



MILLTRONICS
C N C M A C H I N E S

TT40 B Mechanical

July 15, 2008
Rev 1

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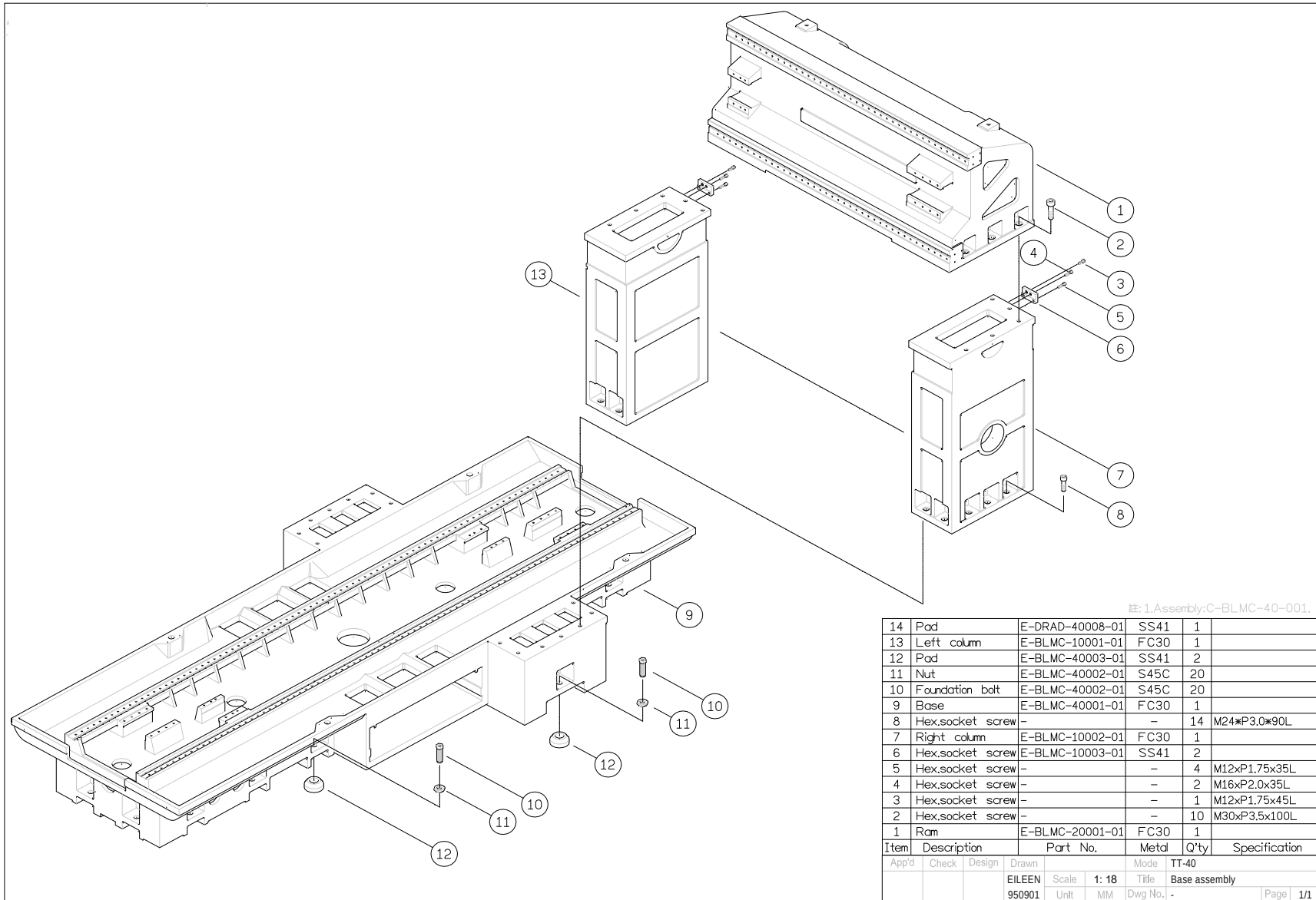
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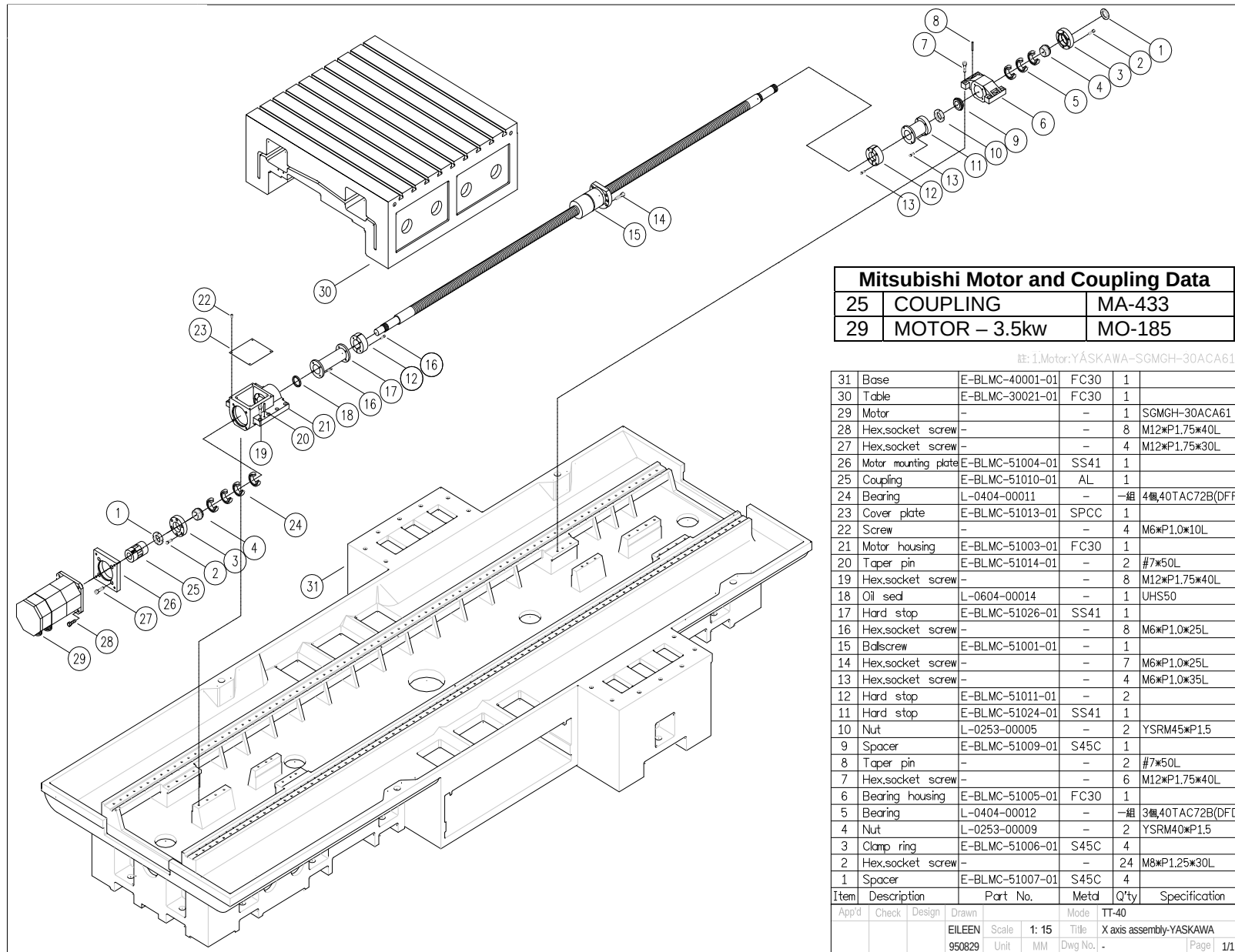
Manual Discrepancy Sheet

1.

Base Assembly



X-Axis Assembly – Mitsubishi



Mitsubishi Motor and Coupling Data		
25	COUPLING	MA-433
29	MOTOR – 3.5kw	MO-185

註: 1. Motor: YASKAWA-SGMGH-30ACA61

31	Base	E-BLMC-40001-01	FC30	1	
30	Table	E-BLMC-30021-01	FC30	1	
29	Motor	-	-	1	SGMGH-30ACA61
28	Hex.socket screw	-	-	8	M12*P1.75*40L
27	Hex.socket screw	-	-	4	M12*P1.75*30L
26	Motor mounting plate	E-BLMC-51004-01	SS41	1	
25	Coupling	E-BLMC-51010-01	AL	1	
24	Bearing	L-0404-00011	-	4組	40TAC72B(DFD)
23	Cover plate	E-BLMC-51013-01	SPCC	1	
22	Screw	-	-	4	M6*P1.0*10L
21	Motor housing	E-BLMC-51003-01	FC30	1	
20	Taper pin	E-BLMC-51014-01	-	2	#7*50L
19	Hex.socket screw	-	-	8	M12*P1.75*40L
18	Oil seal	L-0604-00014	-	1	UHS50
17	Hard stop	E-BLMC-51026-01	SS41	1	
16	Hex.socket screw	-	-	8	M6*P1.0*25L
15	Balscrew	E-BLMC-51001-01	-	1	
14	Hex.socket screw	-	-	7	M6*P1.0*25L
13	Hex.socket screw	-	-	4	M6*P1.0*35L
12	Hard stop	E-BLMC-51011-01	-	2	
11	Hard stop	E-BLMC-51024-01	SS41	1	
10	Nut	L-0253-00005	-	2	YSRM45*P1.5
9	Spacer	E-BLMC-51009-01	S45C	1	
8	Taper pin	-	-	2	#7*50L
7	Hex.socket screw	-	-	6	M12*P1.75*40L
6	Bearing housing	E-BLMC-51005-01	FC30	1	
5	Bearing	L-0404-00012	-	3組	40TAC72B(DFD)
4	Nut	L-0253-00009	-	2	YSRM40*P1.5
3	Clamp ring	E-BLMC-51006-01	S45C	4	
2	Hex.socket screw	-	-	24	M8*P1.25*30L
1	Spacer	E-BLMC-51007-01	S45C	4	
Item	Description	Part No.	Metd	Q'ty	Specification
App'd	Check	Design	Drawn	Mode	TT-40
		EILEEN	Scale	1: 15	Title X axis assembly-YASKAWA
		950829	Unit	MM	Dwg No. - Page 11

