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## Parts Manual TRM MODEL



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This reference covers the following Fadal products:

Model TRM

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The content of this manual has been reviewed for accuracy and is applicable to current Fadal hardware and software products as described herein. Differences may exist and we cannot guarantee that they are completely covered in this document. The information in this document is reviewed regularly and any necessary changes will be incorporated in the next revision. We welcome any suggestions for improvement.

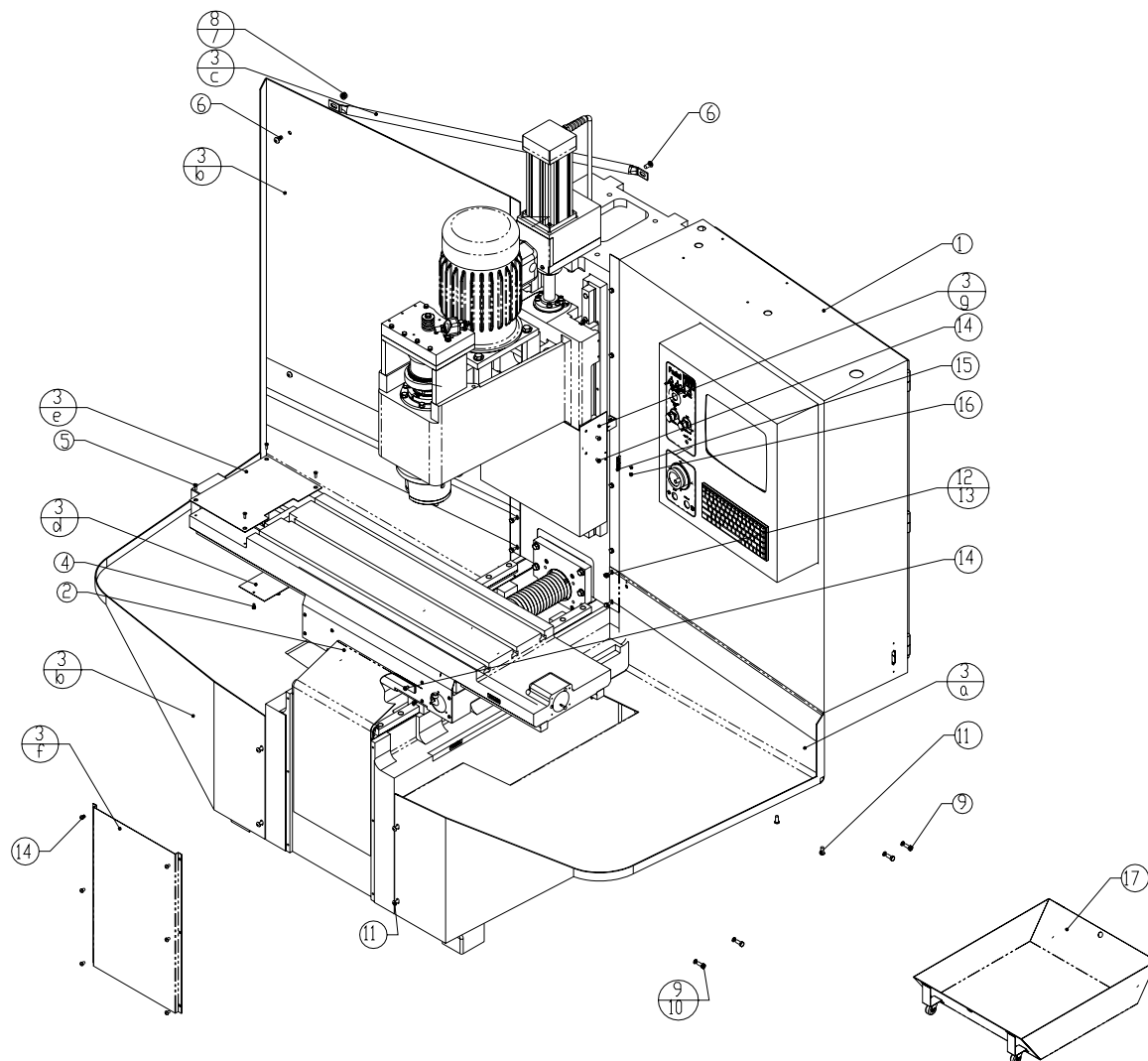
Material is subject to change without notice.

