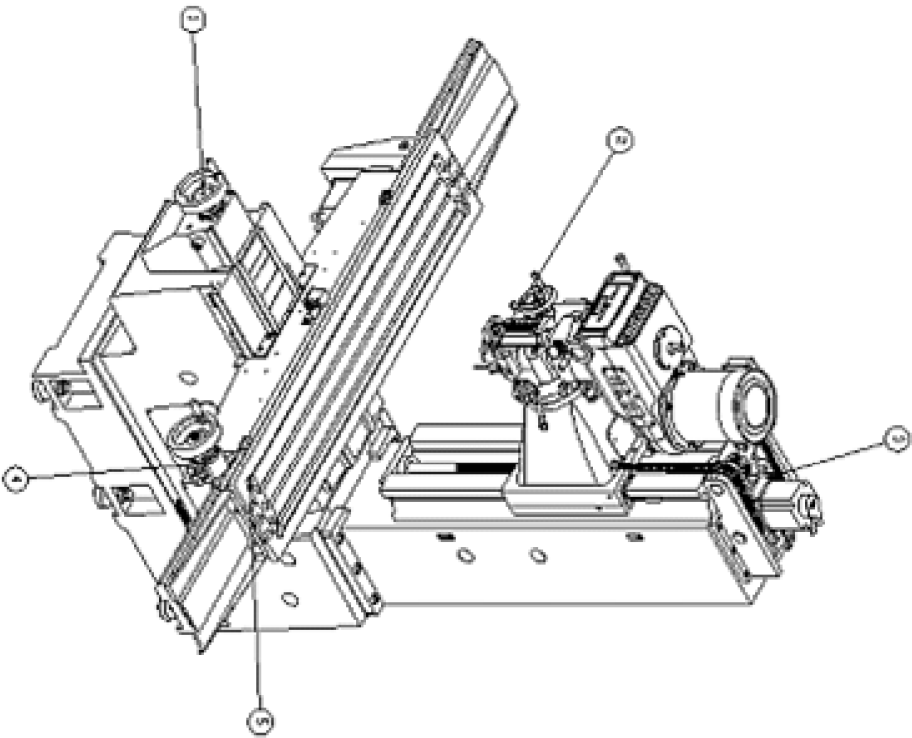
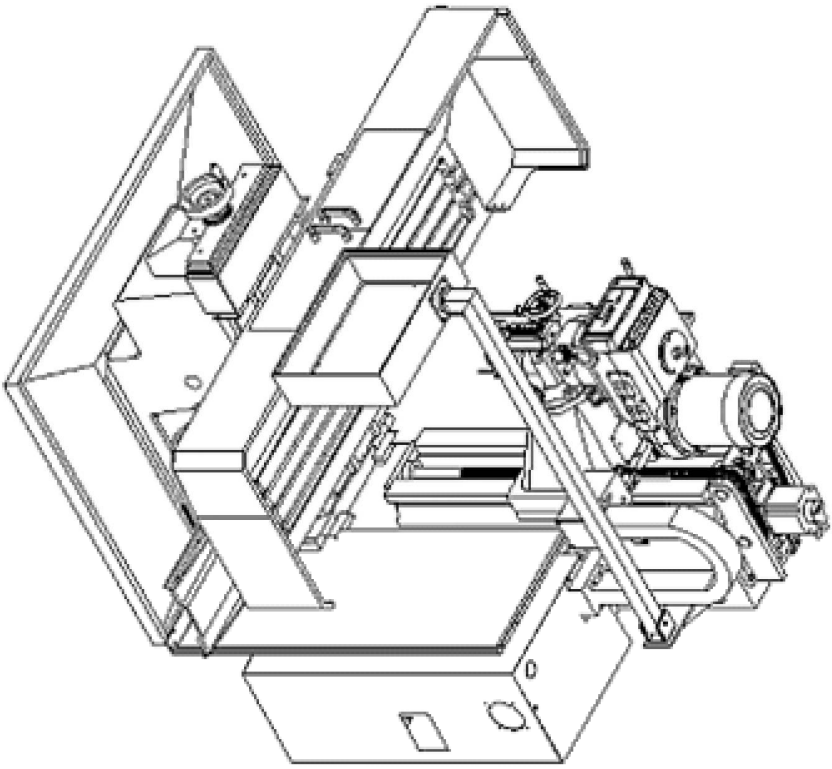


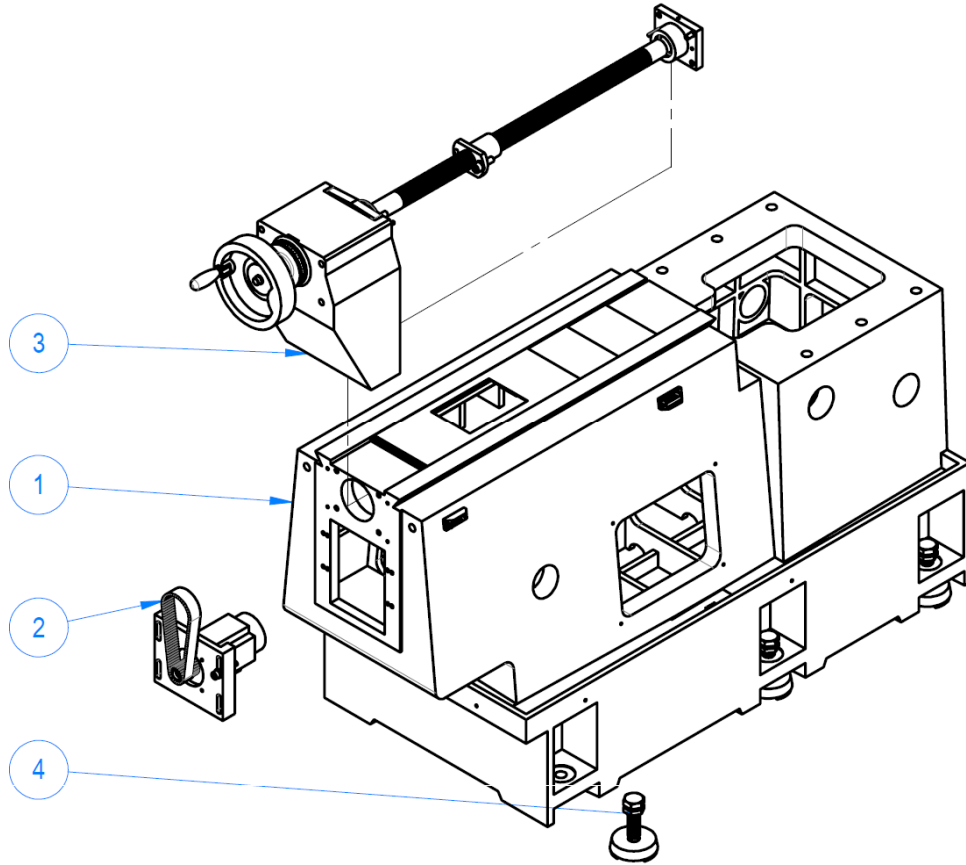
A1-5T

PARTS LIST

No.	Description	No. of drawing
1	Assy. Base	4
2	Assy. Column	4
3	Assy. Saddle	1
4	Assy. Table	3
5	Assy. Mill Head	1



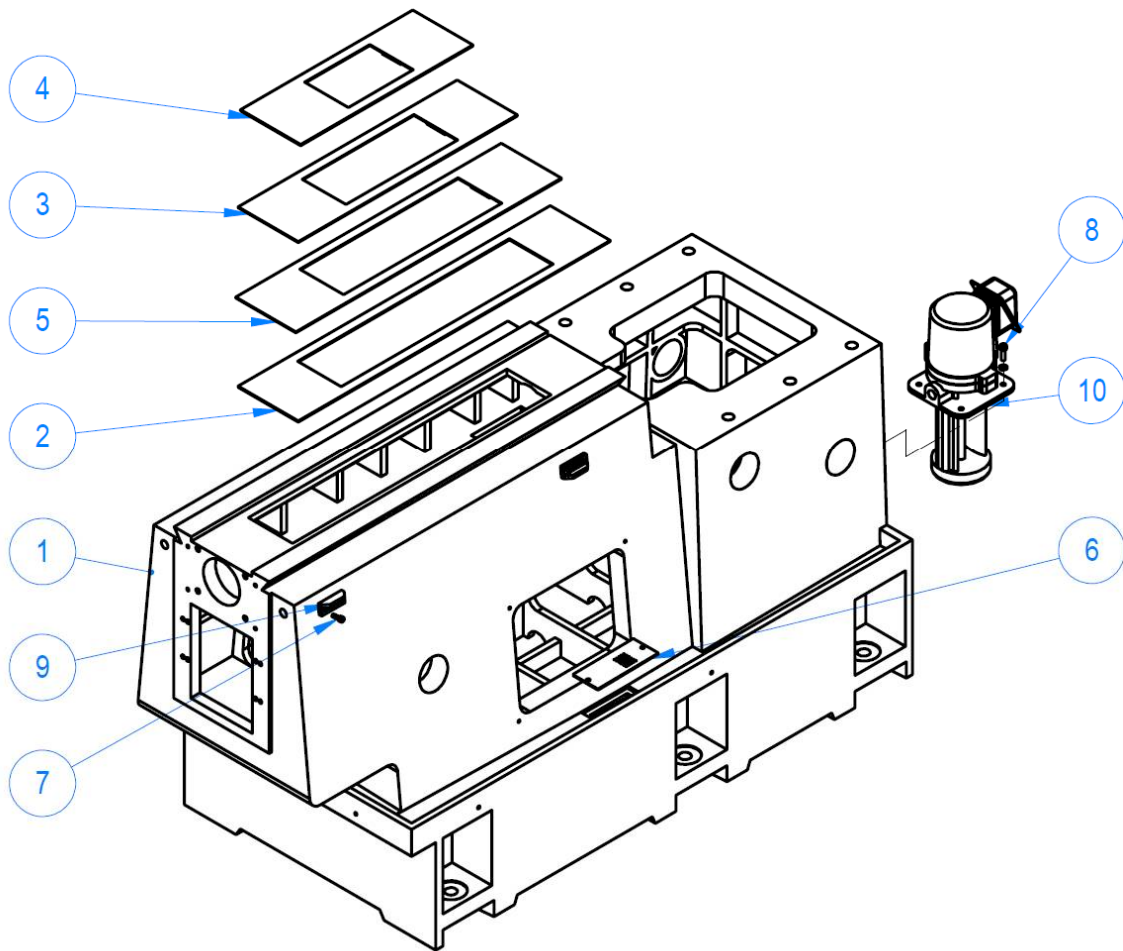
1. Assy. of Base



Assy. of Base

Item	Parts #	Description	QTY
1	BD1101B901	Base A1	1
2	BD1101B902	Y axis Servo Motor Set A1	1
3	BD1101B903	Y axis Assy. A1	1
4	BD1102B902	Leveling Pad & Screw A1	6