X-Axis Assembly - Siemens

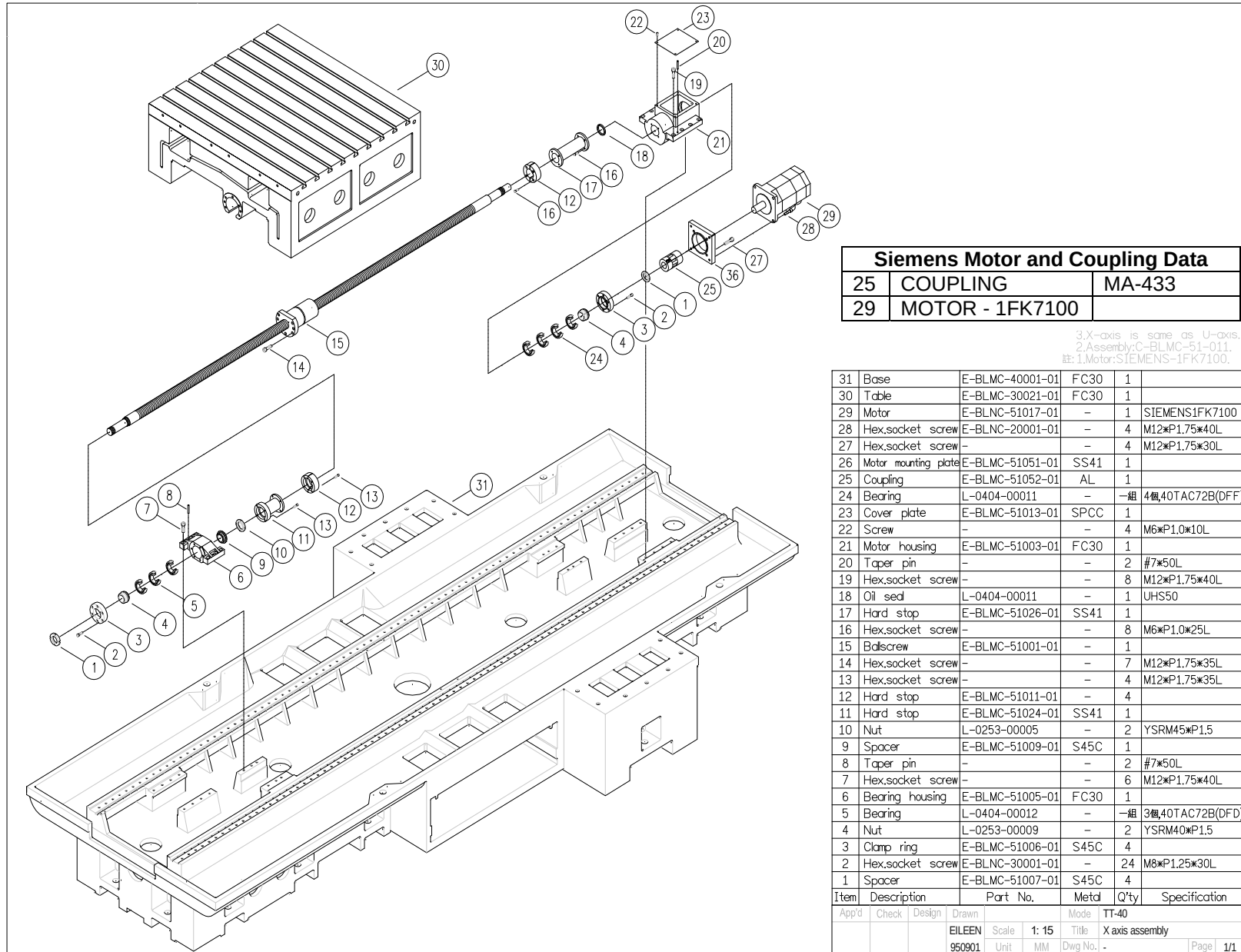
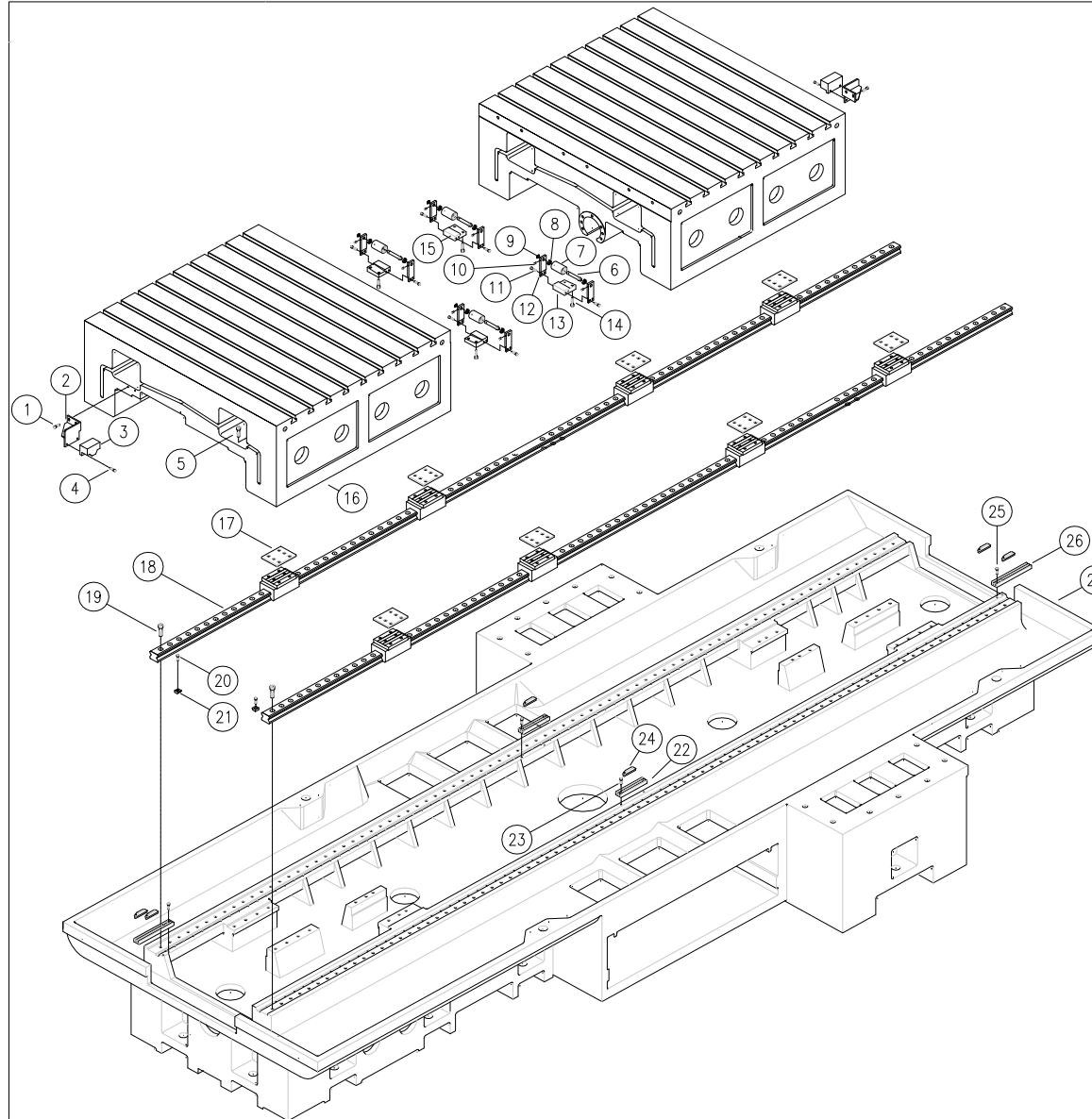


Table Assembly



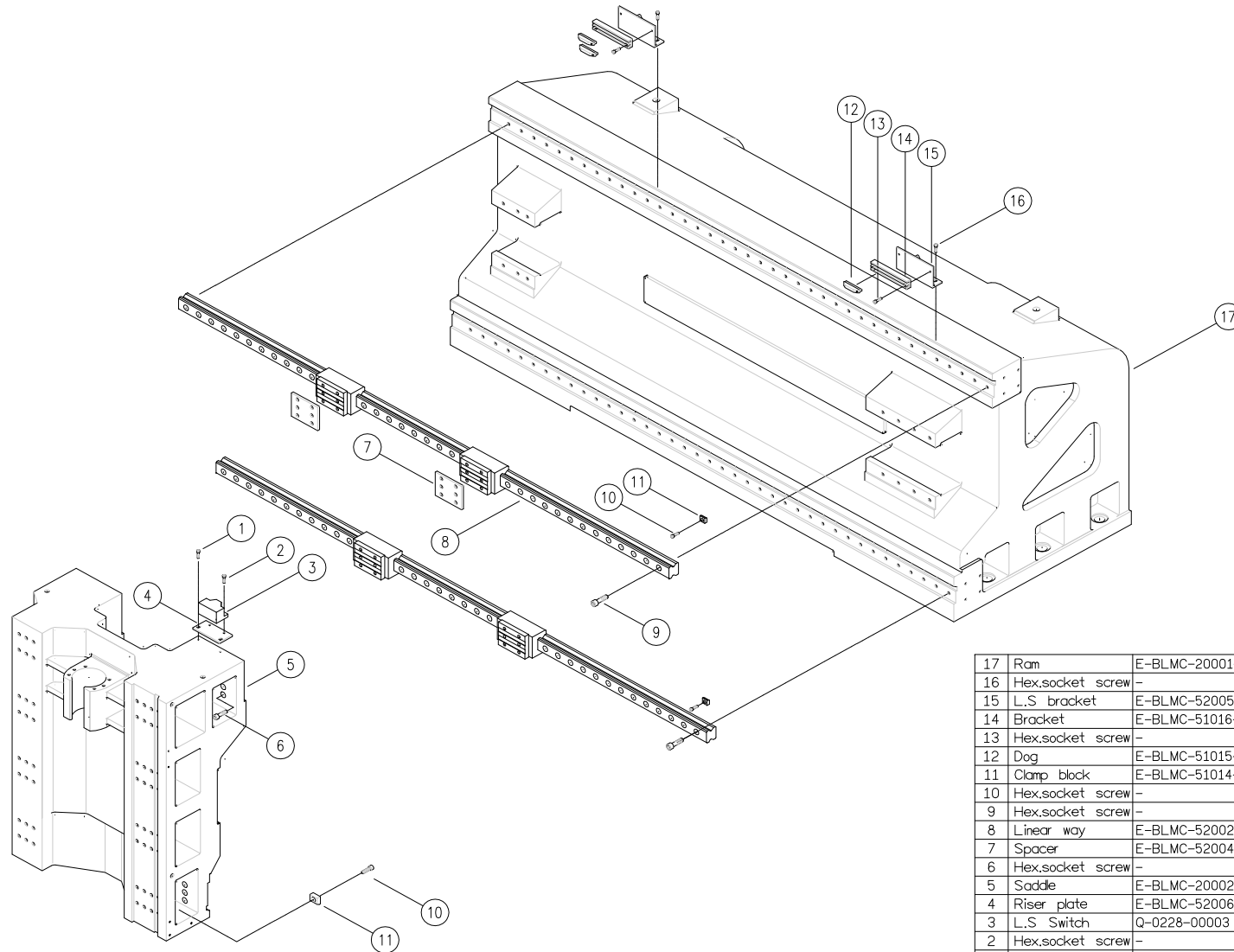
X axis waycover
MPTT-165

Rail block 45mm
MPTT-207

註: 1.Assembly: C-BLMC-40-001.