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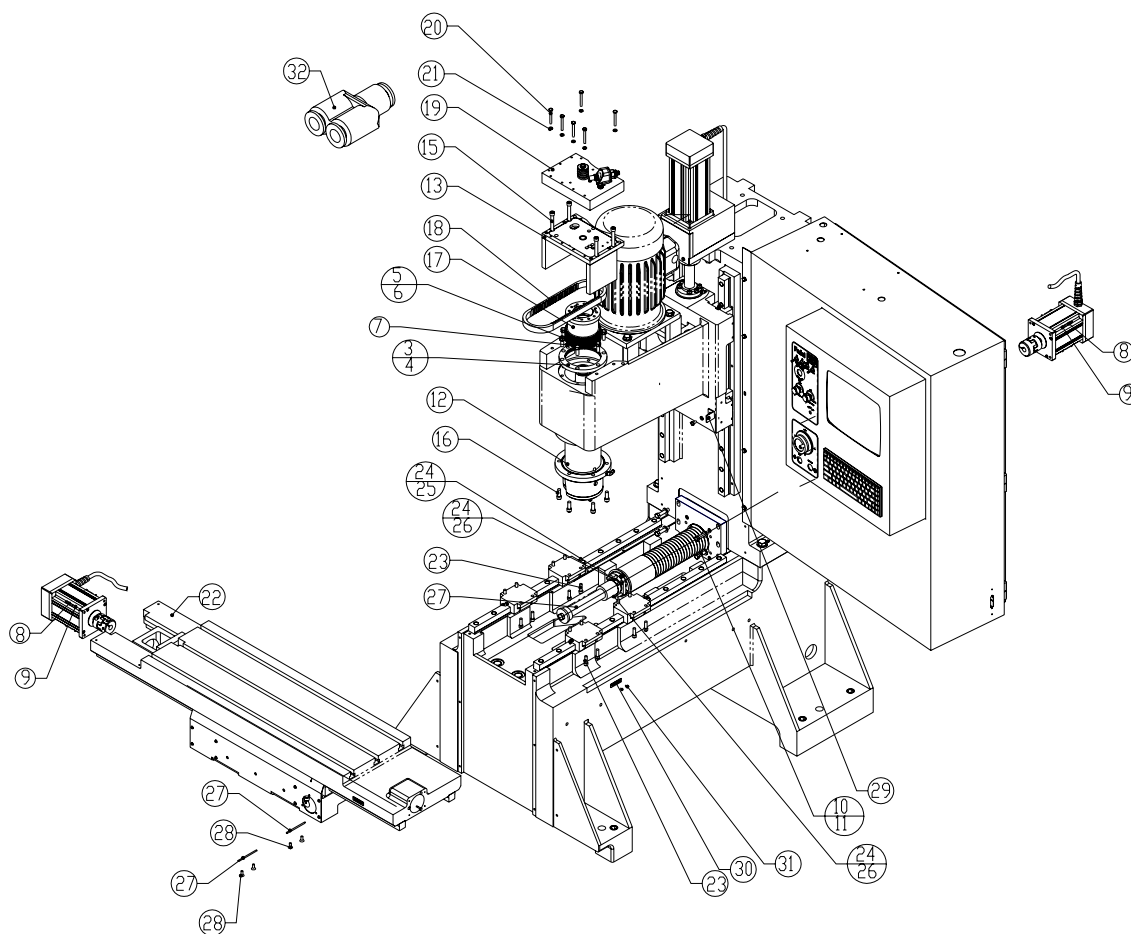
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# SHEET METAL ASSEMBLY