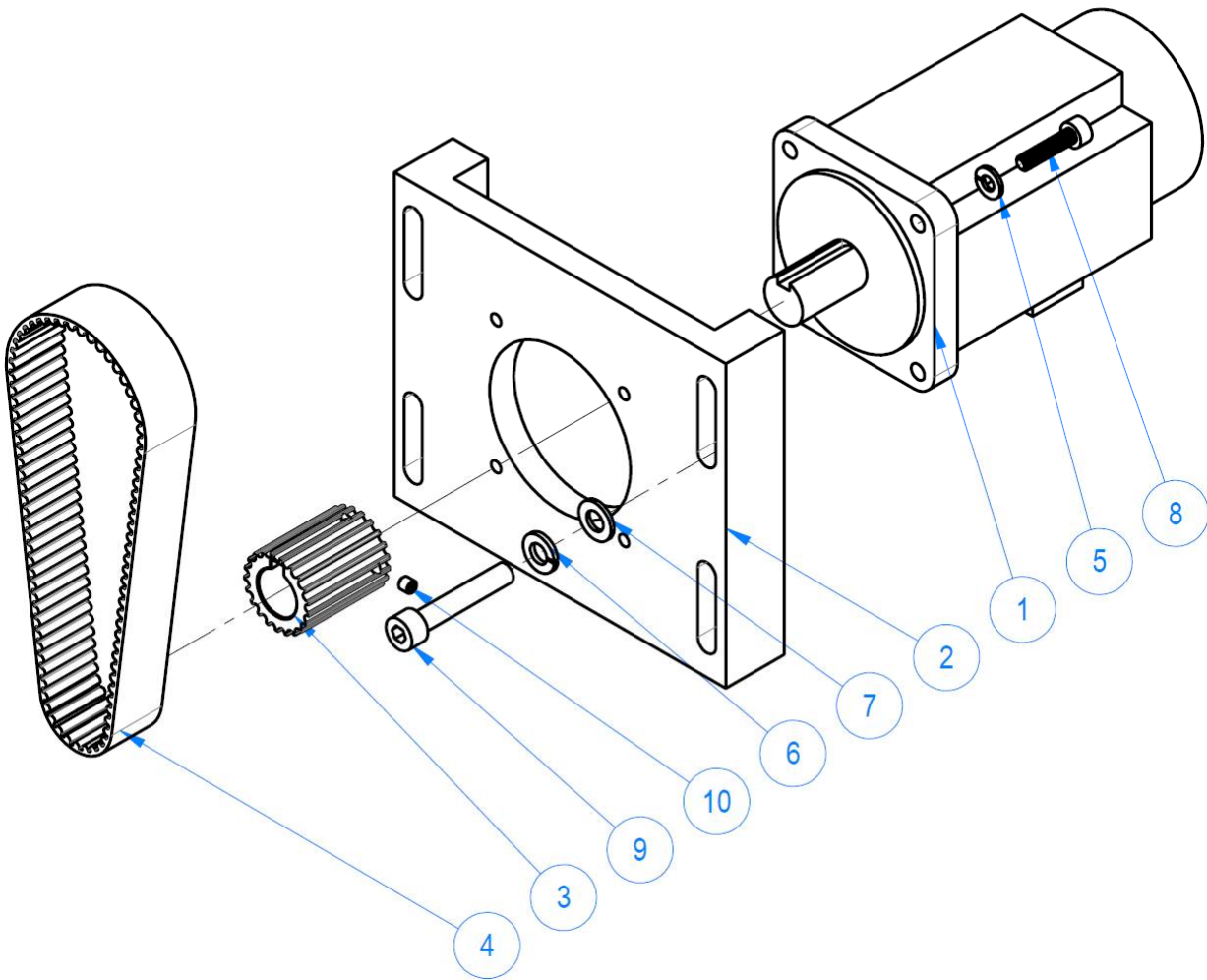
1-1: Base A1



Base for A1

Item	Parts #	Description	QTY
1	BD1101B001B	Base	1
2	BD1101B019	Chip Guard	1
3	BD1101B020	Chip Guard2	1
4	BD1101B021	Chip Guard3	1
5	BD1101B025	Chip Guard4	1
6	BD1101B026	Strainer Net	2
7	MF11005016	Hex Scket Cap Screw	4
8	MF11006020	Hex Scket Cap Screw	2
9	NC0020	Dog	2
10	Z540200	Coolant Pump	1
11	MA00612200	Spring Washer	1

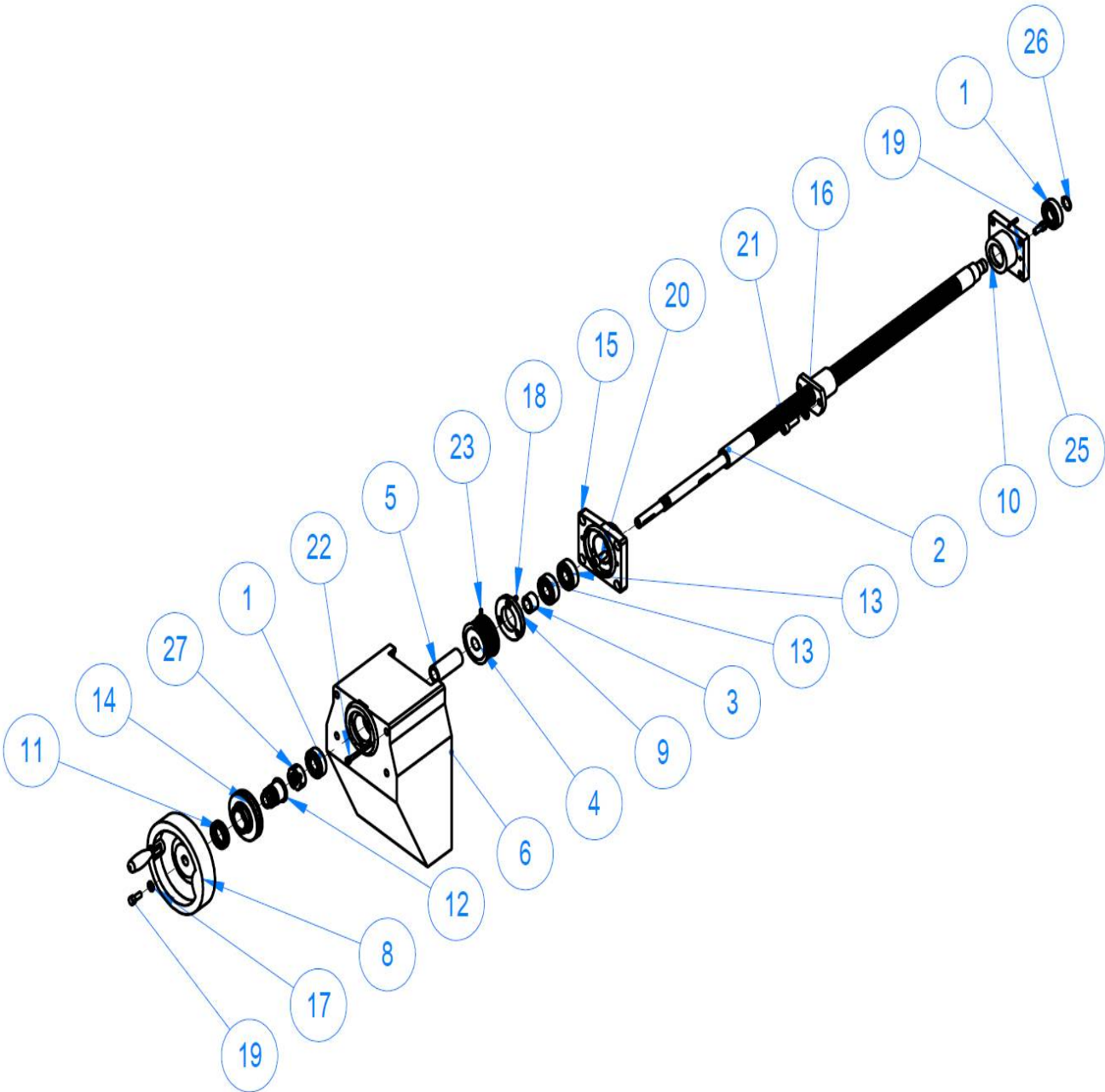
1-2 Y axis Servo Motor Set



Y axis Servo Motor Set (A1)

Item	Parts #	Description	QTY
1		Servo Motor 1KW	1
2	BD1101B005A	Y axis Servo motor Bracket	1
3	BD1101B023	Pulley 21T	1
4	LM50440025	Belt 5M	1
5	MA00612200	Spring Washer	4
6	MA00815405	Spring Washer M8	4
7	MB08016005	Washer	4
8	MF11006025	Hex Socket Cap Screws	4
9	MF11008045	Hex Socket Cap Screws	4
10	MJ11005005	Set screws	2