27	Base	E-BLMC-40001-01	FC30	1	
26	Bracket	E-BLMC-51017-01	AL	2	
25	Hex.socket screw	-	-	4	M6*P1.0*20L
24	Dog	E-BLMC-51015-01	S45C	6	
23	Hex.socket screw	-	-	4	M6*P1.0*20L
22	Bracket	E-BLMC-51016-01	AL	2	
21	Clamp block	E-BLMC-51014-01	SS41	162	
20	Hex.socket screw	-	-	162	M6*P1.0*20L
19	Hex.socket screw	-	-	162	M12xP1.75x40L
18	Linear way	E-BLMC-51002-01	-	1組	2支
17	Riser plate	E-BLMC-52004-01	S45C	8	
16	Table	E-BLMC-30021-01	FC30	2	
15	Fixing block	E-BLMC-30006-01	SS41	2	
14	Hex.socket screw	-	-	8	M8xP1.25x20L
13	Fixing block	E-BLMC-30007-01	SS41	2	
12	Bracket	E-BLMC-30008-01	SS41	8	
11	Hex.socket screw	-	-	16	M6xP1.0x16L
10	Set screw	-	-	16	M5xP0.8x8L
9	C-snap	-	-	4	STW-12
8	Ball bearing	-	-	8	6001-2RSR
7	Roller	E-BLMC-30004-01	-	4	
6	Roller shaft	E-BLMC-30005-01	S45C	4	
5	Hex.socket screw	-	-	48	M10xP1.5x55L
4	Hex.socket screw	-	-	4	M5xP0.8x16L
3	Clamp block	Q-0228-00003	-	2	
2	L,S bracket	E-BLMC-51018-01	SPCC	2	
1	Hex.socket screw	-	-	4	M6*P1.0*15L
Item	Description	Part No.	Metal	Q'ty	Specification
App'd	Check	Design	Drawn	Mode	TT-40
			EILEEN	Scale	1: 15
			950901	Unit	MM
				Title	Table assembly
				Dwg No.	-
				Page	1/1

Bridge Assembly

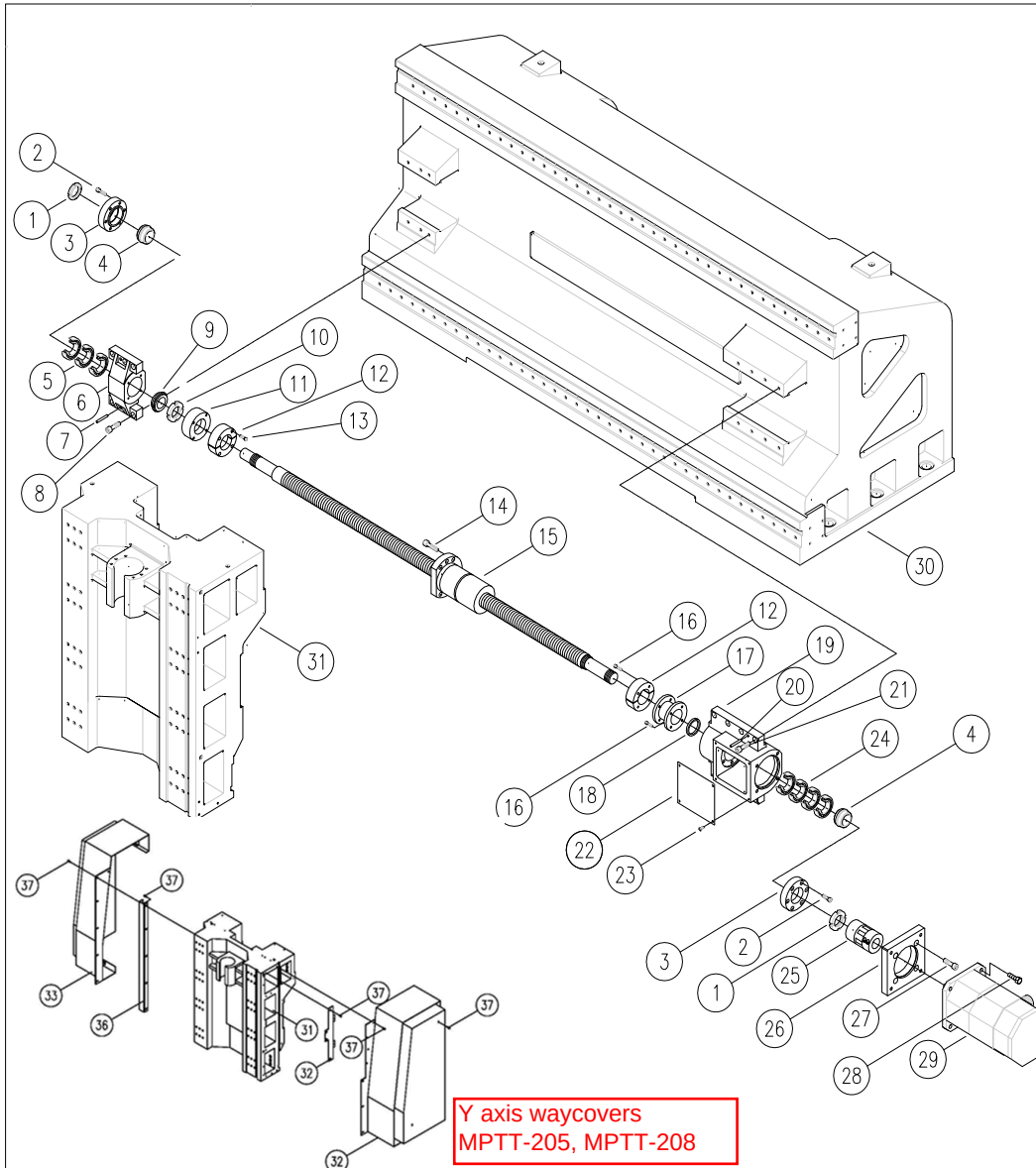


註: 1.Assembly: C-BLMC-20-001.

17	Ram	E-BLMC-20001-01	FC30	1	
16	Hex.socket screw	-	-	4	M6*P1.0*15L
15	L.S bracket	E-BLMC-52005-01	SPCC	2	
14	Bracket	E-BLMC-51016-01	AL	2	
13	Hex.socket screw	-	-	4	M6*P1.0*20L
12	Dog	E-BLMC-51015-01	S45C	3	
11	Clamp block	E-BLMC-51014-01	SS41	82	
10	Hex.socket screw	-	-	78	M6*P1.0*20L
9	Hex.socket screw	-	-	78	M12*P1.75*40L
8	Linear way	E-BLMC-52002-01	-	一組	一組2支
7	Spacer	E-BLMC-52004-01	S45C	2	
6	Hex.socket screw	-	-	24	M10xP1.5x45L
5	Saddle	E-BLMC-20002-01	FC30	1	
4	Riser plate	E-BLMC-52006-01	-	1	
3	L.S Switch	Q-0228-00003	-	1	
2	Hex.socket screw	-	-	2	M5*P0.8*16L
1	Hex.socket screw	-	-	2	M6*P1.0*16L
Item	Description	Part No.	Matel	Q'ty	Specification
App'd	Check	Design	Drawn	Mode	TT-40
			EILEEN	Scale	1: 15
			950829	Unit	MM
				Title	Saddle assembly
				Dwg No.	-
				Page	1/1

Y and Z cabletrack MPTT-116

Y-Axis Assembly



Y axis waycovers
MPTT-205, MPTT-208

Y and Z cabletrack MPTT-116

Y-Axis Covers

32	E-BLMC-20012-01	Telescopic cover	1	
33	E-BLMC-20011-01	Telescopic cover	1	
34	E-BLMC-20013-01	Supported guide way	1	Telescopic cover
35	E-BLMC-20014-01	Supported guide way	1	Telescopic cover
36	TT-40134	Fixing rack of telescopic cover	1	
37	-	Hex. Socket screw	24	M6xP1.0x16L
38	-	Hex. Socket screw	22	M8xP1.25x40L

Motor and Coupling Data

Mitsubishi System

25	COUPLING	MA-362
29	MOTOR – 3.5kw	MO-185

Siemens System

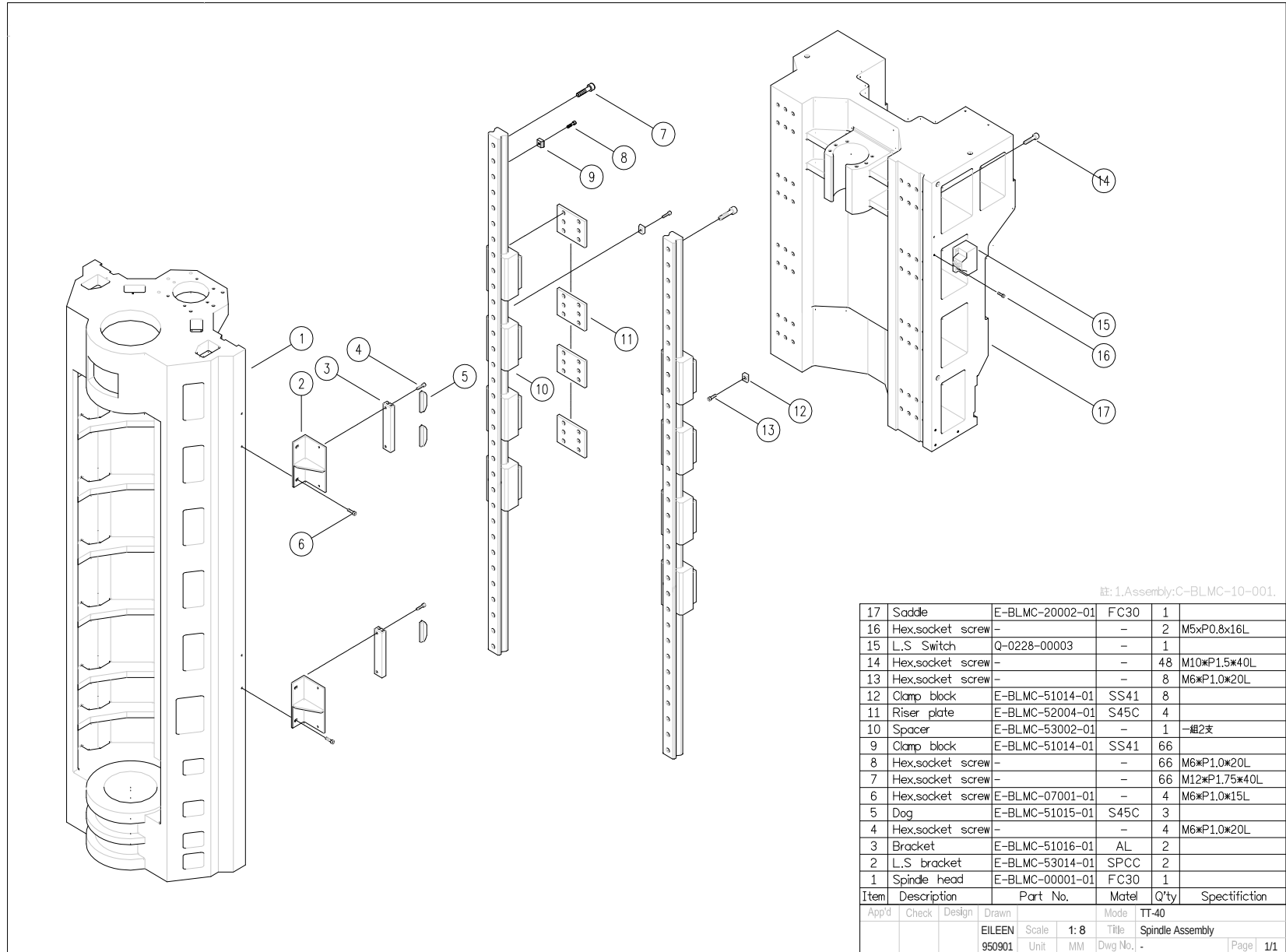
25	COUPLING	MA-338
29	MOTOR – 3.5kw	1FK7100

3.X-axis is same as U-axis.
2.Assembly: C-BLMC-52-001.
註: 1.Motor: FANUC-a22/3000i.