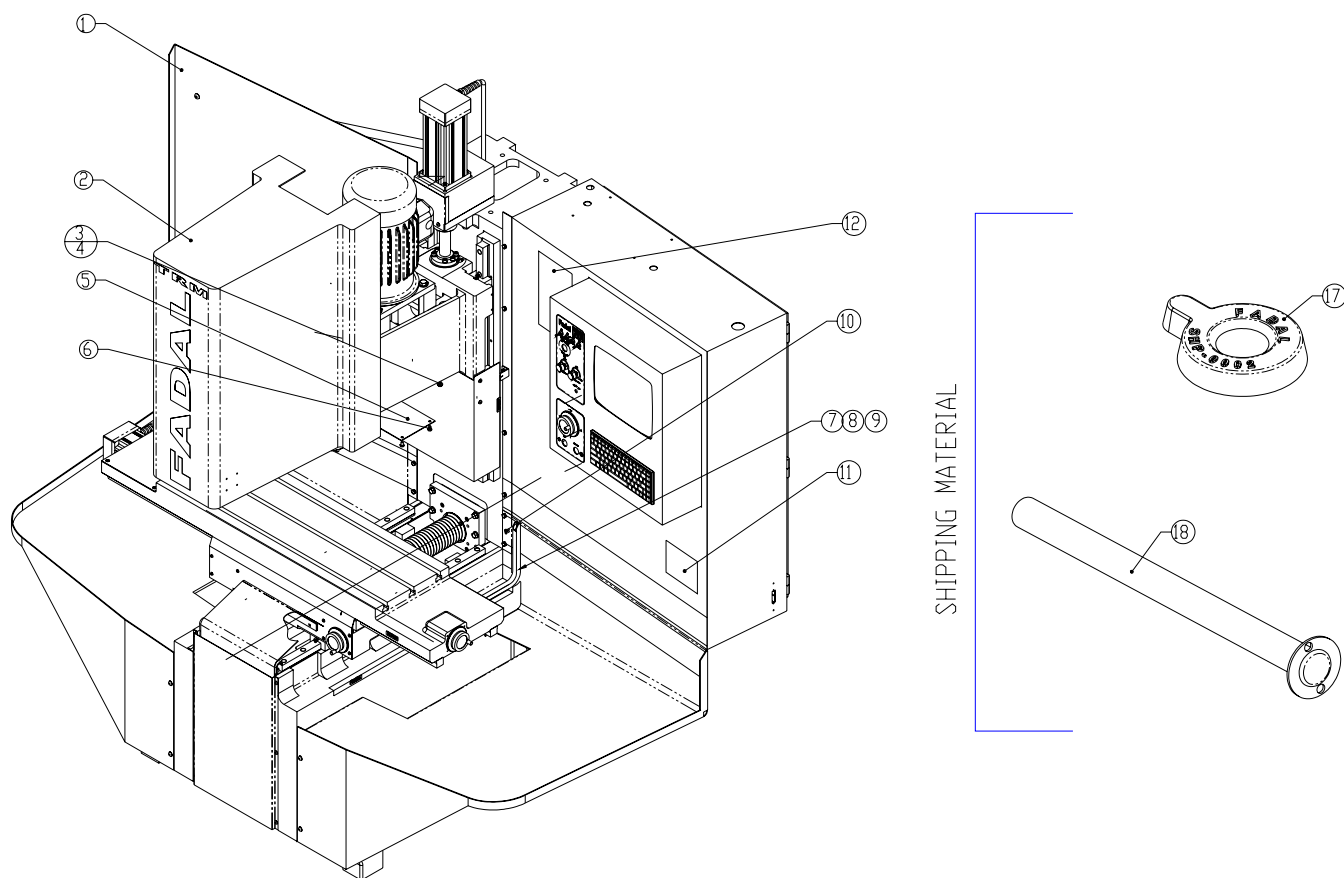
| ITEM NO. | QTY. | PART NO.                                        | DESCRIPTION                                |
|----------|------|-------------------------------------------------|--------------------------------------------|
| 1        | 1    | FMC_0141_Mechanical_Floor_Assembly_TRM          |                                            |
| 2        | 1    | CVR_0261_Front_Cover_Assembly_TRM               |                                            |
| 3        | 1    | STM_1817_Sheetmetal_Kit_Assembly_TRM            |                                            |
| a        | 1    | Stm_1643_Sheet_Metal_Right_Side_Low_Profile_Trm |                                            |
| b        | 1    | Stm_1642_Sheet_Metal_Left_Side_Low_Profile_Trm  |                                            |
| c        | 2    | STM_1636_Support_Bracket_Trm                    |                                            |
| d        | 1    | STM_1816_Coupler_Cover                          |                                            |
| e        | 1    | STM_1734_BallScrew_Cover                        |                                            |
| f        | 1    | STM_1687_Sheet_Metal_Cover_Trm                  |                                            |
| g        | 1    | STM_1640_cover_head_z_axis_trm                  |                                            |
| 4        | 2    | Hdw_0348_screw_button_socap_10_32x.5            | 18-8 Stainless Steel                       |
| 5        | 4    | Hdw_0324_Flat_Head_SCS_#10_-32 UNF x 1/2        | Alloy Steel Black Finish                   |
| 6        | 4    | HDW_0345_Screw 3/8_-16 UNC x 3/4, BTN SHCS PLN  | 18-8 Stainless Steel                       |
| 7        | 2    | HDW-0280                                        | SPLIT LOCK WASHER 3/8 SS                   |
| 8        | 2    | HDW_0333_Nut 3/8_-16 FIN HX Full                | 18-8 Stainless Steel                       |
| 9        | 8    | Hdw_0575_screw_hexcap_gr8_3125_18x.75           | Zinc-Plated Steel, Grade 5 Medium Strength |
| 10       | 8    | HDW-0281                                        | SPLIT LOCK WASHER 5/16                     |
| 11       | 8    | HDW_1028_Button_Head_SCS_0.3125_-18 UNC x 3/4"  | 18-8 Stainless Steel                       |
| 12       | 9    | HDW-0319                                        | HEXCAP SCREW GR8 1/4X20 1/2LONG Zinc Pl.   |
| 13       | 9    | HDW-0279                                        | LOCK SPLIT WASHER 1/4                      |
| 14       | 9    | HDW-0347                                        | BUTTON SCREW SOCAP 1/4X20 3/8LONG          |
| 15       | 1    | Stm_0593_cold_start_brkt_x_axis_l model         |                                            |
| 16       | 2    | Hdw_0352_screw_button_socap_8_32x.25            | 18-8 Stainless Steel                       |
| 17       | 1    | STM_1623_Chip_Tank_Assembly_TRM                 |                                            |