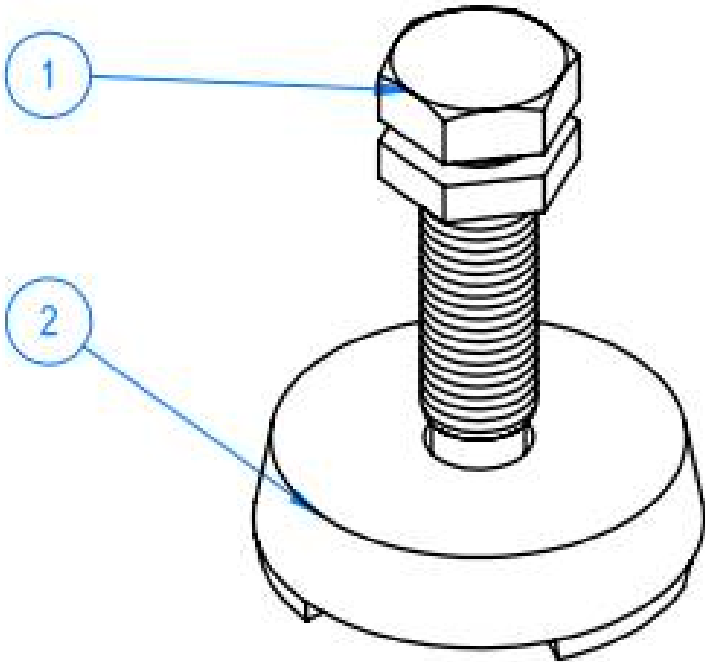
1-3 Y axis Assy. A1



Y axis Assy. A1

Item	Parts #	Description	QTY
1	B620402002N	Bearing	2
2	BD1101B003	Y axis Ball Screw	1
3	BD1101B006	Y-axis Bearing Sleeve	1
4	BD1101B007	XY Pulley	1
5	BD1101B008	Y-axis Bearing Sleeve	1
6	BD1101B009A	Y-axis Belt Cover	1
7	BD1101B013	Handle	1
8	BD1101B014	Handwheel	1
9	BD1101B016	Bearing Ring	1
10	BD1102B014	Bearing Bracket (rear)	1
11	BD1102B015	Dial Holder Lock Nut	1
12	BD1102B016	Dail holder	1
13	BT02004715K	Bearing	2
14	D0004A	Dial	1
15	D00028	Bearing Bracket (front)	1
16	MA01018400	Spring Washer	2
17	MB08016005	Washer	1
18	MF11006020	Hex Socket Cap Screw	3
19	MF11008020	Screw	5
20	MF11010025	Hex Socket Cap Screw	4
21	MF11010030	Hex Socket Cap Screw	2
22	MF11106065	Hex Socket Cap Srrew	4
23	MJ11005010	Set Screw	2
24	N3PT100001	Zero Plate	1
25	NN02005040	Spring Pin	1
26	TB01020120	C-ring	1
27	YF02015038	Bearing Nut (YSF-M20xP1.5)	1

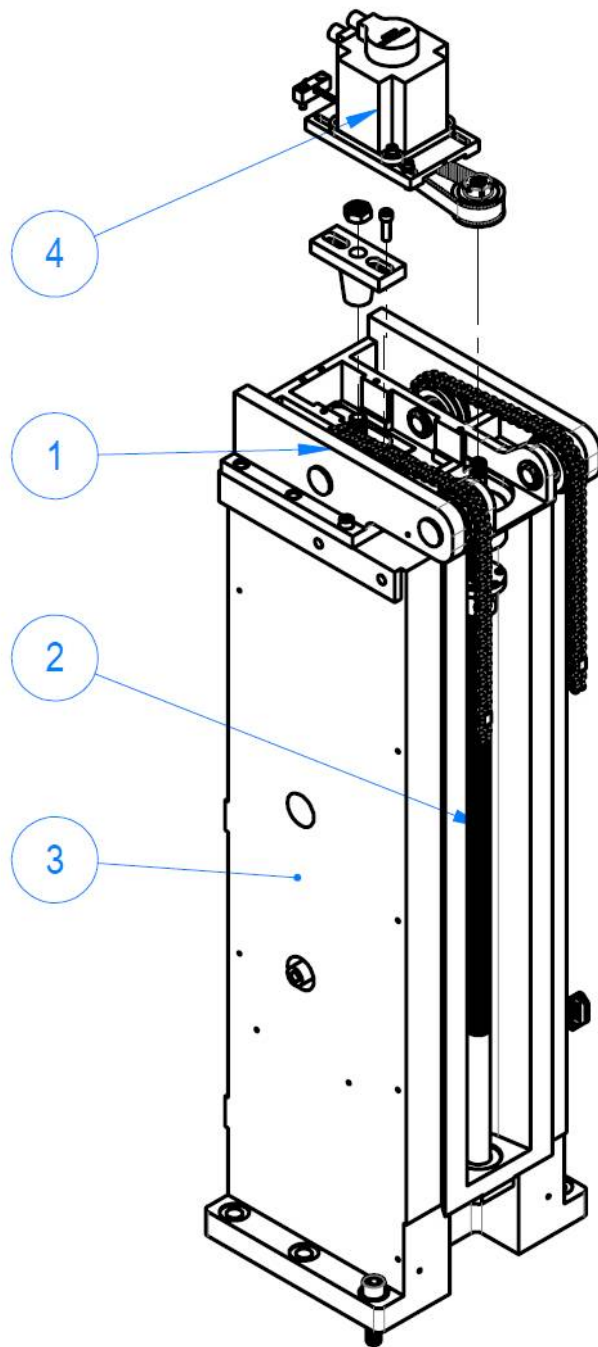
1-4: Leveling Pad & Screws



Leveling Pad & Screws

Item	Part #	Description	Qty
1	FC0112	Leveling Screw	1
2	FC0114	Leveling Pad	1

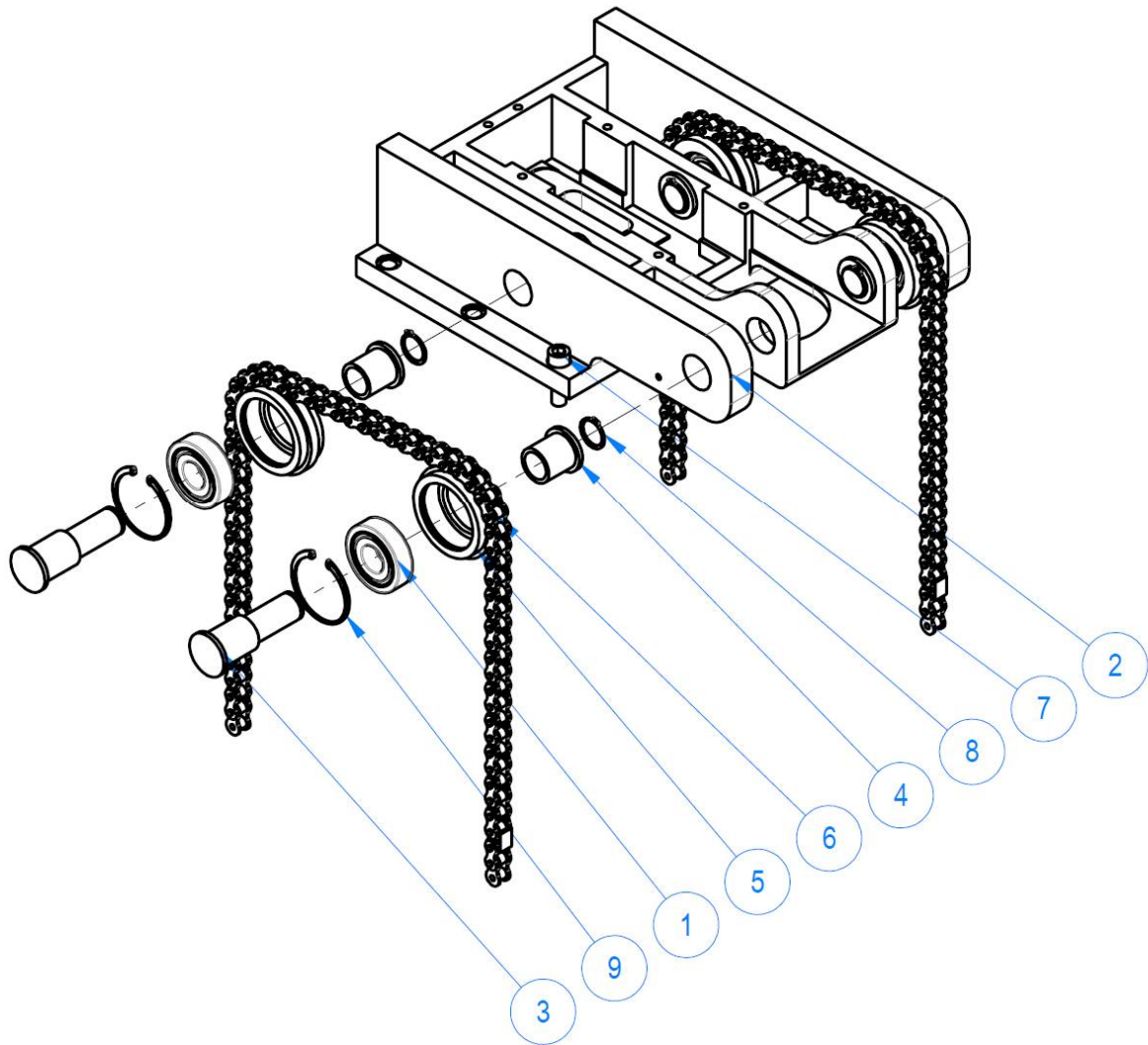
2. Assy. of Column



Assy. of Column A1

Item	Parts #	Description	QTY
1	BD1101C901	Counter Balance Set	1
2	BD1101C902	Z axis Assy. A1	1
3	BD1101C903	Column	1
4	BD1101C905	Z axis Servo Motor set	1