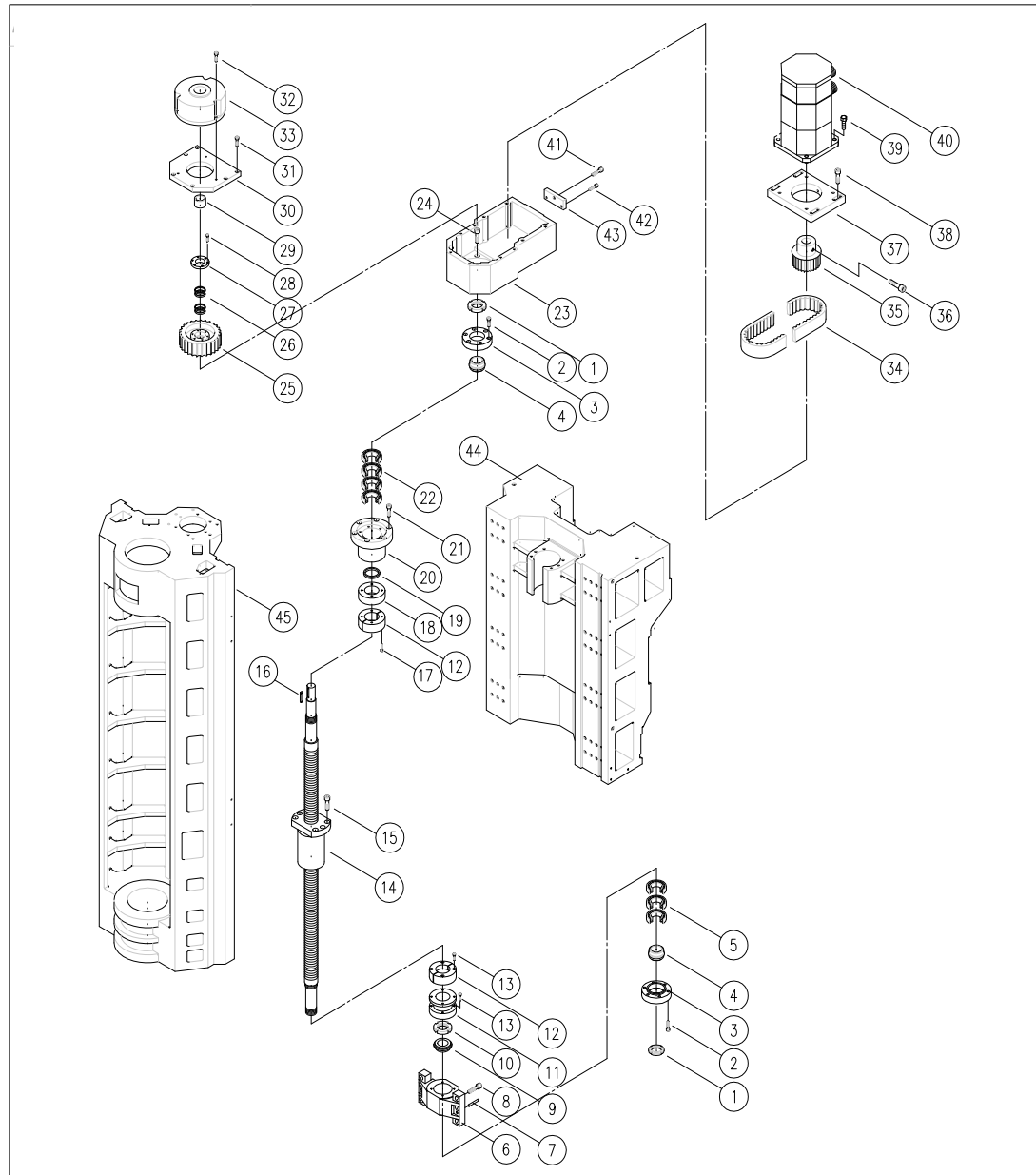
31	Base	E-BLMC-20002-01	FC30	1	
30	Ram	E-BLMC-20001-01	FC30	1	
29	Motor	-	-	1	Fanuc a22/3000i
28	Hex.socket screw	-	-	4	M12*P1.75*40L
27	Hex.socket screw	-	-	4	M12*P1.75*30L
26	Motor mounting plate	E-BLMC-51004-01	SS41	1	
25	Coupling	E-BLMC-51010-01	AL	1	
24	Bearing	L-0404-00011	-	一組	4個40TAC72B(DF)
23	Screw	-	-	8	M6*P1.0*10L
22	Cover plate	E-BLMC-51013-01	SPCC	1	
21	Hex.socket screw	-	-	16	M12*P1.75*30L
20	Taper pin	-	-	2	#7*50L
19	Motor housing	E-BLMC-51003-01	FC30	1	
18	Oil seal	L-0604-00014	-	1	UHS50
17	Spacer	E-BLMC-51025-01	SS41	1	
16	Hex.socket screw	-	-	8	M6*P1.0*25L
15	Balscrew	E-BLMC-51001-01	-	1	
14	Hex.socket screw	-	-	7	M12*P1.75*35L
13	Hex.socket screw	-	-	4	M6*P1.0*25L
12	Hard stop	E-BLMC-51011-01	-	2	
10	Nut	L-0253-00005	-	1	YSRM45*P1.5
9	Spacer	E-BLMC-51009-01	S45C	1	
11	Hard stop	E-BLMC-51021-01	SS41	1	
8	Hex.socket screw	-	-	6	M12*P1.75*40L
7	Taper pin	-	-	2	
6	Bearing housing	E-BLMC-51005-01	FC30	1	
5	Bearing	L-0404-00012	-	一組	3個40TAC72B(DFD)
4	Spacer	E-BLMC-51007-01	S45C	2	
3	Clamp ring	E-BLMC-51006-01	S45C	2	
2	Hex.socket screw	-	-	2	M8*P1.25*30L
1	Nut	L-0253-00009	-	2	YSRM40*P1.5

編號	名稱	材料	數量	規格
App'd	Check	Design	Drawn	Mode
			EILEEN	Scale
			950901	Unit
				MM
				Dwg No.
				Page
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Head Assembly - Z-Axis Rails



