alarm	NO
Oil pressure gauge	YES
Manual override button	YES

Pictures of MA00458



Lubrication and Air System



Retention Knob Chart

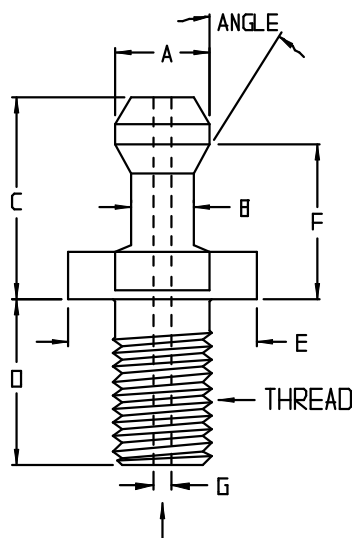
40 Taper Tooling

		Dimension								
Standard	Flange	A	B	C	D	E	F	G	Angle	Thread
MAS 60°	CT	.59	.39	1.27	.86	.90	.99	.19	60°	5/8"-11
	BT	.59	.39	1.38	.99	.90	1.10	.16	60°	M16-2
Optional										
ANSI 45°	CT	.74	.49	.64	.86	.93	.44	.27	45°	5/8"-11
	BT	.74	.49	.75	.86	.90	.55	.28	45°	M16-2
MAS 45°	CT	.59	.39	1.27	.86	.90	.99	.19	45°	5/8"-11
	BT	.59	.39	1.38	.99	.90	1.10	.16	45°	M16-2
DIN 69872	CT	.75	.55	1.02	.86	.90	.79	.24	75°	5/8"-11
	BT	.75	.55	1.02	.99	.90	.79	.28	75°	M16-2

50 Taper Tooling

		Dimension								
Standard	Flange	A	B	C	D	E	F	G	Angle	Thread
ANSI 45°	CT	1.14	.83	1.00	1.32	1.42	.70	.45	45°	1"-8
	BT	1.14	.83	1.00	1.32	1.42	.70	.45	45°	M24-3

MAS - ANSI - DIN Dimension Diagram



English threads for CT-Flange
 Metric threads for BT-Flange

Notes:

1. Balanced tooling (G2.5 Spec) is required for spindle speeds in excess of 8000 RPM. Spindle warranty will be void if balanced tooling is not used.
2. Always tighten retention knobs to the manufacturers recommended torque specification.
3. Inline spindles, in their respective frame sizes, use the same retention knobs as belted models.
4. All dimensions above are in inches.