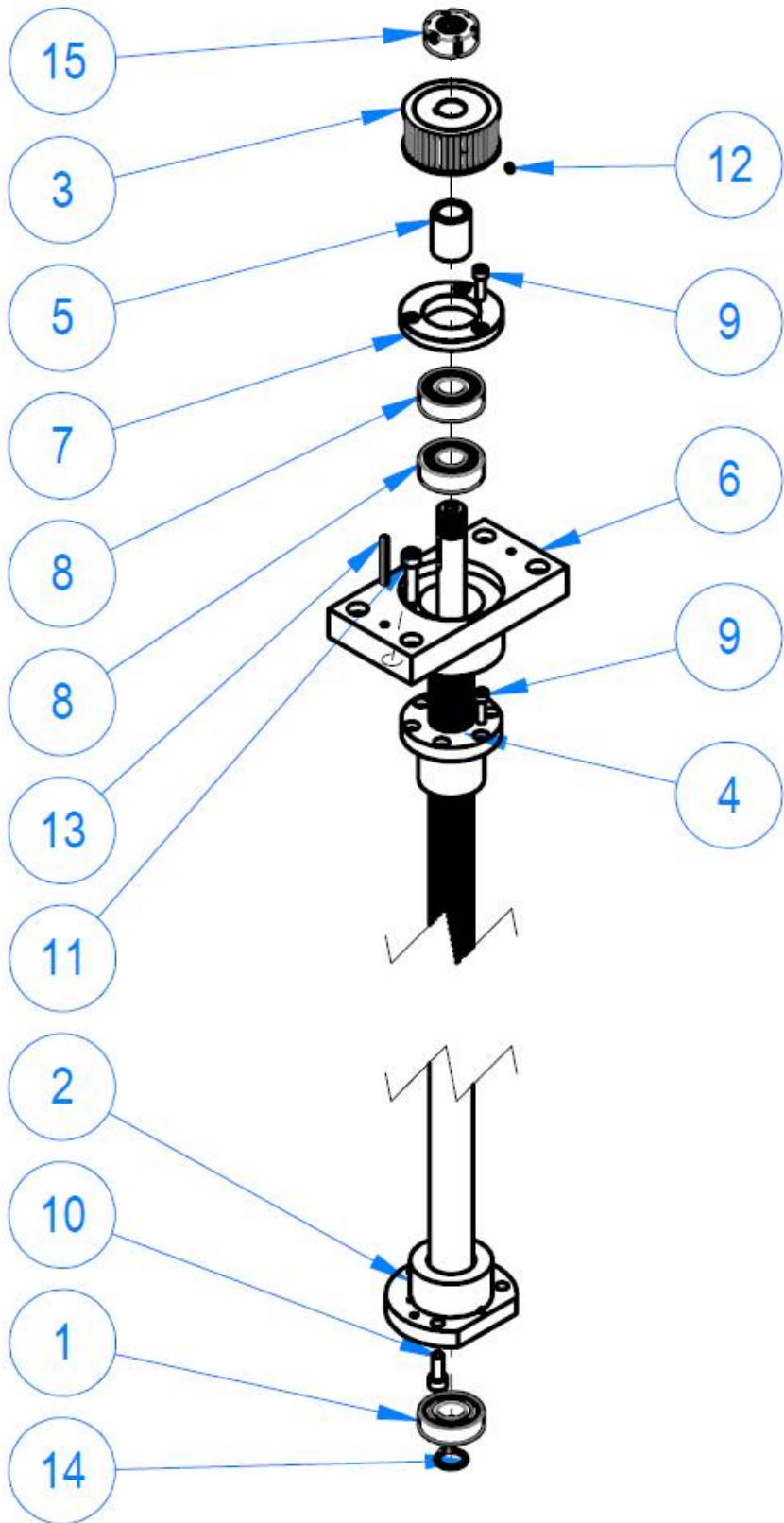
2-1 Counter Balance Set



Counter Balance Set for A1

Item	Parts #	Description	QTY
1	B630502502K	Bearing	4
2	BD1101C003	Balancing Base	1
3	BD1101C004	Shaft	4
4	BD1101C005	Sprocket Bushing	4
5	BD1101C006	Balancing Pulley	4
6	BD1101C032	Chain	2
7	MF11012040	Hex Socket Flat Head Cap Screw	6
8	TB01024120	Snap Ring	4
9	TB02062200	C Ring	4

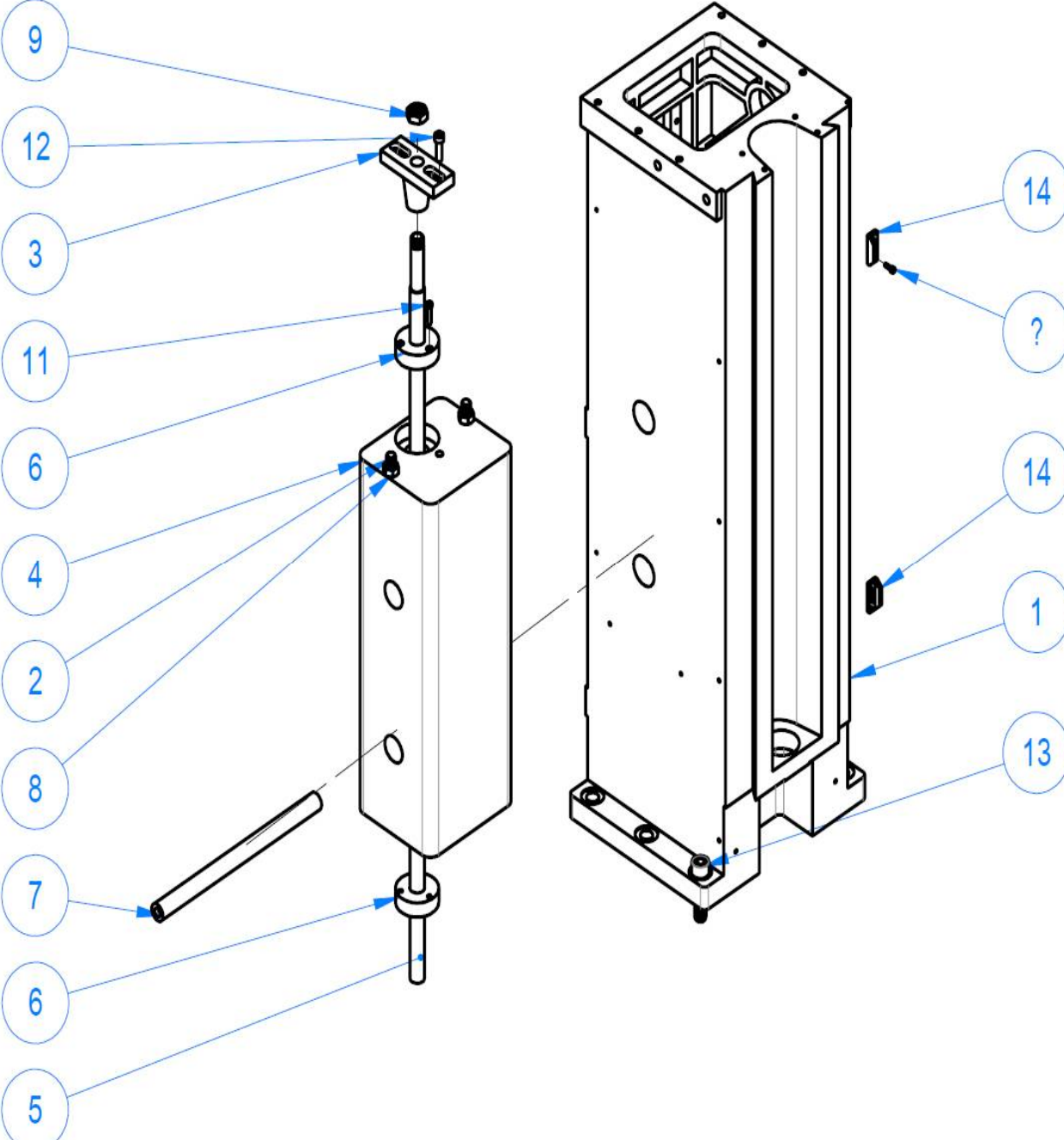
2-2 Z-axis Assy.



Z axis Assy. for A1

Item	Parts #	Description	QTY
1	B620402002N	Bearing	1
2	BD1101B002	Bearing Bracket (end)	1
3	BD1101B007	Pulley	1
4	BD1101C010	Ballscrew (Z axis)	1
5	BD1101C013	Bearing Adapter Sleeve	1
6	BD1101C015	Bearing Bracket (Z axis)	1
7	BD1101B016	Bearing Ring	1
8	BT02004715K	Bearing	2
9	MF11006020	Hex Socket Flat Head Cap Screw	9
10	MF11008020	Hex Socket Flat Head Cap Screw	3
11	MF11008035	Hex Socket Flat Head Cap Screw	4
12	MJ11005005	Hex socket headless screw	2
13	NN02005040	Spring Pin	4
14	TB01020120	Retaining Ring	1
15	YF02015038	Nut (YSF-M20XP1.5)	1

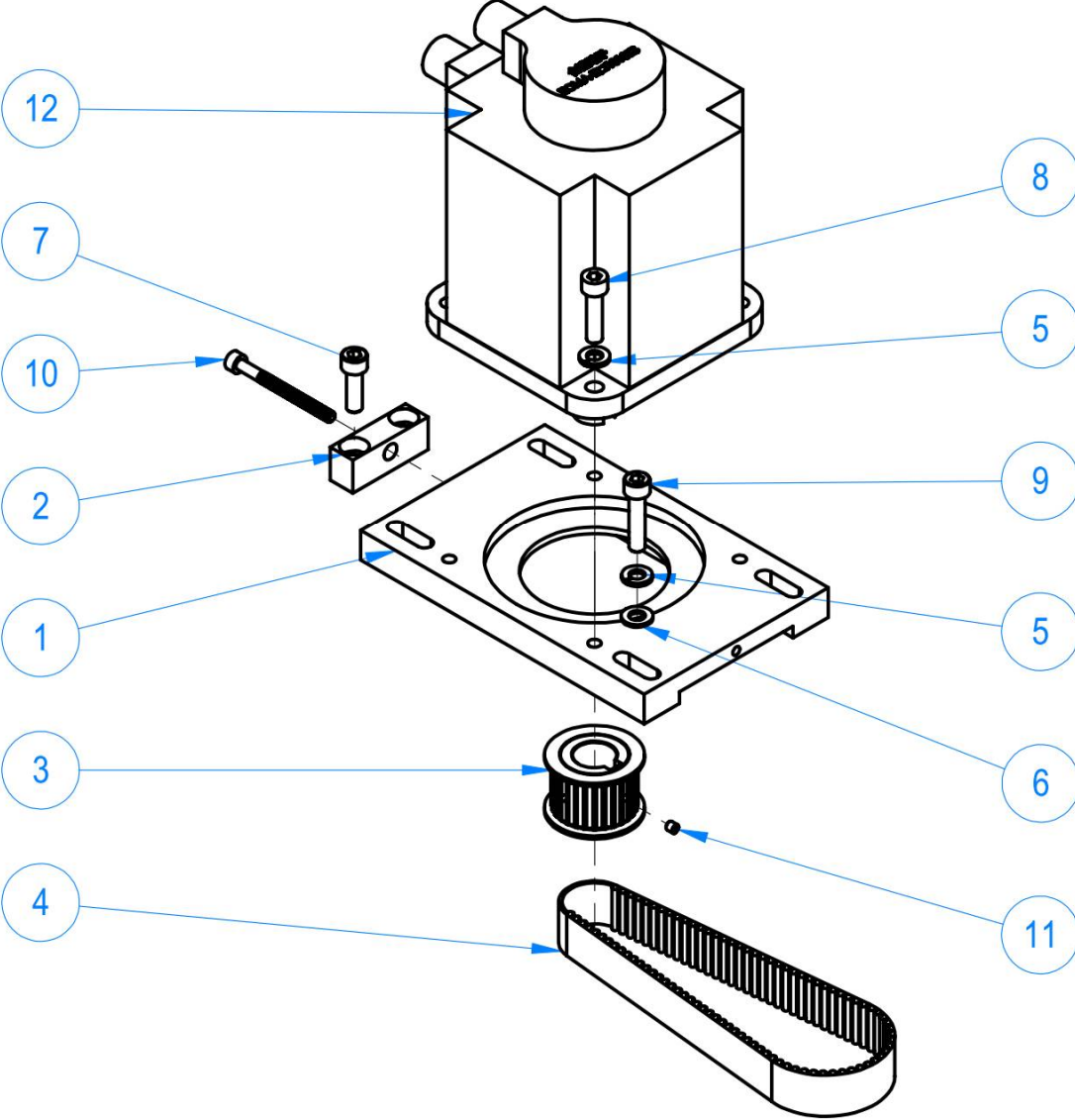
2-3 Column



Column for A1

Item	Parts #	Description	QTY
1	BD1101C001A	Column	1
2	BD1101H005	Balance Bolt	2
3	BD1101C008A	Fix Plate for Balancing Rod	1
4	BD1101C011A	Balancing Block	1
5	BD1101C012	Balancing Rod	1
6	BD1101C014	Sleeve for Balancing Rod	2
7	BD1101C021	Balancing Shaft	1
8	ME11016200	Hex Nut	2
9	ME11022250	Nut	1
10	MF11005016	Hex Socket Flat Head Cap Screw	4
11	MF11006030	Hex Socket Flat Head Cap Screw	6
12	MF11010035	Hex Socket Flat Head Cap Screw	2
13	MF11120080	Hex Socket Flat Head Cap Screw	6
14	NC0020	Dog	2