Z Axis Assembly - Mitsubishi

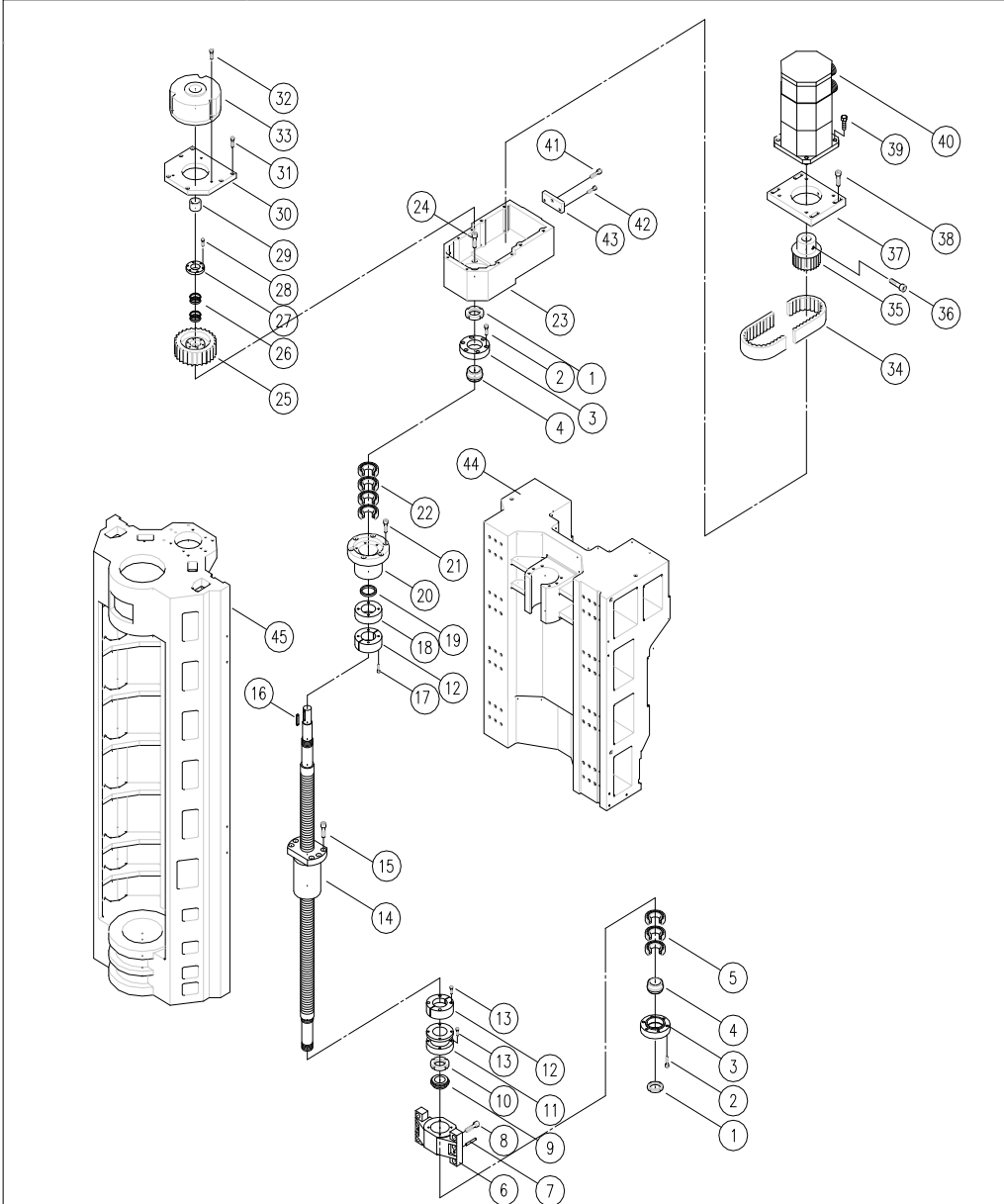


Mitsubishi Motor and Coupling Data					
40	MOTOR – 5kw	MO-188			
2組立圖: C-BLMC-53-021. 註: 1 配合馬達控制: YASKAWA-SGMGH-44ACA6C.					
45	Spindle head	E-BLMC-00001-01	FC30	1	
44	Saddle	E-BLMC-20002-01	FC30	1	
43	L.S mounting plate	E-BLMC-53010-01	SS41	1	
42	Hex.socket screw	-	-	2	M8*P1.25*25L
41	Hex.socket screw	-	-	1	M10*P1.5*40L
40	Motor	-	-	1	SGMGH-44ACA6C
39	Hex.socket screw	-	-	4	M12*1.75*40L
38	Hex.socket screw	-	-	4	M12*1.75*40L
37	Motor mounting plate	E-BLMC-53004-01	SS41	1	
36	Set screw	-	-	1	M8*P1.25*14L
35	Pulley	E-BLMC-53021-01	S45C	1	
34	Belt	L-0902-00101	-	1	8M-800L
33	Hex.socket screw	-	-	3	
32	Brake	E-BLMC-53015-01	-	1	SAB-8
31	Hex.socket screw	-	-	6	M8*P1.25*25L
30	Mounting plate	E-BLMC-53009-01	SS41	1	
29	Spacer	E-BLMC-53008-01	S45C	1	
28	Hex.socket screw	-	-	6	M6*P1.0*25L
27	Clamp ring	E-BLMC-53007-01	S45C	1	
26	Bushing	E-DRAD-51117-01	-	2	SCE300-φ35*φ40
25	Pulley	E-BLMC-53006-01	S45C	1	
24	Hex.socket screw	-	-	6	M12*P1.75*45L
23	Motor housing	E-BLMC-53005-01	FC30	1	
22	Bearing	L-0404-00011	-	組	4個 40TAC72B(DFD)
21	Hex.socket screw	-	-	6	M10*P1.5*35L
20	Bearing housing	E-BLMC-53003-01	S45C	1	
19	Oil seal	L-0604-00014	-	1	UHS50
18	Head stop	E-BLMC-51022-01	SS41	1	
17	Hex.socket screw	-	-	8	M6*P1.0*55L
16	Key	-	-	1	7x7x45L
15	Hex.socket screw	-	-	6	M12*P1.75*35L
14	Ballscrew	E-BLMC-53001-01	-	1	
13	Hex.socket screw	-	-	8	M6*P1.0*25L
12	Head stop	E-BLMC-51011-01	-	2	
11	Head stop	E-BLMC-51023-01	SS41	2	
10	Nut	L-0253-00005	-	1	YSRM45*P1.5
9	Spacer	E-BLMC-51009-01	S45C	1	
8	Hex.socket screw	-	-	6	M12*P1.75*40L
7	Taper pin	-	-	2	#7*50L
6	Head stop	E-BLMC-51005-01	FC-30	1	
5	Bearing	L-0404-00012	-	組	3個 40TAC72B(DFD)
4	Spacer	E-BLMC-51007-01	S45C	2	
3	Clamp ring	E-BLMC-51006-01	S45C	2	
2	Hex.socket screw	-	-	12	M8*P1.25*30L
1	Nut	L-0253-00009	-	2	YSRM40*P1.5

Item	Description	Part No.	Metal	Q'ty	Specification
App'd	Check	Design	Drawn	Mode	TT-40
			EILEEN	Scale	1: 13
			950829	Unit	MM
				Dwg No.	-
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Y and Z cabletrack MPTT-116

Z Axis Assembly - Siemens

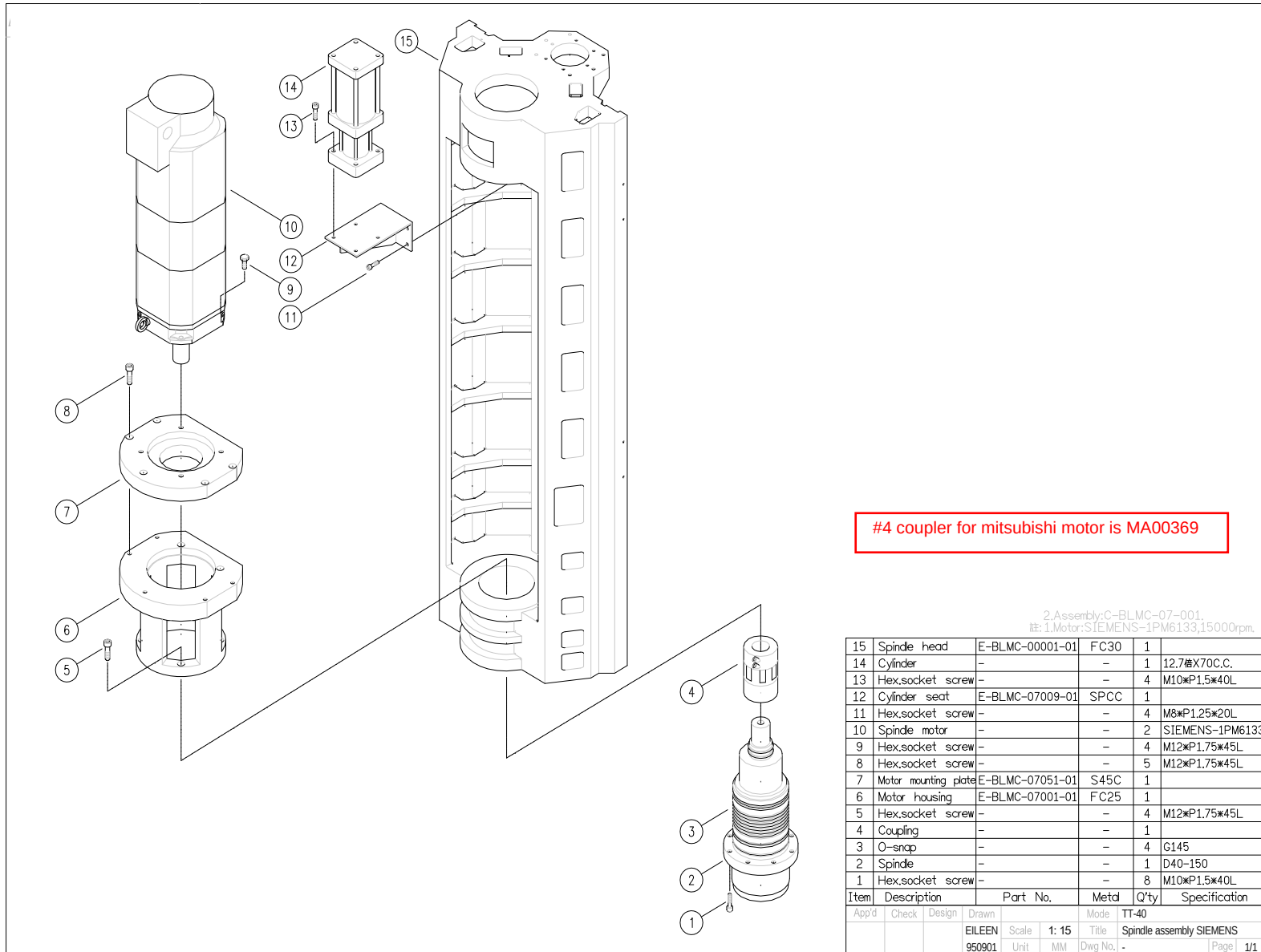


2.Assembly: C-BLMC-53-011.
 註: 1.Motor: SIEMENS-1FK7103.