# MECHANICAL ASSEMBLY



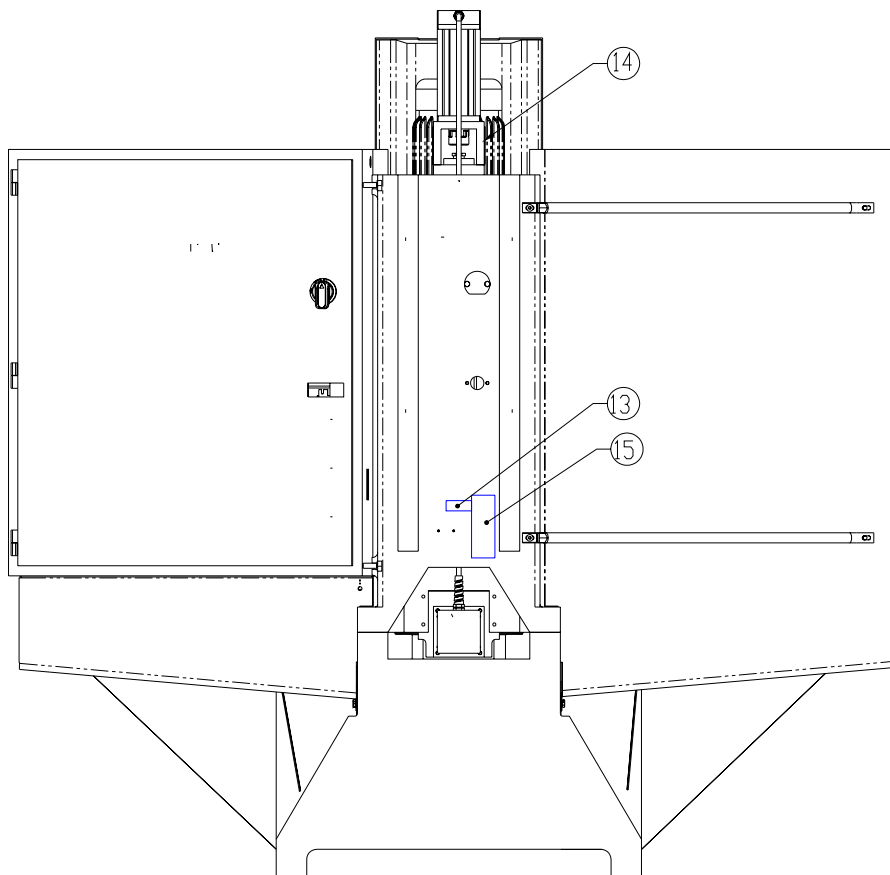
| ITEM NO. | QTY. | PART NO.                                              | DESCRIPTION                                                   |
|----------|------|-------------------------------------------------------|---------------------------------------------------------------|
| ITEM NO. | QTY. | PART NO.                                              | DESCRIPTION                                                   |
| 1        | 1    | FMC_0140_Pre-Assembly_TRM                             |                                                               |
| 2        | 1    | Bls_0377_Ballscrew_Asy_Y_Axis_Trm                     |                                                               |
| 3        | 1    | SPN_0042 Retainer spindle upper                       |                                                               |
| 4        | 1    | HDW_0170 O ring 2-247                                 |                                                               |
| 5        | 6    | Hdw_0568_screw_hexcap_gr8_.375_16x1                   | Zinc-Plated Steel, Grade 5 Medium Strength, ANSI/ASME threads |
| 6        | 6    | Hdw_0275_washer_390x625x060_fw_ylw_zc                 |                                                               |
| 7        | 1    | HDW_0422 Plug, pressure, .125 x 18                    |                                                               |
| 8        | 8    | HDW-0301 Screw Socap 10-32 x 1.00                     | Alloy Steel Black Finish                                      |
| 9        | 8    | Hdw_0278_washer_lock_split_#10_z_p                    | 18-8 Stainless Steel                                          |
| 10       | 4    | HDW-0569                                              | HEXCAP SCREW GR8 3/8X16 1 3/4 LONG ZINC PL                    |
| 11       | 4    | Hdw-0049 Washer,Hardened;3/8                          | Zinc-Plated Steel                                             |
| 12       | 1    | SPN_0081 spindle_assy_non-lock_7.5K_grease            |                                                               |
| 13       | 1    | ORB_0040_Orient_Bridge_Asy_Trm                        |                                                               |
| 14       | 1    | Hdw_0093                                              |                                                               |
| 15       | 4    | Hdw_0288_screw_socap_.375_16x5.25                     | Alloy Steel Black Finish                                      |
| 16       | 6    | Hdw_0470_screw_socap_.375_16x1                        | Alloy Steel Black Finish                                      |
| 17       | 1    | PUL_0025_SPRKT_SPN_PLYCHN_NON_COOLANT                 |                                                               |
| 18       | 1    | BEL-0039 BELT GATES TRM                               |                                                               |
| 19       | 1    | DRB_0049_Drawbar_Cylinder_Asy_Standart                |                                                               |
| 20       | 6    | Hdw_0320_screw_hexcap_gr8_.25_20x2                    | Zinc-Plated Steel, Grade 5 Medium Strength, ANSI/ASME threads |
| 21       | 6    | HDW-0279                                              | LOCK SPLIT WASHER 1/4                                         |
| 22       | 1    | SDL_0089 SDL_TBL_BSCREW_ASSEMBLY TRM                  |                                                               |
| 23       | 16   | Hdw_0481_screw_socap_.03125_-18 UNC x 1               | Alloy Steel Black Finish                                      |
| 24       | 6    | Hdw_0291_screw_socap_.3125-18x1_.25                   | Alloy Steel Black Finish                                      |
| 25       | 4    | Hdw_0048_washer_hardened_.3125                        | Zinc-Plated Steel                                             |
| 26       | 2    | HDW-0281                                              | SPLIT LOCK WASHER 5/16                                        |
| 27       | 2    | HDW_1264_press_roller_linear_carriage EMC 2016L 3016L |                                                               |
| 28       | 4    | Hdw_0603_250-20x.500_FHSCS                            | Alloy Steel Black Finish                                      |
| 29       | 1    | Stm_0048_z_axis_c_s                                   |                                                               |
| 30       | 1    | Stm_0593_cold_start_brkt_x_axis_l_model               |                                                               |
| 31       | 2    | Hdw_0352_screw_button_socap_8_32x.25                  | 18-8 Stainless Steel                                          |
| 32       | 1    | PLM_0201 Fitting, 5/32 x 5/32 QD "Y"                  |                                                               |