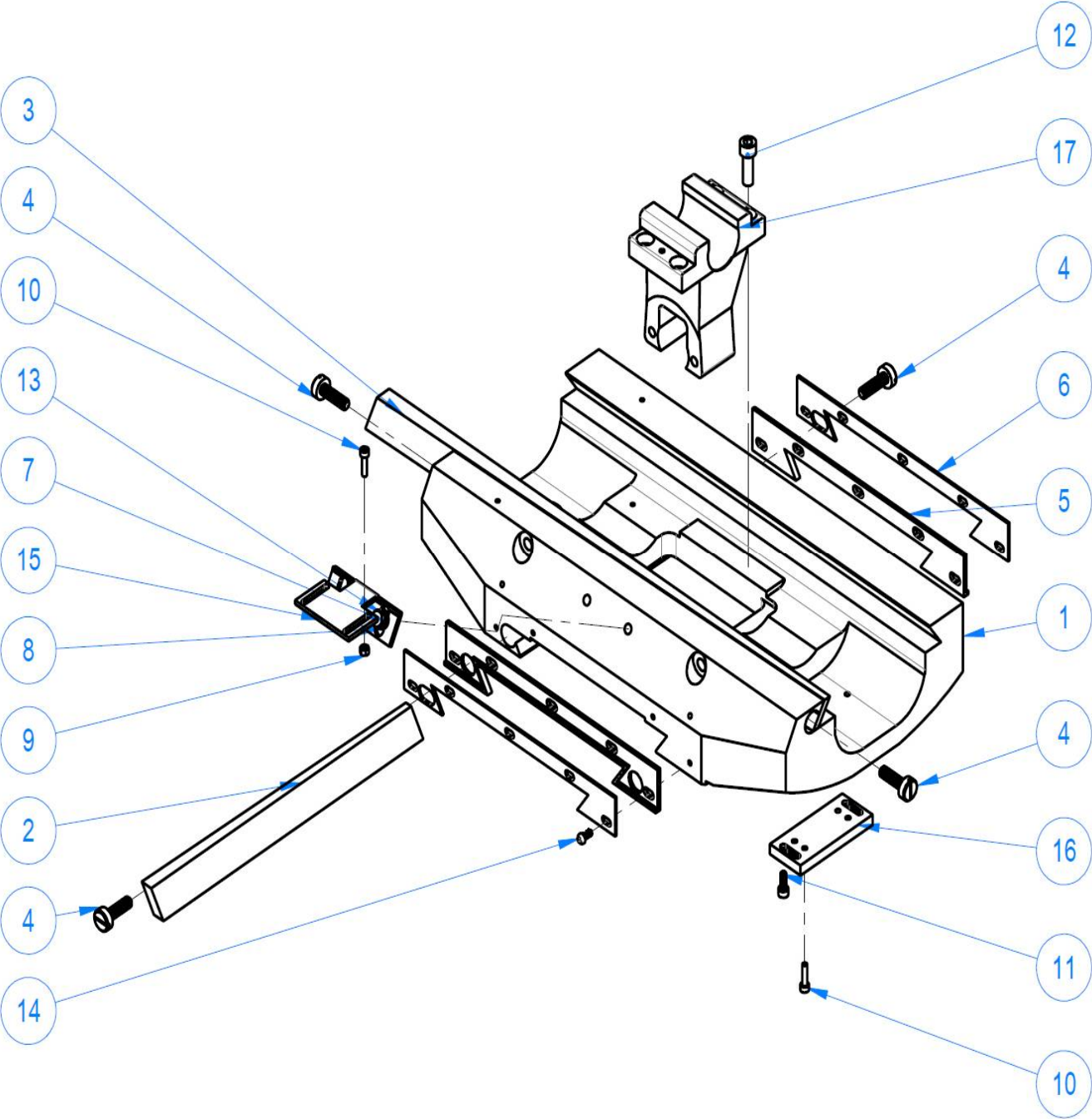
2-4 Z-axis Servo Motor Set



Z axis Servo Motor Set (A1)

Item	Parts #	Description	QTY
1	BD1101C007	Servo Motor bracket (Z axis)	1
2	BD1101C009	Adjusting palte for belt	1
3	BD1101B051	Pulley 42T	1
4	LM50505025	Belt 5M	1
5	MA00815405	Spring Washer M8	8
6	MB08016005	Washer	4
7	MF11008025	Hex Socket Flat Head Cap Screw	2
8	MF11008030	Hex Socket Flat Head Cap Screw	4
9	MF11008035	Hex Socket Flat Head Cap Screw	4
10	MF11106065	Hex Socket Flat Head Cap Screw	1
11	MJ11005005	Hex socket headless screw	2
12	Delta 1kw	Servo Motor	1

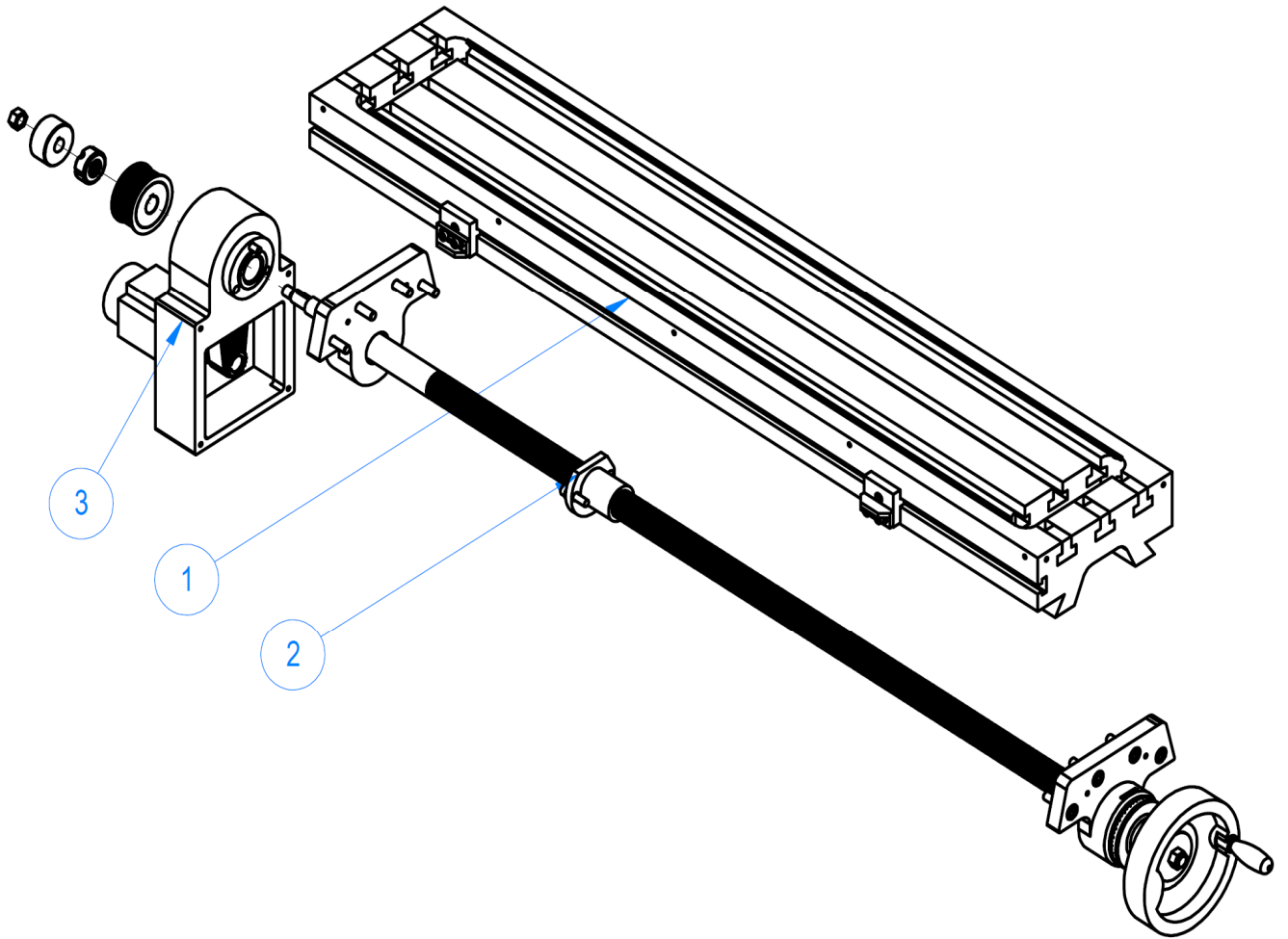
3. Assy. of Saddle



Assy. of Saddle A1

Item	Parts #	Description	QTY
1	C0052A	Saddle (510mm)	1
2	BD1101S002	Gib	1
3	BD1101S003	Gib	1
4	C0041	Screws	4
5	C0044B	Y axis Wiper	2
6	C0050B	Y axis Wiper Holder	2
7	MA00815405	Spring Lock Washer M8	2
8	MB08016005	Washer	2
9	ME11005080	Hex Nut	2
10	MF11005020	Hex Socket Flat Head Cap Screw	4
11	MF11006016	Hex Socket Flat Head Cap Screw	2
12	MF11010030	Hex Socket Flat Head Cap Screw	4
13	MG11008020	Hex screw	2
14	MQ11005012	Cross round head tapping screw	8
15	NC0032A	Plate for Limit Switch	1
16	NC0040	Limit Switch Bracket (Y axis)	1
17	ND0022	York for XY axis ballscrew	1