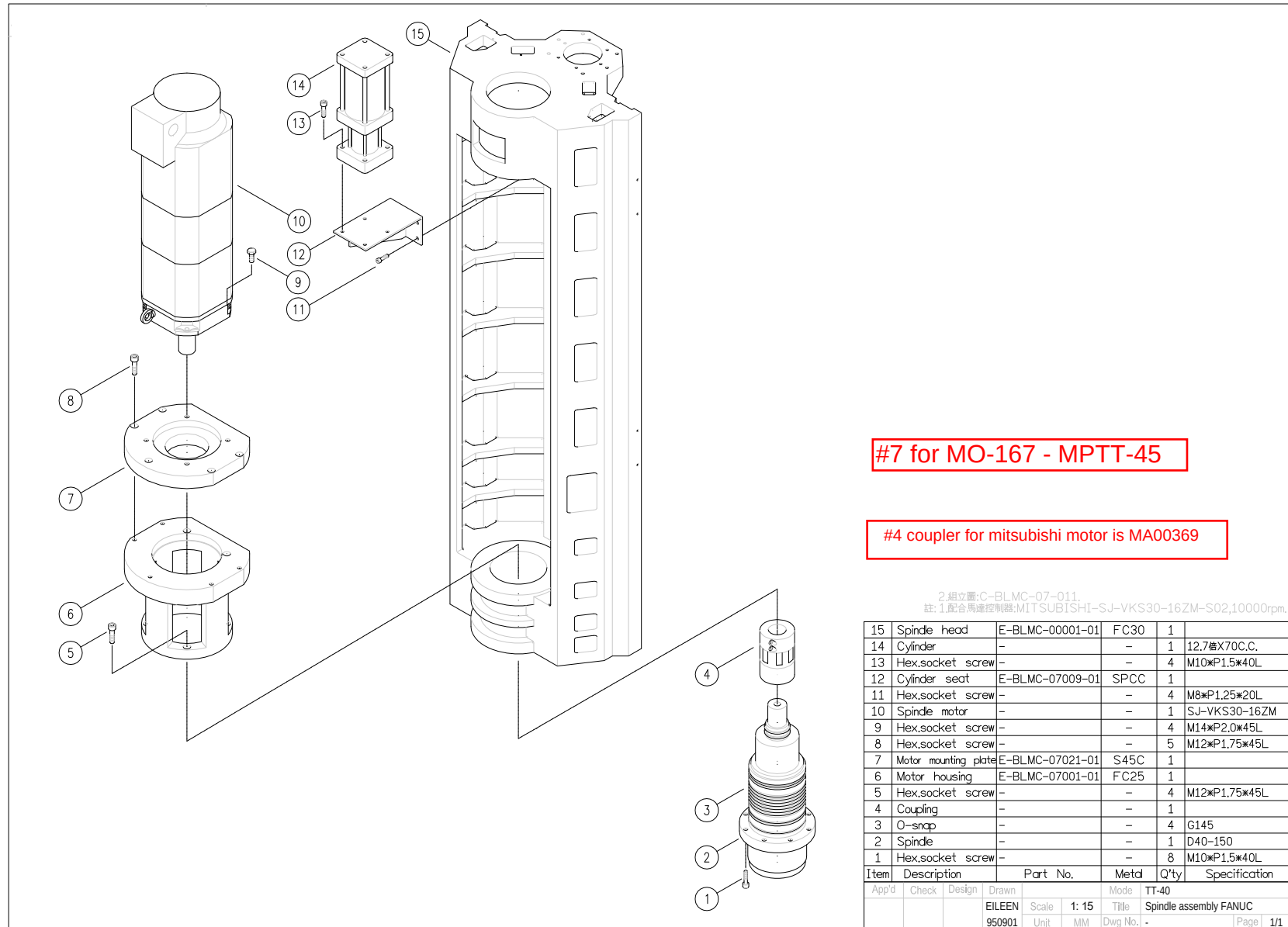
45	Spindle head	E-BLMC-00001-01	FC30	1	
44	Saddle	E-BLMC-20002-01	FC30	1	
43	L.S mounting plate	E-BLMC-53010-01	SS41	1	
42	Hex.socket screw	-	-	2	M8*P1.25*25L
41	Hex.socket screw	-	-	1	M10*P1.5*40L
40	Motor	-	-	1	SIEMENS 1FK7103
39	Hex.socket screw	-	-	4	M12*1.75*35L
38	Hex.socket screw	-	-	4	M12*1.75*40L
37	Motor mounting plate	E-BLMC-53051-01	SS41	1	
36	Set screw	-	-	1	M8*P1.25*14L
35	Pulley	E-BLMC-53052-01	S45C	1	
34	Belt	L-0902-00101	-	1	8M-800L
33	Hex.socket screw	-	-	3	
32	Brake	E-BLMC-53015-01	-	1	SAB-8
31	Hex.socket screw	-	-	6	M8*P1.25*25L
30	Mounting plate	E-BLMC-53009-01	SS41	1	
29	Spacer	E-BLMC-53008-01	S45C	1	
28	Hex.socket screw	-	-	6	M6*P1.0*25L
27	Clamp ring	E-BLMC-53007-01	S45C	1	
26	Bushing	E-DRAD-51117-01	-	2	SCE300-ø35*ø40
25	Pulley	E-BLMC-53006-01	S45C	1	
24	Hex.socket screw	-	-	6	M12*P1.75*45L
23	Motor housing	E-BLMC-53005-01	FC30	1	
22	Bearing	L-0404-00011	-	一組	4個,40TAC72B(DFD)
21	Hex.socket screw	-	-	6	M10*P1.5*35L
20	Bearing housing	E-BLMC-53003-01	S45C	1	
19	Oil seal	L-0604-00014	-	1	UHS50
18	Head stop	E-BLMC-51022-01	SS41	1	
17	Hex.socket screw	-	-	8	M6*P1.0*55L
16	Key	-	-	1	7x7x45L
15	Hex.socket screw	-	-	6	M12*P1.75*35L
14	Balscrew	E-BLMC-53001-01	-	1	
13	Hex.socket screw	-	-	8	M6*P1.0*25L
12	Head stop	E-BLMC-51011-01	-	2	
11	Head stop	E-BLMC-51023-01	SS41	2	
10	Nut	L-0253-00005	-	1	YSRM45*P1.5
9	Spacer	E-BLMC-51009-01	S45C	1	
8	Hex.socket screw	-	-	6	M12*P1.75*40L
7	Taper pin	-	-	2	#7*50L
6	Head stop	E-BLMC-51005-01	FC-30	1	
5	Bearing	L-0404-00012	-	一組	3個,40TAC72B(DFP)
4	Spacer	E-BLMC-51007-01	S45C	2	
3	Clamp ring	E-BLMC-51006-01	S45C	2	
2	Hex.socket screw	-	-	12	M8*P1.25*30L
1	Nut	L-0253-00009	-	2	YSRM40*P1.5
Item	Description	Part No.	Metld	Q'ty	Specification
App'd	Check	Design	Drawn	Mode	TT-40
		EILEEN	Scale	1: 13	Title Z-Axis Assembly
		950901	Unit	MM	Dwg No. - Page 1/1

Y and Z cabletrack MPTT-116

Spindle Assembly - Siemens



Spindle Assembly - Mitsubishi



Machine Lubrication Specifications

MOBILITH AW SERIES, MULTIPURPOSE EP GREASE	
PRODUCT NUMBER	64352-8
NLGI GRADE	1
COLOR	GREEN
STRUCTURE	SMOOTH/TACKY
SOAP TYPE	LITHIUM COMPLEX
MINERAL OIL VISCOSITY	
cST AT 40°C	150
cST AT 100°C	13
SUS AT 100°F	750
SUS AT 210°F	70
ISO VISCOSITY GRADE	150
PENETRATION AT 23°C (77°F), WORKED	325
DROPPING POINT, ASTM D 2265, °F	475
TIMKEN OK LOAD, ASTM D 2509, lb	40
FOUR-BALL EP TEST, ASTM D 2596, WELD LOAD, kg	250
LOAD WEAR INDEX	40
FOUR-BALL WEAR TEST, ASTM D 2266, SCAR DIAMETER, mm, MAX	0.5
CORROSION PREVENTION, ASTM D 1743	PASS
WHEEL BEARING TEST, ASTM D 4290 MODIFIED, LEAKAGE, GRAM	5

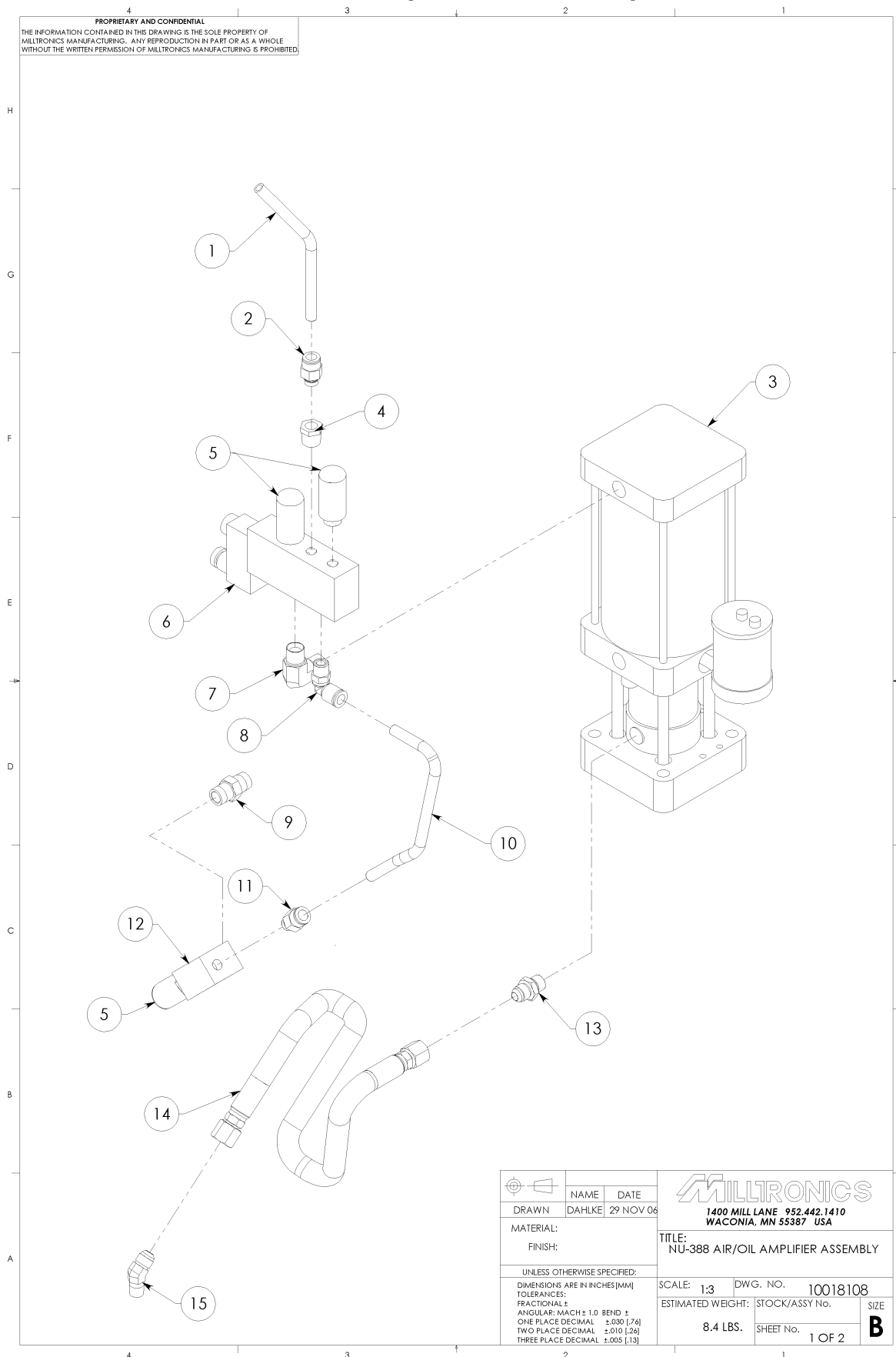
MOBIL VELOCITE OIL No. 10	
PRODUCT NUMBER	60068-4
GRAVITY, API	32.0
POUR, °C (°F), max.	-4 (25)
FLASH, °C (°F), min.	182 (360)
VISCOSITY	
cST AT 40° C	22.0
cST AT 100° C	4.0
SUS AT 100° F	115
SUS AT 210° F	40
ISO VG	22
VISCOSITY INDEX	95
COLOR, ASTM D 1500	2.0
RUST PROTECTION, ASTM D 665	PASS
CINCINNATI MILACRON SPECIFICATION	P-45