# FINISHED ASSEMBLY



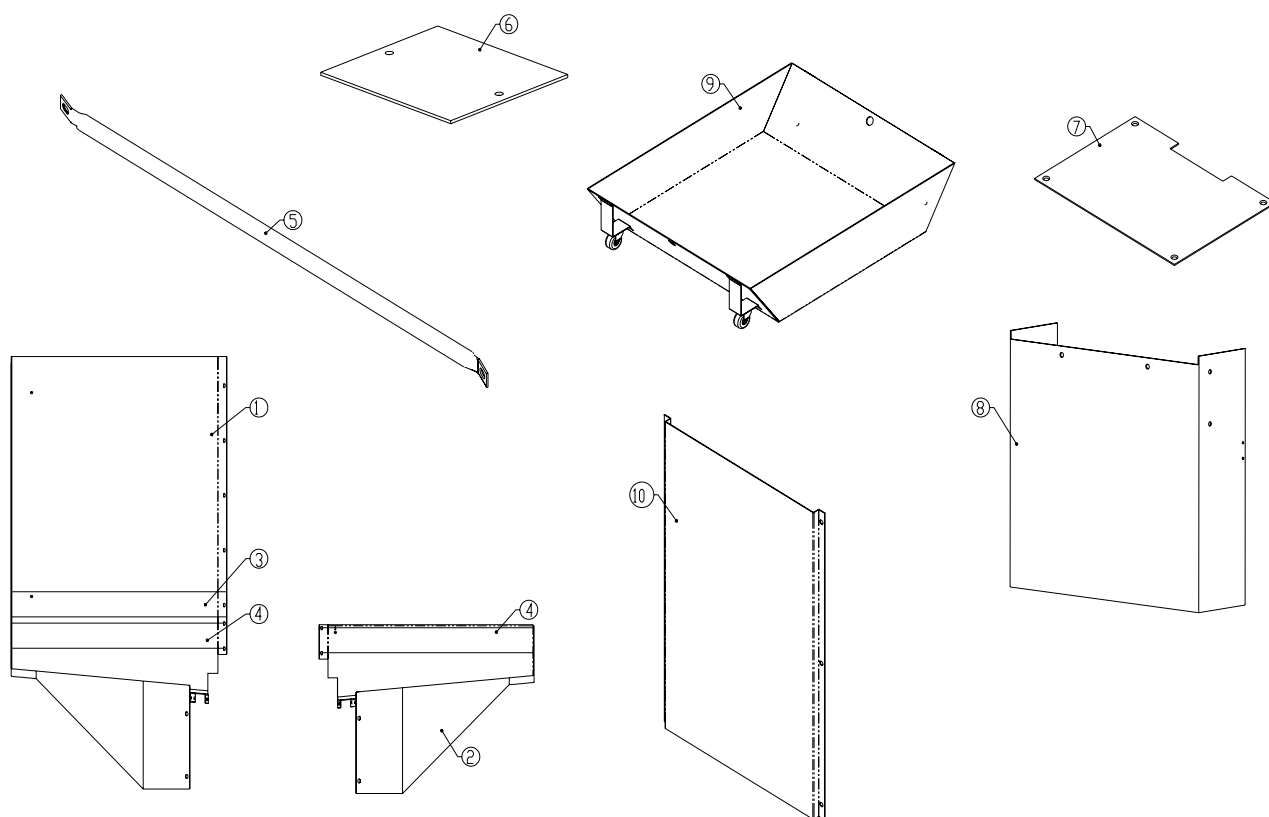
\* See page 6 for the B.O.M.