4. Assy. of Table



Assy. of Table A1

Item	Parts #	Description	QTY
1	BD1101T901	Table	1
2	BD1101T902	X axis Assy.	1
3	BD1101T903	X axis Servo Motor Set	1

4-1 Table

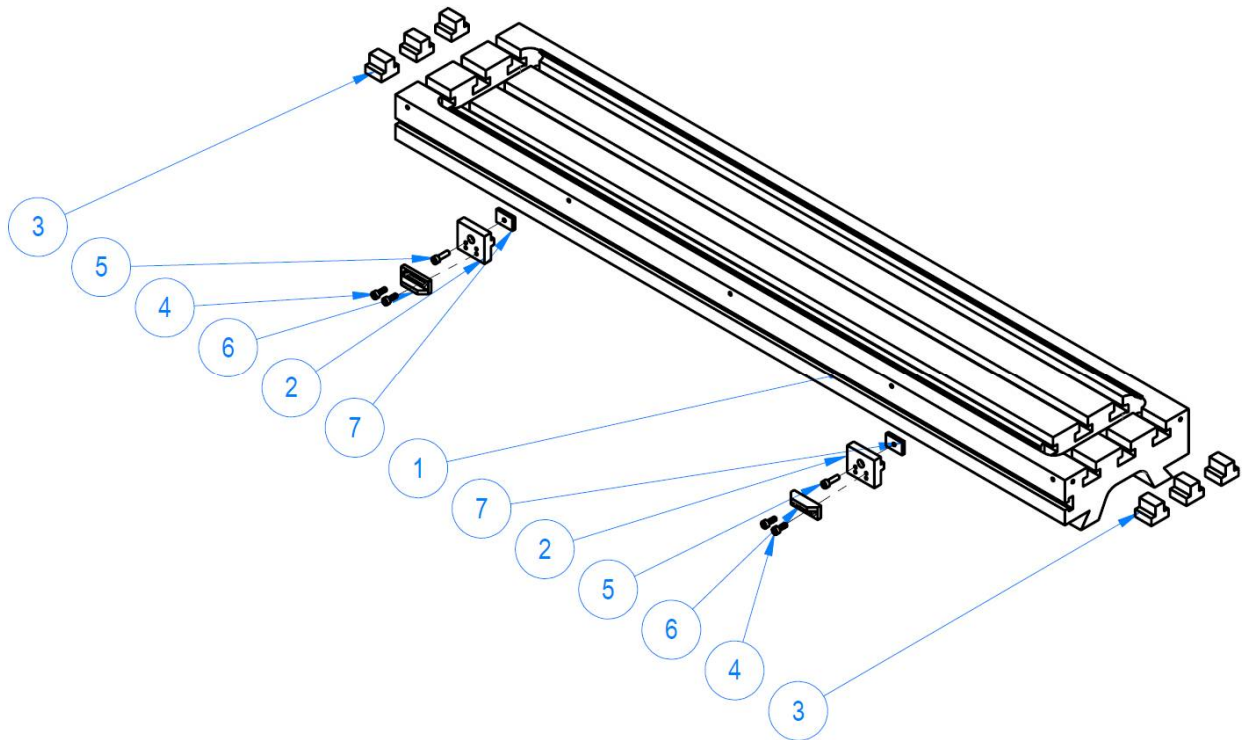
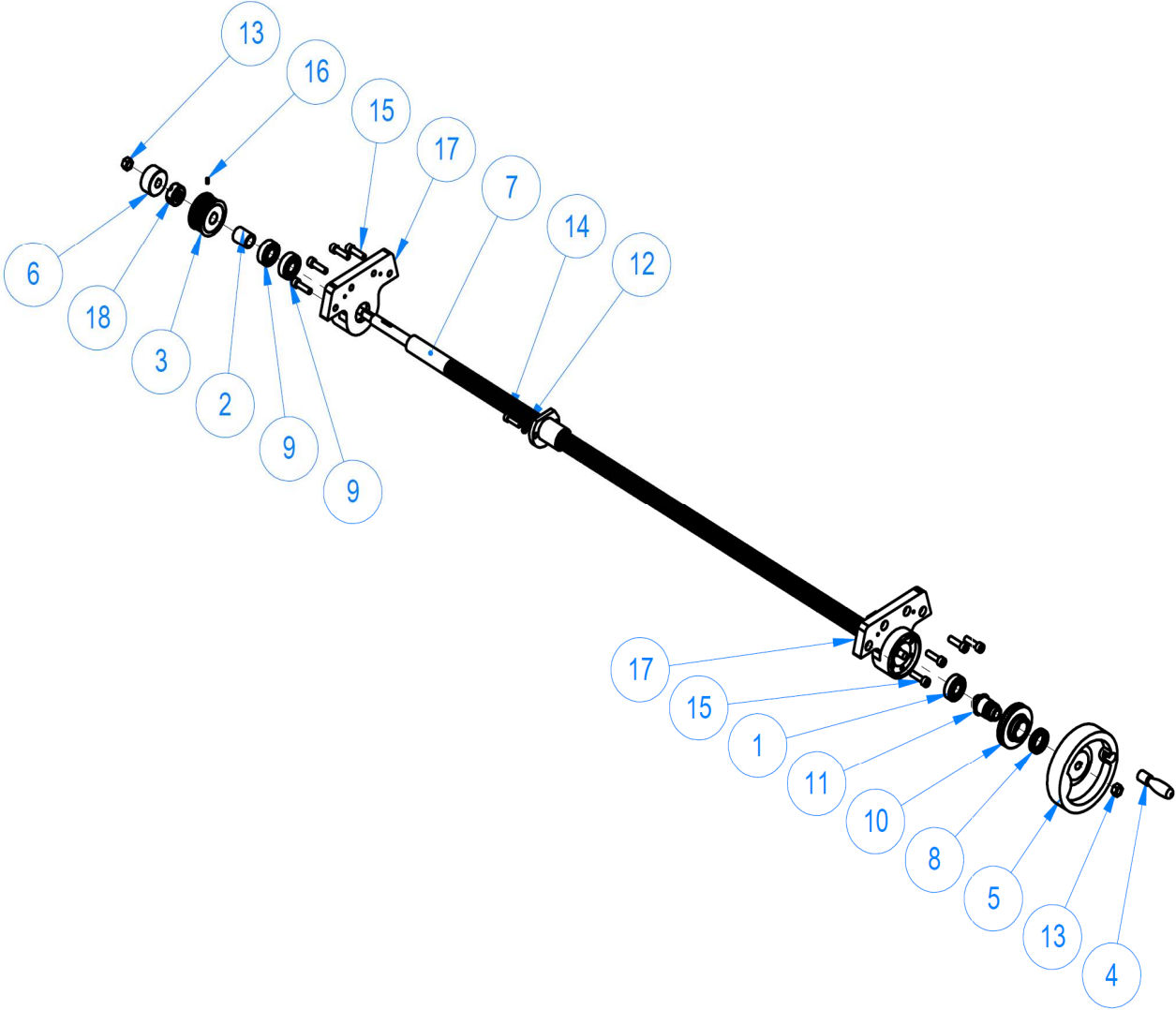


Table for A1

Item	Parts #	Description	QTY
1	BD1101T001	Table 9x49"	1
2	BD1102T005	Fix Plate	2
3	D0029A	Chock Plug	6
4	MF11006016	Hex Socket Flat Head Cap Screw	4
5	MF11006020	Hex Socket Flat Head Cap Screw	2
6	NC0020	Dog	2
7	NC0035	Fix Plate (Small)	2

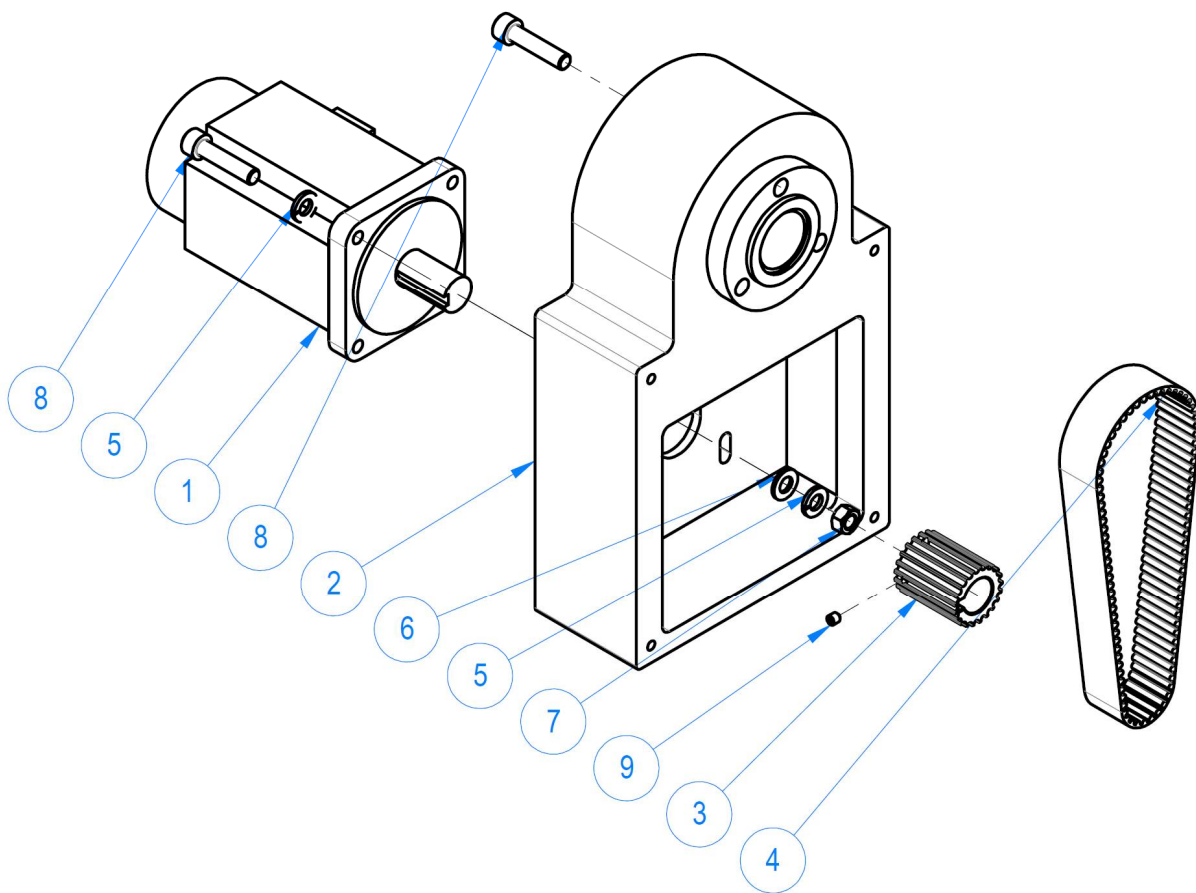
4-2 X axis assy.