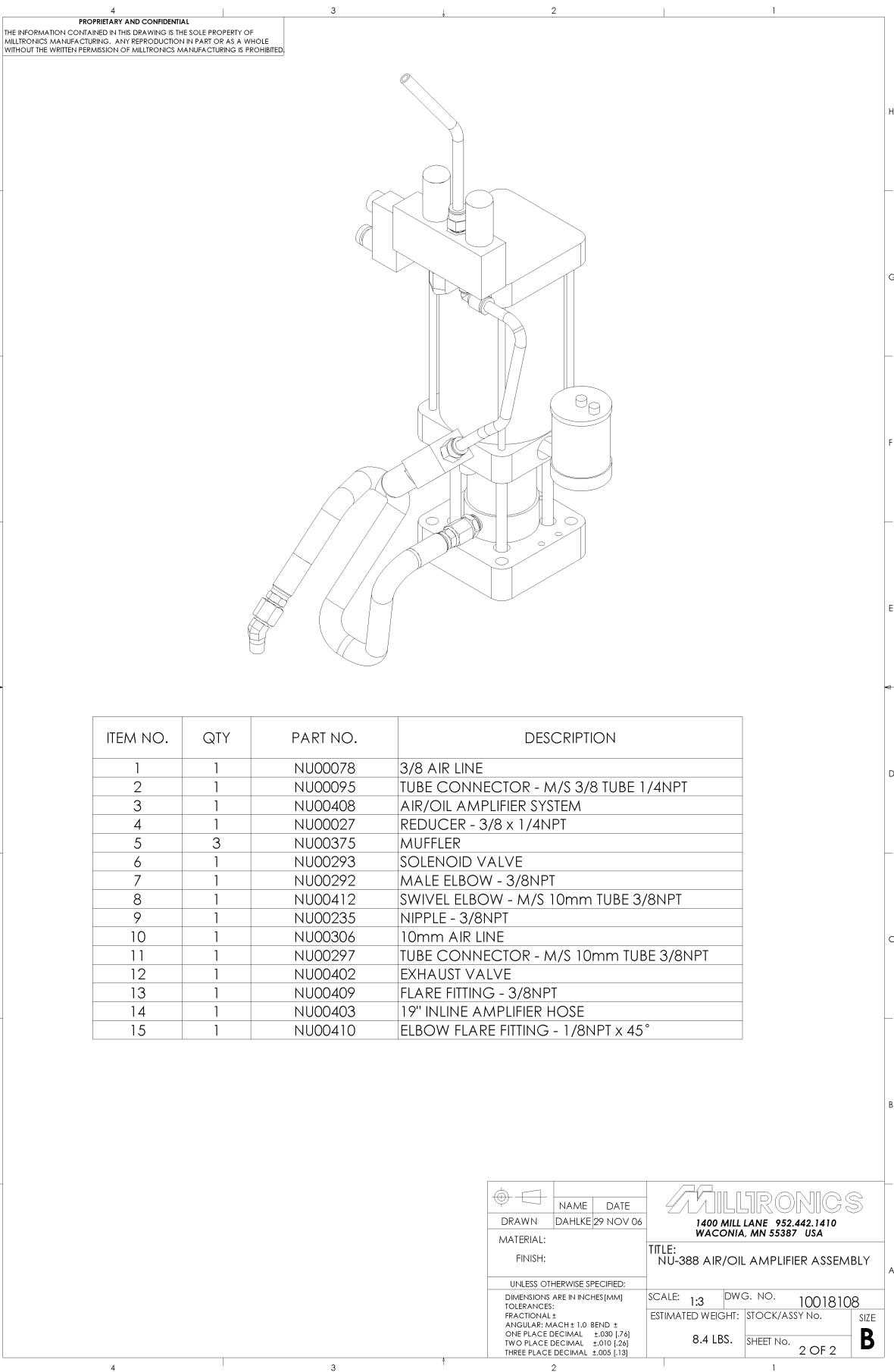
MOBIL VACTRA OIL No. 2	
PRODUCT NUMBER	60049-4
SPECIFIC GRAVITY, 60/60F	0.88
POUR POINT, °C (°F), max.	-9 (16)
FLASH POINT, °C (°F), min.	244 (472)
VISCOSITY	
cST AT 40°C	68
cST AT 100°C	8.6
SUS AT 100°F	356
SUS AT 210°F	55
VISCOSITY INDEX	97
ISO VG	68
COLOR, ASTM D 1500	4
FZG, PASS STAGES	11
4 BALL WELD, kg, ASTM D 2783	160
4 BALL WEAR, mm, ASTM D 4172	0.22
COPPER CORROSION, ASTM D 130	1B
RUST, D665A	PASS
VICKERS V-104C, mg D 2882 (MOD)	-
CMCD, P-SPEC, APPROVAL	P-47
BIJUR PT 37-1 APPROVAL	PASS
DKUMA APPROVAL	PASS

MOBIL DTE 24	
PRODUCT NUMBER	60262-3
9B CMCS CODE (DRUM)	98020E
SPECIFIC GRAVITY	0.871
POUR POINT, °C (°F), max	-18 (0)
FLASH POINT, °C (°F), min	200 (392)
VISCOSITY	
cST AT 40°C	32
cST AT 100°C	5.3
SUS AT 100°F	165
SUS AT 210°F	44
ISO VISCOSITY GRADE	32
VISCOSITY INDEX	95
RUST PROTECTION, ASTM D 665, A & B	PASS
COLOR, ASTM D1500, max	3.5
FZG GEAR TEST STAGES PASSED DIN 51534	12

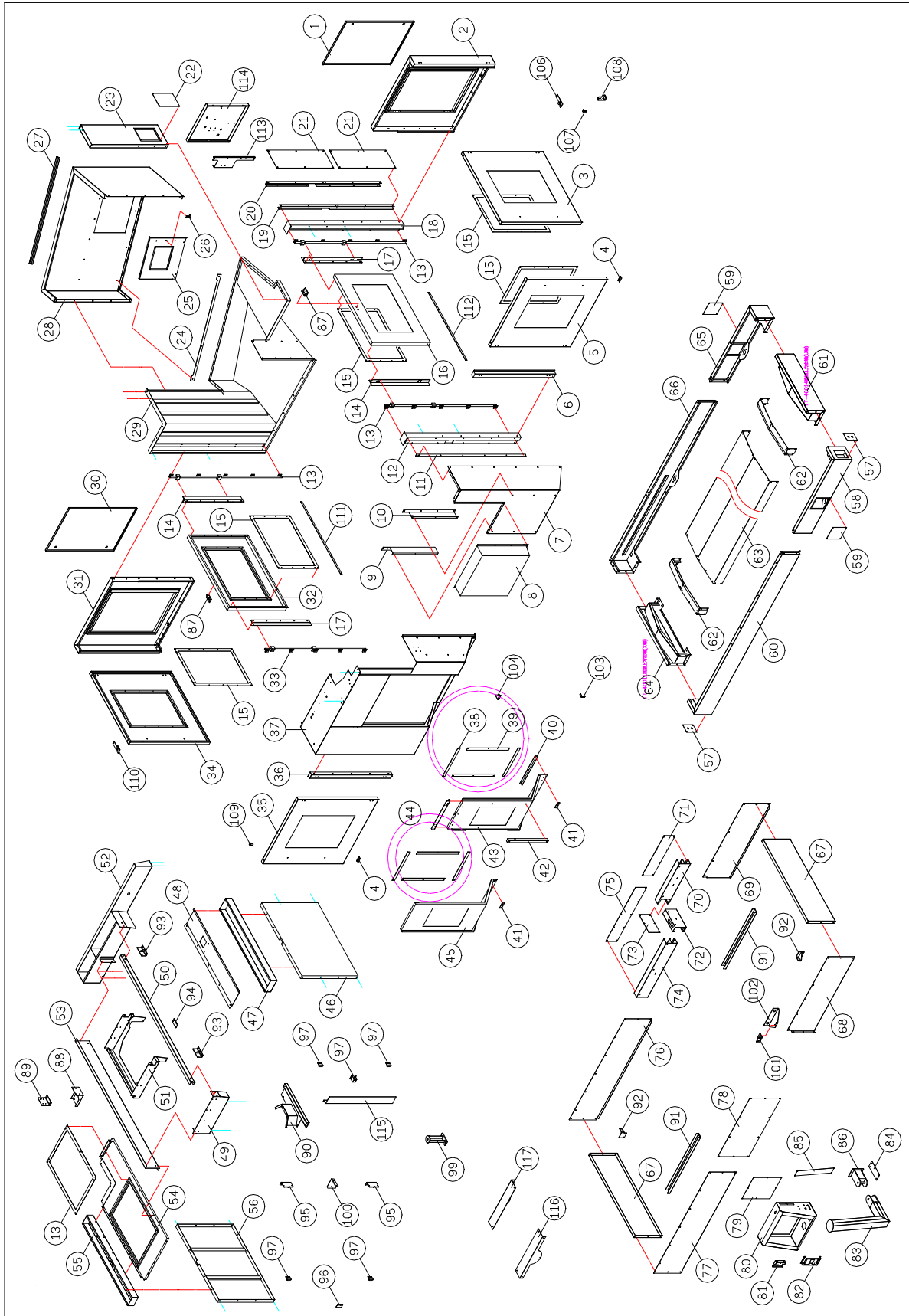
REV.	DESCRIPTION OF CHANGE	E.C.D. No.	APP'D BY	DATE
MATERIAL/FINISH		 1400 MILL LANE 952-442-1410 WACONIA, MN 55387 USA		
STOCK/ASSY No.				
TOLERANCE UNLESS SPECIFIED		TITLE BRIDGE MILL GREASE INSTRUCTIONS		
X.XXX	+/-	APPLICATION BRIDGE MILL		
X.XX	+/-	SCALE 24:1	DWG No 6-11-031-001	SIZE B
X.X	+/-	DATE 01 FEB 01	DRAWN BY NEW	SHEET No. 2 OF 2
ANGLE	+/-			

Drawbar Cylinder Assembly





Enclosure Assembly



Rev.1

Retention Knob Chart

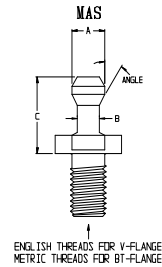
NOTE: STANDARD RETENTION KNOBS FOR 40 TAPER SPINDLES WITHOUT CTS

MAS RETENTION KNOBS STYLE CT-FLANGE 40 TAPER

ASSEMBLY SELECTION	DIMENSIONS				MILLTRONICS MACHINE		COMMAND PART No.	KENNAMETAL PART No.	VALENITE PART No.	LYNDEX PART No.
	A	B	C	ANGLE	60mm SPINDLE	70mm SPINDLE				
4833	.59	.39	1.27	60°	RH19, RH20, RH30, RH33, RH35, BR50, BR60, BR80, VM16, VM20, VM22, VM25, VM30, VMC16, VMC20, VMC25, VMC30, MM18	RH20, RH30, RH33, RH35, BR50, BR60, BR80, VM16, VM20, VM22, VM25, VM30, VMC16, VMC20, VMC25, VMC30, TT24, TT40, HMC20, HMC35	RB4E-0002	RK31114A	PT-532-B0	C40-6000

MAS RETENTION KNOBS STYLE BT-FLANGE 40 TAPER

ASSEMBLY SELECTION	DIMENSIONS				MILLTRONICS MACHINE		COMMAND PART No.	KENNAMETAL PART No.	VALENITE PART No.	LYNDEX PART No.
	A	B	C	ANGLE	60mm SPINDLE	70mm SPINDLE				
4834	.59	.39	1.38	60°	RH19, RH20, RH30, RH33, RH35, BR50, BR60, BR80, VM16, VM20, VM22, VM25, VM30, VMC16, VMC20, VMC25, VMC30, MM18	RH20, RH30, RH33, RH35, BR50, BR60, BR80, VM16, VM20, VM22, VM25, VM30, VMC16, VMC20, VMC25, VMC30, TT24, TT40, HMC20, HMC35	RB4M-0002	RK31113A	PT-444-B0	B40-6000