# FINISHED ASSEMBLY



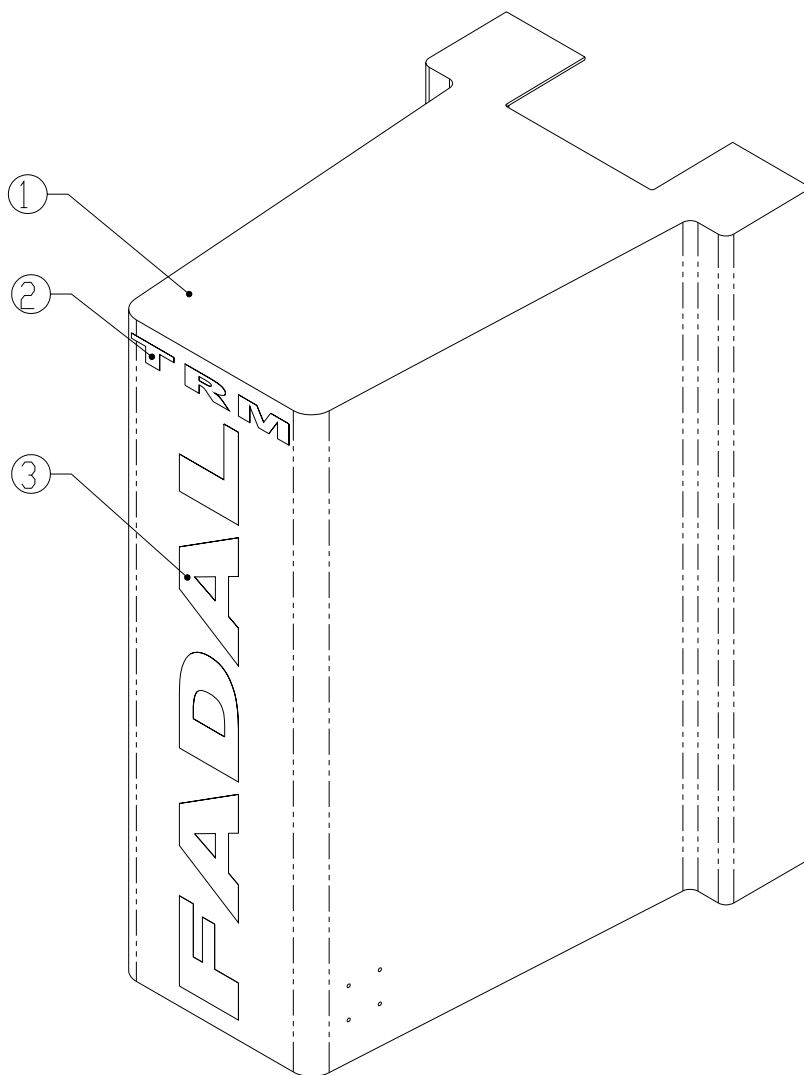
| ITEM NO. | QTY. | PART NO.                                       | DESCRIPTION                                |
|----------|------|------------------------------------------------|--------------------------------------------|
| 1        | 1    | FMC_0142_Sheetmetal_Assembly_TRM               |                                            |
| 2        | 1    | Cvr-0262 Head_Cover_Assembly_TRM               |                                            |
| 3        | 4    | Hdw_0322_screw_hexcap_gr8_25_20x.75            | Zinc-Plated Steel, Grade 5 Medium Strength |
| 4        | 4    | HDW-0047                                       | WASHER HARDENED 1/4                        |
| 5        | 1    | Stm_0064_cover_head_core_all_vmc               |                                            |
| 6        | 4    | Hdw_0795_screw_hexcap_gr8_25_20x.375           | Zinc-Plated Steel, Grade 5 Medium Strength |
| 7        | 1    | STM_1834_Cable_Carrier_Bracket                 |                                            |
| 8        | 1    | HDW_1028_Button_Head_SCS_0.3125 -18 UNC x 3/4" | 18-8 Stainless Steel                       |
| 9        | 1    | CVR_0260_Cable_Carrier_TRM                     |                                            |
| 10       | 4    | HDW-0606 Screw 6-32 x .500 FSHCS PLN           | Alloy Steel Black Finish                   |
| 11       | 1    | LBL_0213 Lbl-Made in USA                       |                                            |
| 12       | 1    | LBL_0123 Safety label, instructions            |                                            |
| 13       | 1    | LBL_0146 Air Pressure Label                    |                                            |
| 14       | 1    | LBL_0471 LBL, Danger, Z-Axis Fall SPN          |                                            |
| 15       | 1    | LBL_0126 Warning Lable, Air Pressure           |                                            |
| 16       | 1    | Serial Number Lable                            |                                            |
| 17       | 6    | SHP_0002 Leveling Pad, FADAL                   |                                            |
| 18       | 1    | HDW_1000 Rod Cap/Counter Weight Pin            |                                            |