X axis Assy for A1

Item	Parts #	Description	QTY
1	B620402002N	Bearing	1
2	BD1101C013	Bearing spacer	1
3	BD1101B007	Pulley (XY)	1
4	BD1101B013	Handle	1
5	BD1101B014	Handlewheel	1
6	BD1101T032	Handlewheel	1
7	BD1101T904	X-axis Ball Screw	1
8	BD1102B015	Dial Lock Nut	1
9	BT02004715K	Bearing	2
10	D0004A	Dial	1
11	D0005	Dial Holder	1
12	MA00815405	Spring Washer M8	2
13	ME22008020	Hex Nut	2
14	MF11008030	Hex Socket Flat Head Cap Screw	2
15	MF11010035	Hex Socket Flat Head Cap Screw	8
16	MJ11005010	Set Screw	2
17	ND0011	Pin	2
18	YF02015038	Nut (YSFM20XP1.5)	1
19	N3PT100001	Zero Plate	1

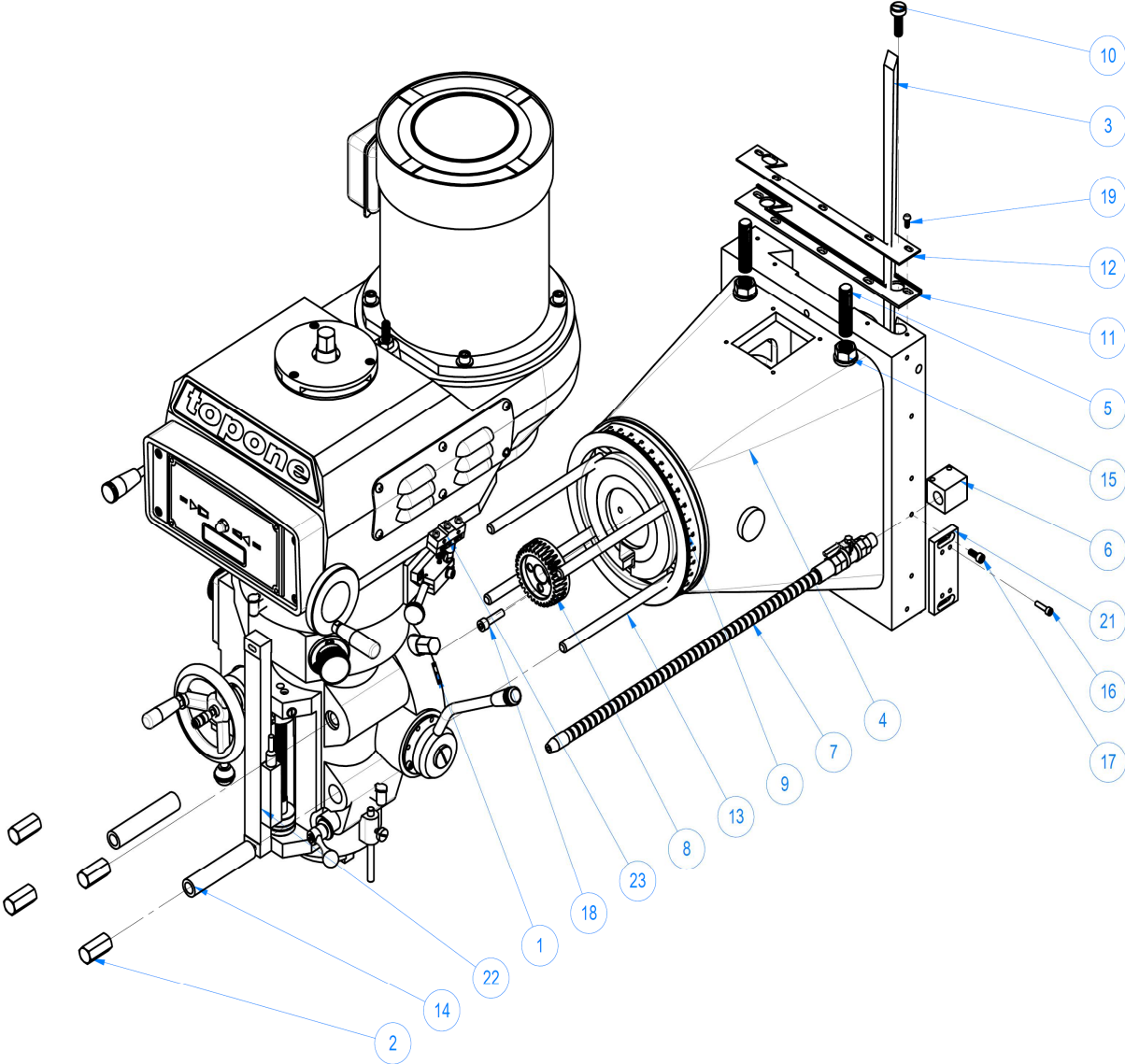
4-3 X axis servo motor set



X axis Servo Motor set for A1

Item	Parts #	Description	QTY
1		Servo Motor	1
2	BD1101T005	X-axis Servo Motor Bracket	1
3	BD1101B023	Pulley (21T)	1
4	LM50450025	Belt	1
5	MA00815405	Spring Lock Washer M8	8
6	MB08016005	Washer	4
7	ME11008125	Hex Nut	4
8	MF11008035	Hex Socket Flat Head Cap Screw	7
9	MJ11005005	Hex socket headless screw	2

5 Assy. Mill Head



A1-5T Mill Head Assy.

Item	Parts #	Description	QTY
1	N3PT100001	Zero Plate	1
2	B0157	Lock Nut	4
3	BD1101H002	Gib	1
4	BD1101H004	Sliding Block	1
5	BD1101H005	Balancing Bolt	2
6	BD1102H011	Coolant Hose Bracket	1
7	BD1102H022	Ball Valve	1
8	C0001	Quill housing adj Gear	1
9	C0003	Angle Plate	1
10	C0041	Screw	2
11	C0044B	Wiper	2
12	C0050B	Wiper Holder	2
13	FB0155	T-Bolt	4
14	FB0156	T-Bolt spacer	2
15	ME11016200	Hex Nut	2
16	MF11005020	Hex Socket Flat Head Cap Screw	2
17	MF11006016	Hex Socket Flat Head Cap Screw	2
18	MF11008030	Hex Socket Flat Head Cap Screw	3
19	MQ11005012	Philip Screw	8
20	20-1	Head Top Housing (#40/5HP Mill Head)	1
20	20-2	Lower Head for #40	1
21	NC0040	Limit Switch Bracket	1
22	Z571000	Quill DRO Scale (Optional)	1
23	Z841023	Micro Switch	1

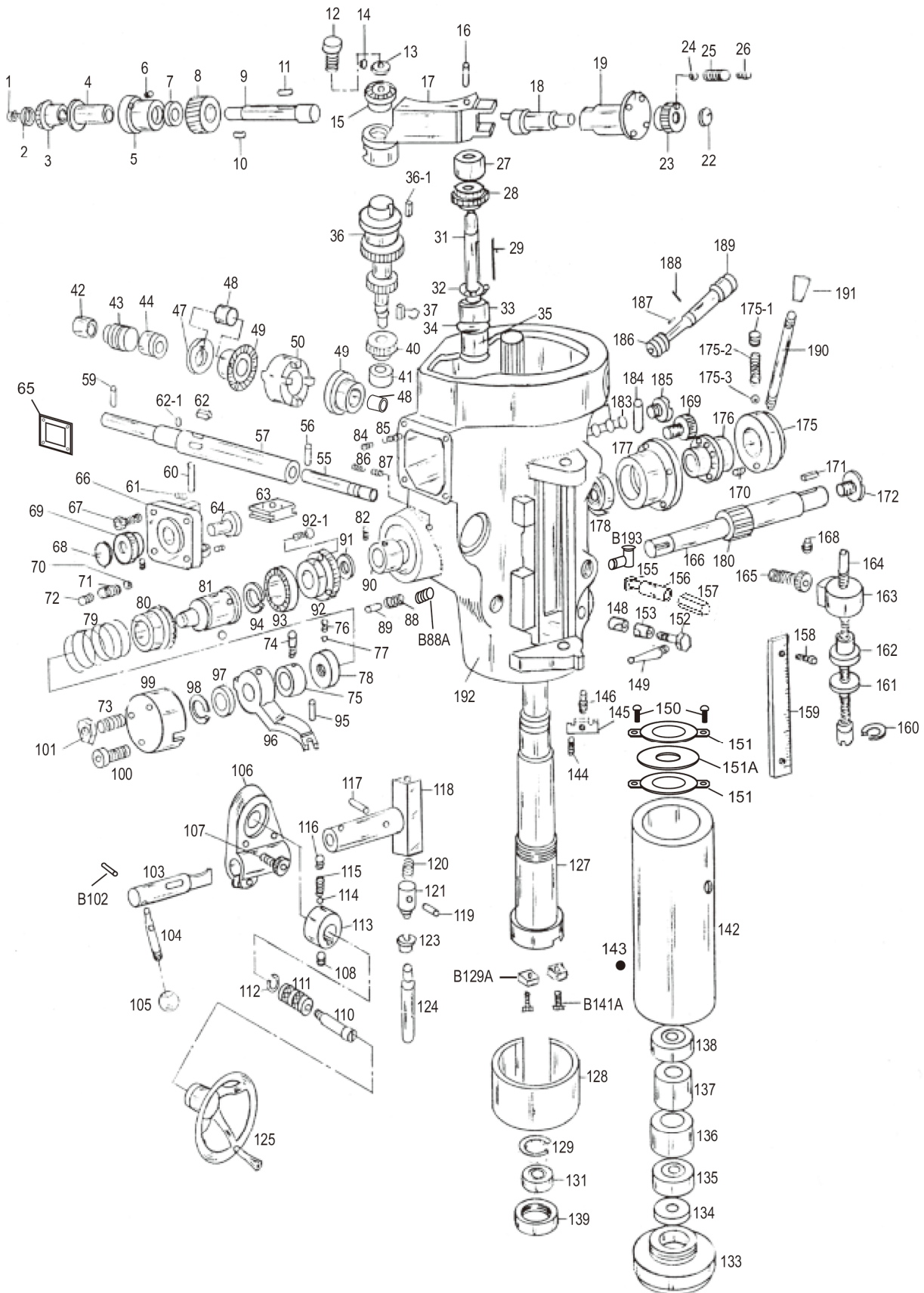
Item 20: 20-1 Head Top Housing (FVS Part)