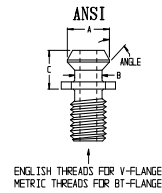
NOTE: STANDARD RETENTION KNOBS FOR 40 TAPER SPINDLES WITH CTS

ANSI RETENTION KNOBS STYLE CT-FLANGE 40 TAPER

ASSEMBLY SELECTION	DIMENSIONS				MILLTRONICS MACHINE		COMMAND PART No.	KENNAMETAL PART No.	VALENITE PART No.	LYNDEX PART No.
	A	B	C	ANGLE	60mm SPINDLE	70mm SPINDLE				
4836	.74	.49	.64	45°	SELECTION NOT AVAILABLE		RC4E-0001	RK11122	PT-475C	C40-STD

ANSI RETENTION KNOBS STYLE BT-FLANGE 40 TAPER

ASSEMBLY SELECTION	DIMENSIONS				MILLTRONICS MACHINE		COMMAND PART No.	KENNAMETAL PART No.	VALENITE PART No.	LYNDEX PART No.
	A	B	C	ANGLE	60mm SPINDLE	70mm SPINDLE				
4837	.74	.49	.75	45°	SELECTION NOT AVAILABLE		RS4M-0115	RK11126A	N/A	B40-FADAL



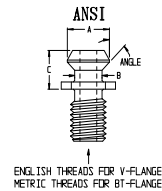
NOTE: STANDARD RETENTION KNOBS FOR 50 TAPER SPINDLES WITH OR WITHOUT CTS

ANSI RETENTION KNOBS STYLE CT-FLANGE 50 TAPER

ASSEMBLY SELECTION	DIMENSIONS				MILLTRONICS MACHINE		COMMAND PART No.	KENNAMETAL PART No.	VALENITE PART No.	LYNDEX PART No.
	A	B	C	ANGLE	60mm SPINDLE	70mm SPINDLE				
N/A	1.14	.83	1.00	45°	VM25XP, VM30XP, RH35XP, HMC70		RCRE-0001	DWG RK11144	N/A	C50-STD

ANSI RETENTION KNOBS STYLE BT-FLANGE 50 TAPER

ASSEMBLY SELECTION	DIMENSIONS				MILLTRONICS MACHINE		COMMAND PART No.	KENNAMETAL PART No.	VALENITE PART No.	LYNDEX PART No.
	A	B	C	ANGLE	60mm SPINDLE	70mm SPINDLE				
N/A	1.14	.83	1.00	45°	VM25XP, VM30XP, RH35XP, HMC70		RSM-0105	DWG RK11144A	N/A	N/A



NOTE: OPTIONAL RETENTION KNOBS FOR 40 TAPER SPINDLES

MAS RETENTION KNOBS STYLE CT-FLANGE 40 TAPER

ASSEMBLY SELECTION	DIMENSIONS				MILLTRONICS MACHINE		COMMAND PART No.	KENNAMETAL PART No.	VALENITE PART No.	LYNDEX PART No.
	A	B	C	ANGLE	60mm SPINDLE	70mm SPINDLE				
4831	.59	.39	1.27	45°	SELECTION NOT AVAILABLE		RB4E-0001	RK31114	PT-532-45	C40-4500

MAS RETENTION KNOBS STYLE BT-FLANGE 40 TAPER

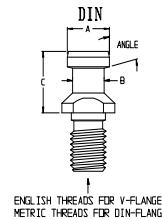
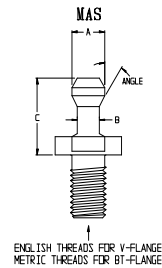
ASSEMBLY SELECTION	DIMENSIONS				MILLTRONICS MACHINE		COMMAND PART No.	KENNAMETAL PART No.	VALENITE PART No.	LYNDEX PART No.
	A	B	C	ANGLE	60mm SPINDLE	70mm SPINDLE				
4832	.59	.39	1.38	45°	SELECTION NOT AVAILABLE		RB4M-0001	RK31113	PT-444-45	B40-4500

DIN 69872 RETENTION KNOBS STYLE CT-FLANGE 40 TAPER

ASSEMBLY SELECTION	DIMENSIONS				MILLTRONICS MACHINE		COMMAND PART No.	KENNAMETAL PART No.	VALENITE PART No.	LYNDEX PART No.
	A	B	C	ANGLE	60mm SPINDLE	70mm SPINDLE				
4838	.75	.55	1.02	75°	SELECTION NOT AVAILABLE		RS4E-0114-C	DWG RK71125	N/A	C40-1500

DIN 69872 RETENTION KNOBS STYLE DIN-FLANGE 40 TAPER

ASSEMBLY SELECTION	DIMENSIONS				MILLTRONICS MACHINE		COMMAND PART No.	KENNAMETAL PART No.	VALENITE PART No.	LYNDEX PART No.
	A	B	C	ANGLE	60mm SPINDLE	70mm SPINDLE				
4839	.75	.55	1.02	75°	SELECTION NOT AVAILABLE		RS4M-0114-C	DWG RK71124	N/A	B40-1500

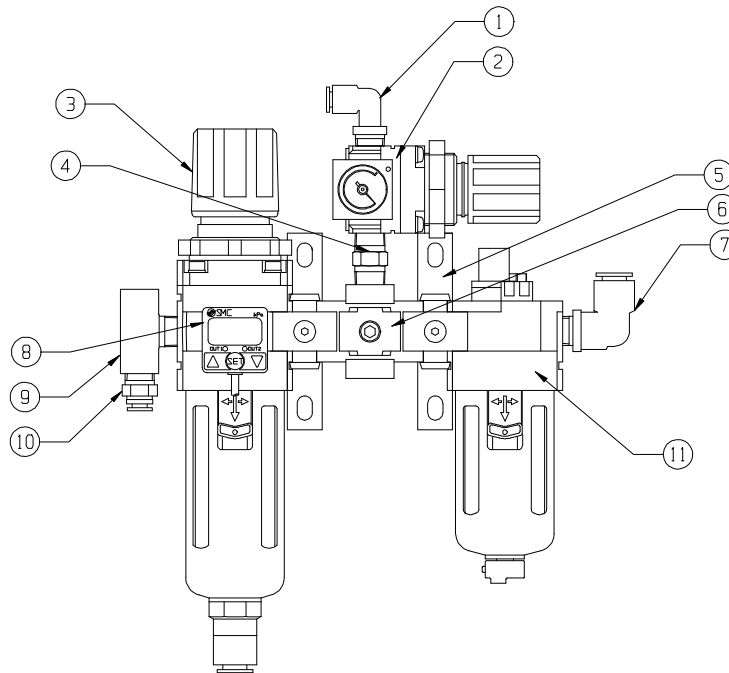


- FOR SPINDLES OF 8000 RPM AND GREATER YOU MUST USE BALANCED TOOLING TO A G2.5 SPEC. OR IT WILL VOID THE SPINDLE WARRANTY.
- CHART IS GOOD FOR ALL MACHINE VERSIONS LISTED FROM ECD DATE REV. G ON THIS DRAWING

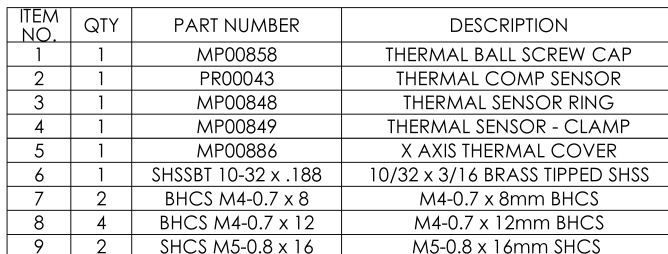
G	ADD MM18 AND MOVE HMC70 FRAMES TO 50 TAPER					6193	N.M.	10/06										
F	ADD VMC, TT, AND HMC FRAMES					6175	N.M.	09/06										
E	UPDATE CHART					5992	M.N.	08/05										
D	ADD RH/RW12 & RH19					5146	N.M.	09/01										
C	ADD RETENTION KNOBS TO CHART					4859	N.M.	12/00										
B	CHANGE 70mm BT-FLANGE CHART					4730	N.M.	10/00										
A	ADD LYNDEX CORP. IN CHART					4351	N.M.	1/00										
REV.	DESCRIPTION					E.C.D. NO.	APP'D BY	DATE										
 1000 MILL LANE MILLVILLE, RI 02887-0284 860-468-1410						RETENTION KNOB CHART			SCALE	1.75:1	DWG No.	6-11-018-054	SIZE	B				
						APPLICATION		GENERAL PRODUCTS		DATE	30 APR 99	DRN BY	DAHLKE	SHEET NO.	1 OF 1			

Air Filter / Regulator / Lubricator Assembly

PARTS LIST			
ITEM	QTY	STOCK No.	DESCRIPTION
1	1	NU-186	1/4 NPT 1/4 TUBE SWIVEL ELBOW
2	1	NU-262	LOW PRESSURE REGULATOR W/GAGE
3	1	NU-212	LARGE FILTER/HIGH PRESSURE REGULATOR
4	1	NU-30	1/4 NPT PIPE NIPPLE
5	2	NU-210	LARGE MOUNTING SPACER
6	1	NU-211	LARGE MANIFOLD SPACER
7	1	NU-199	1/4 NPT 3/8 TUBE SWIVEL ELBOW
8	1	NU-259	DIGITAL AIR GAUGE WITH PRESSURE SWITCH
9	1	NU-219	1/4 NPT BRANCH TEE
10	1	NU-32	1/4 NPT 1/4 TUBE MALE STRAIGHT
11	1	NU-209	LARGE LUBRICATOR



B	ADD DIGITAL GAGE	4860		12/00
A	CHANGE STOCK NUMBER	4813	N. M.	12/00
REV.	DESCRIPTION	E.C.O. NO.	APP'D BY	DATE
MATERIAL/FINISH		 1400 MILL LANE 952-442-1410 WACONIA, MN 55387 USA		
		STOCK/ASSY No.		
TOLERANCE UNLESS SPECIFIED X.XXX +/- X.XX +/- X.X +/- ANGLE +/-		TITLE NU-232 FRL ASSEMBLY		
		APPLICATION GENERAL PRODUCTS		
		SCALE 3:1	DWG NO. 6-10-018-095	SIZE B
		DATE 14 JAN 00	DRAWN BY DAHLKE	SHEET NO. 1



- NOTES:
1. ITEMS 3 & 4 ARE REVERSED ON SOME AXES
 2. ITEMS 5 & 7 ARE NOT USED ON SOME AXES

	NAME	DATE	 MILLTRONICS CNC MACHINES 1400 MILL LANE #524410 WACONIA, MN 55387 USA
	DRAWN	JRD	
MATERIAL:			TITLE: THERMAL COMP ASSEMBLY
FINISH:			
UNLESS OTHERWISE SPECIFIED:			SCALE: 1:4 DWG. NO. 10018111 ESTIMATED WEIGHT: 16.0 Lbs. STOCK/ASSY NO. 1 OF 1
DIMENSIONS ARE IN INCHES[MM] TOLERANCES: FRACTIONAL ± ANGULAR: MAX ± 1.0 BEND ± ONE PLACE DECIMAL ±.030 (.76) TWO PLACE DECIMAL ±.010 (.26) THREE PLACE DECIMAL ±.005 (.13)			SHEET NO. 1 OF 1 SIZE B