# SHEET METAL KIT



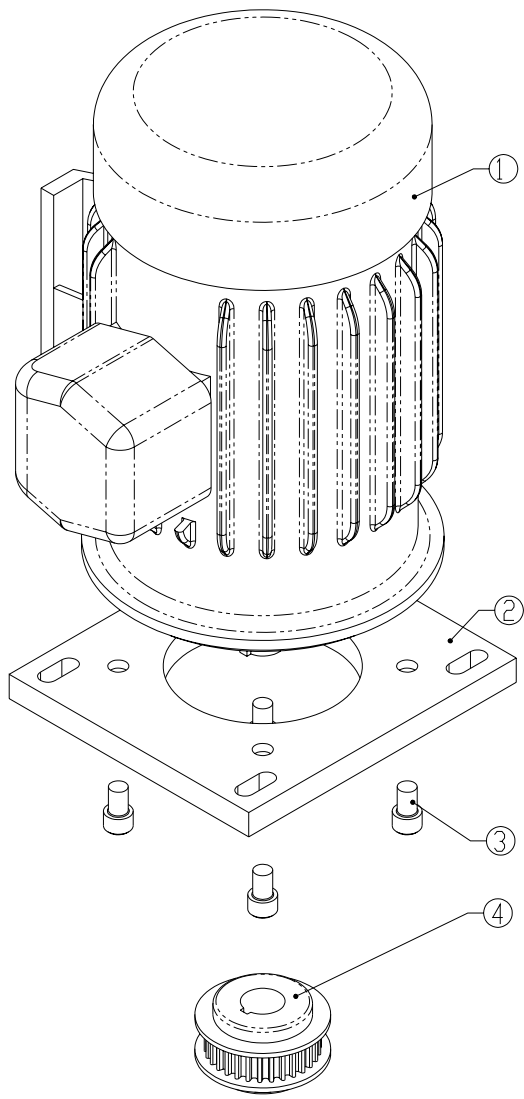
| ITEM NO. | QTY. | PART NO. | DESCRIPTION                                     |
|----------|------|----------|-------------------------------------------------|
| 1        | 1    | STM-1642 | SHEET METAL LEFT SIDE, TRM                      |
| 2        | 1    | STM-1643 | SHEET METAL RIGHT SIDE, TRM                     |
| 3        | 1    | LBL-0496 | VINYL VIVID DARK BLUE, 4.0 inches x 4.0 feet    |
| 4        | 2    | LBL-0504 | VINYL OLYMPIC LIGHT BLUE, 4.0 inches x 4.0 feet |
| 5        | 2    | STM-1636 | SUPPORT BRACKET, TRM                            |
| 6        | 1    | STM-1816 | COUPLER COVER                                   |
| 7        | 1    | STM-1734 | BALLSCREW COVER                                 |
| 8        | 1    | STM-1640 | COVER HEAD Z AXIS, TRM                          |
| 9        | 1    | STM-1623 | CHIP TANK ASSEMBLY, TRM                         |
| 10       | 1    | STM-1687 | SHEET METAL COVER, TRM                          |

# HEAD COVER ASSEMBLY



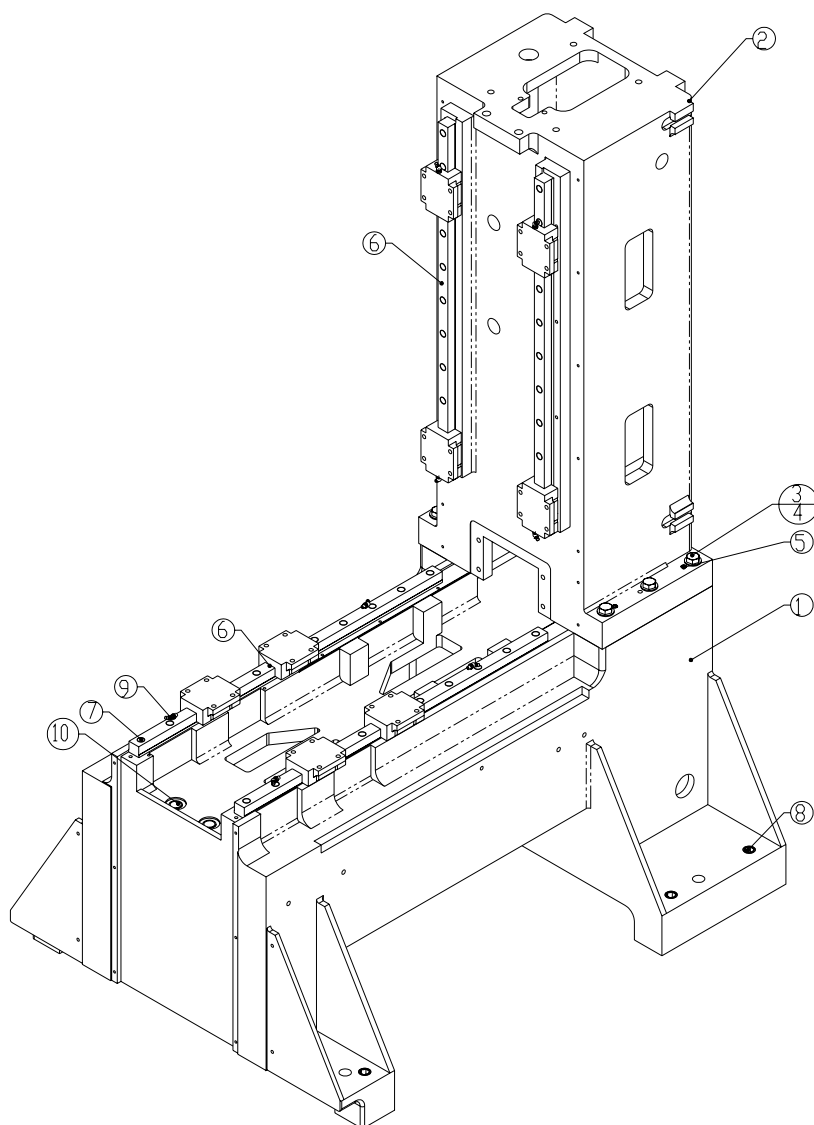
| ITEM NO. | QTY. | PART NO. | DESCRIPTION          |
|----------|------|----------|----------------------|
| 1        | 1    | CVR-0251 | COVER, HEAD, TRM     |
| 2        | 1    | LBL-0505 | LETTER: "TRM", TRM   |
| 3        | 1    | LBL-0495 | LETTER: "FADAL", TRM |