ITEM NO:	DESCRIPTION	ITEM NO:	DESCRIPTION
1	BeIt Housing	70	Timing Pulley Clutch
3	Socket Set Screw	71	Key
4	BeIt	72	Key
5	Socket Cap Screw	73	Spindle Gear Hub
6	End Cover	74	Spindle Bull Gea
06-2	Key	75	Bearing Sleeve
7	C Ring	76	Washer
11	Motor Pulley Cover	77	Ball Bearing
12	Socket Cap Screw	78	Bearing Spacer
13	Top Bearing Cap	79	Bearing Spacer
14	Socket Cap Screw (3 Req.)	80	C Ring
14-1	ocket Cap Screw	81	Lock Nut
15	Ball Bearing	82	Gear Housing
17	Socket Cap Screw	83	Spring (3 Req.)
43	Ball Bearing	84	Lock Washer
46	Ball Bearing Housing	85	Bolt (3 Req.)
47	Brake Sheo Assembly	87	Clutch Gear Gear
48	Brake Sheo Pivot Sleeve	88	Pin
49	Spring	89	Hi-Low Pinion Block
50	BeIt Housing Base	90	Hi-Low Detent Punger
52	Brake Lock Bushing	91	Spring
53	Brake Lock shaft	92	Hi-Low Pinion Block
54	Hand1e Fix Block	93	Socket Cap Screw (2 Req)
55	Pin Spring	94	Hi-Low Shaft Crank
55-1	Nut	97	C Ring
56	Brake Lock Hand1e	98	Washer
57	Brake Ball Hand1e	100	Snap. Ring
58	Turning Block Shaft	101	Ventilator
59	Finger Pivot Stud	102	Set Belt
61	Jam Nut	103	C Ring
62	Timing Pulley	104	Copper Chip (2 Req.)
63	BeIt	105	Washer
64	Bull Gear Pinion Gear Cap	106	Plastic Washer
65	Ball Bearing(2 Req.)	107	Copper Chip
66	Bull Gear Pinion	108	Collar
67	Bull Gear Pinion Counter Shaft	109	Draw Bar
68	Key	110	Motor
69	Key	111	Socket Cap Screw

Item 20: 20-1 Head Top Housing (FVS Part)

ITEM NO:	DESCRIPTION
112	Block
113	Washer (4 Req.)
115	Motor Pulley
116	Plate
117	Plate
119	Puelley
120	Washer
124	Brake Disk
126	Washer
136	Socket Cap Screw
137	Socket Cap Screw (4 Req.)
140	Limit Switch(1 Req.)
141	Limit Switch Plat
142	Set Cap Screw
143	Set Cap Screw (2 Req.)
145	Set Cap Screw
146	Set Cap Screw (2 Req.)
OIL 1	Oil
OIL 2	Oiler

Item 20: 20-2 Lower Head Drawing Detail



Item 20: 20-2 Lower Head (FB Part)

ITEM No.	DESCRIPTION	Q'TY	ITEM No.	DESCRIPTION	Q'TY
FB1	RD.HD.Screw	1	FB62	Key	1
FB2	Bevel Pinion Washer	1	FB63	Feed Gear Shift Fork	1
FB3	Feed Bevel Pinion	1	FB64	Cluster Gear Shift Crank	1
FB4	Feed Worm Gear Shaft Sleeve	1	FB65	Cork mat	1
FB5	Worm Cradle Bushing	1	FB66	Cluster Gear Cover	1
FB6	Setscrew	1	FB67	Cap Screw	4
FB7	Worm Gear Spacer	1	FB68	Label - Power Feed Speed	1
FB8	Feed Drive Worm Gear	1	FB69	Shift Crank	1
FB9	Feed Drive Worm Gear Shaft	1	FB70	Steel Ball	1
FB10	Worm Shaft Key	1	FB71	Set Screw	1
FB11	Key	1	FB72	Set Screw	1
FB12	Locknut	1	FB73	Cap Screw	2
FB13	Washer	1	FB74	Clutch Ring Pin	1
FB14	Cluster Gear Key	1	FB75	Clutch Ring	1
FB15	Feed Reverse Bevel Gear	1	FB76	Socket Set Screw	1
FB16	Feed Engage Pin	1	FB77	Brass Plug	1
FB17	Worm Gear Cradle	1	FB78	Overload Clutch Locknut	1
FB18	Worm Gear Cradle Throw-out	1	FB79	Safety Clutch Spring	1
FB19	Shift Sleeve	1	FB80	Overload Clutch	1
FB22	Label - Power Feed	1	FB81	Overload Clutch Sleeve	1
FB23	Shift Crank	1	FB83	Round Head Screw	1
FB24	Steel Ball	1	FB84	Mock-it Lockscrew	1
FB25	Set Screw	3	FB85	Socket Set Screw	1
FB26	Set Screw	3	FB86	Lockscrew	1
FB27	Cluster Gear Shaft Upper Bearing	1	FB87	Socket Set Screw	1
FB28	Cluster Gear Assembly	1	FB88	Compression Spring	1
FB29	Cluster Gear Key	1	B88A	Compression Spring- special	1
FB31	Cluster Gear Shaft	1	FB89	Overload Clutch Lever Spring	1
FB32	Snap Ring	1		Plunger	
FB33	Bevel Gear Bearing	1	FB90	Quill Pinion Shaft Bushing	1
FB34	Bevel Gear Thrust Spacer	1	FB91	Pinion Shaft Worm Gear Spacer	1
FB36	Feed Driving Gear	1	FB92	Overload Clutch Worm Gear	1
FB37	Key	1	FB93	Overload Clutch Ring	1
FB40	Feed Drive Gear	1	FB94	Snap Ring	1
FB41	Needle Bearing	1	FB95	Dowel Pin	1
FB42	Bushing	1	FB96	Overload Clutch Trip Lever	1
FB43	Worm	1	FB97	Overload Clutch Washer	1
FB44	Feed Worm Shaft Bushing	1	FB98	Snap Ring	1
FB47	Feed Worm Shaft Thrust Washer	1	FB99	Clutch Arm Cover	1
FB49	Feed Reverse Bevel Gear (include B48 Bushing)	2	FB100	Socket Set Screw	1
FB50	Feed Reverse Clutch	1	FB101	Chem Blacked Locknut	1
FB55	Reverse Clutch Rod	1	B102	Dowel Pin	1
FB56	Roll Pin	1	FB103	Cam Rod	1
FB57	Feed Worm Shaft	1	FB104	Trip Handle	1
FB59	Pin	1	FB105	Black Plastic Ball	1
FB60	Feed Shift Rod	1	FB106	Feed Trip Bracket	1
FB61	KP.Set Screw	1	FB107	Cap Screw	2
			FB108	Socket Set Screw	1

Item 20: 20-2 Lower Head (FB Part)

ITEM No.	DESCRIPTION	Q'TY	ITEM No.	DESCRIPTION	Q'TY
FB110	Feed Reverse Knob Stud	1	FB163	Quill Stop Knob	1
FB111	Reverse Knob	1	FB164	Quill Stop Micro-screw	1
FB112	Snap Ring	1	FB165	Screw	1
FB113	Hand Wheel Clutch	1	FB166	Quill Pinion Shaft	1
FB114	Steel Ball	1	FB168	Screw Pin	1
FB115	Compression Spring	1	FB169	RD.Head Screw	1
FB116	Handwheel Clutch Spring Screw	1	FB170	Roll Pin	1
FB117	Roll Pin	1	FB171	Key	1
FB118	Cam Rod Sleeve Assy	1	FB172	Pinion Shaft Hub Screw	1
FB119	Roll Pin	1	FB173	Steel Ball	1
FB120	Compression Spring	1	FB174	Compression Spring	1
FB121	Trip Plunger	1	FB175	Rack Feed Handle Hub	1
FB123	Trip Plunger Bushing	1	FB176	Pinion Shaft Hub Sleeve	1
FB124	Feed Trip Plunger	1	FB177	Spring Cover	1
FB125	Handwheel	1	FB178	Clock Spring(Clock Spring Assy)	1
FB127	Spindle	1	FB181	Socket Set Screw	1
FB128	Quill Skirt	1	FB182	Lockscrew	1
FB129	Quill Lock	1	FB183	Reverse Trip Ball Lever	1
B129A	Spindle fixed block	2	FB184	Feed Reverse Trip Plunger	1
FB130	Lockwasher	1	FB185	Reverse Trip Ball Lever Screw 5/16"	1
FB131	Bearing	1	FB186	Worm Gear	1
FB133	Nose-Piece	1	FB187	Key	1
FB134	Spindle Dirt Shield	1	FB188	Socket Set Screw	1
FB135	Bearing	2	FB189	Addition Worm Shaft	1
FB136	Bearing Spacer-Large	1	FB190	Pinion Shaft Hub Handle	1
FB137	Bearing Spacer-Small	1	FB191	Black Plastic Ball Handles	1
FB139	Spindle Dirt Shield	1	FB192	Quill Housing	1
B141A	M8x16 Screw	2	B193	Oil Cup 1/8PTx1/8PH	1
FB142	Quill	1			
FB143	Bushing 4x3mm (copper)-SWI	1			
FB144	Socket Set Screw	1			
FB145	Feed Trip Lever	1			
FB146	Trip Lever Pin	1			
FB148	Quill Lock Sleeve	1			
FB149	Lock Handle	1			
FB150	Socket Set Screw	2			
FB151	Felt Washer	2			
FB151A	Felt	1			
FB152	Quill Lock Bolt	1			
FB153	Quill Lock Sleeve Tapped	1			
FB155	T-Bolt Assy	4			
FB156	Lower Clamping Bolt Spacer	2			
FB157	Locknut	1			
FB158	Chem Blacked RD.HD.Screws	2			
FB159	Micrometer Scale	1			
FB160	Snap Ring	1			
FB161	Quill Micro-stop Nut	1			
FB162	Micrometer Nut	1			