MOTOR ASSEMBLY



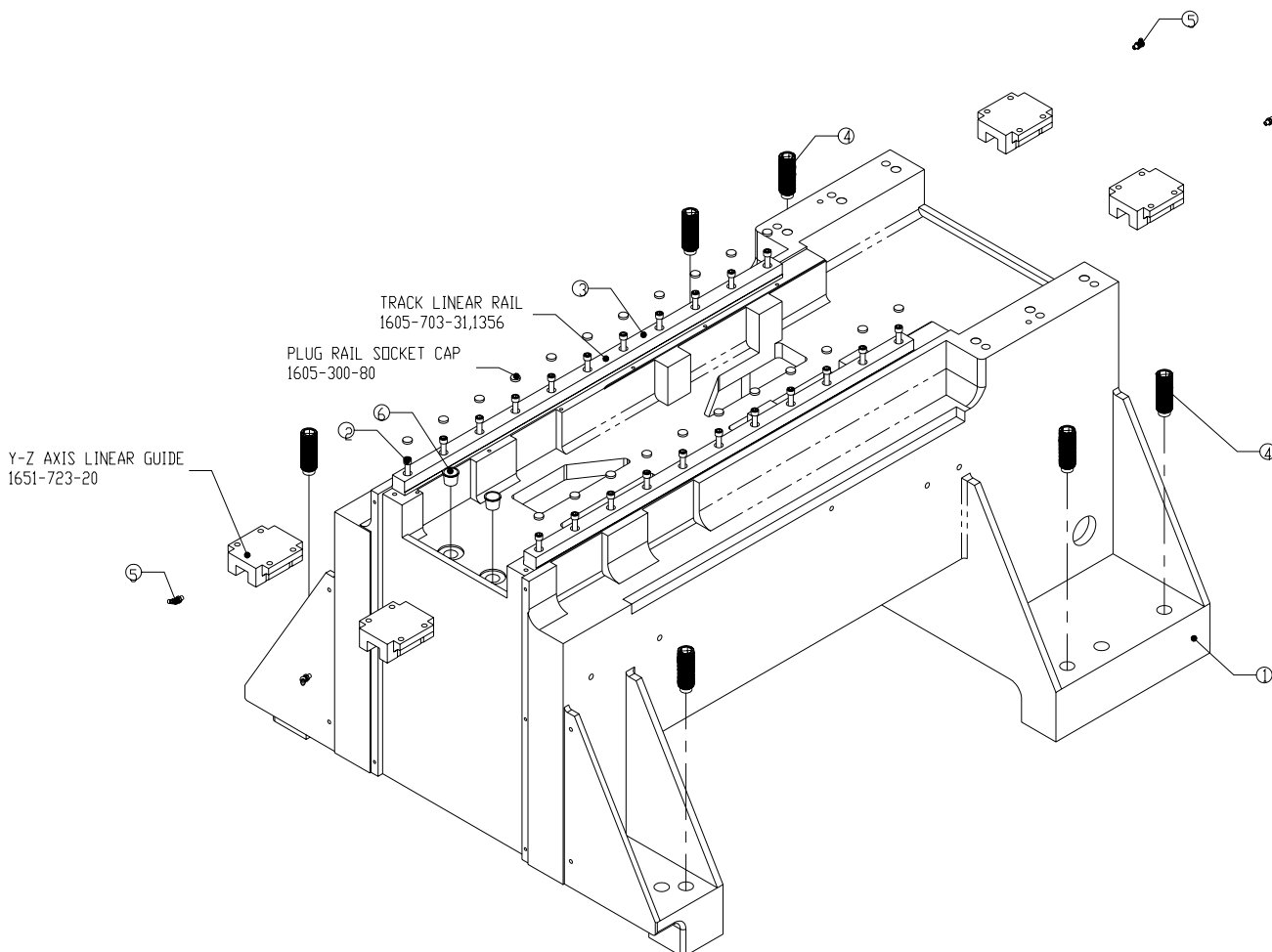
| ITEM NO. | QTY. | PART NO.                                                            | DESCRIPTION |
|----------|------|---------------------------------------------------------------------|-------------|
| 1        | 1    | MTR_0232 baldor motor                                               |             |
| 2        | 1    | MTR_0226 Plate Spindle Motor Mount TRM                              |             |
| 3        | 4    | HW_0283 Socket Head Cap Screw .500-13x.750 Alloy Steel Black Finish |             |
| 4        | 1    | PUL-0078 Sprcket MTR Polychain TRM                                  |             |

# COLUMN / BASE ASSEMBLY



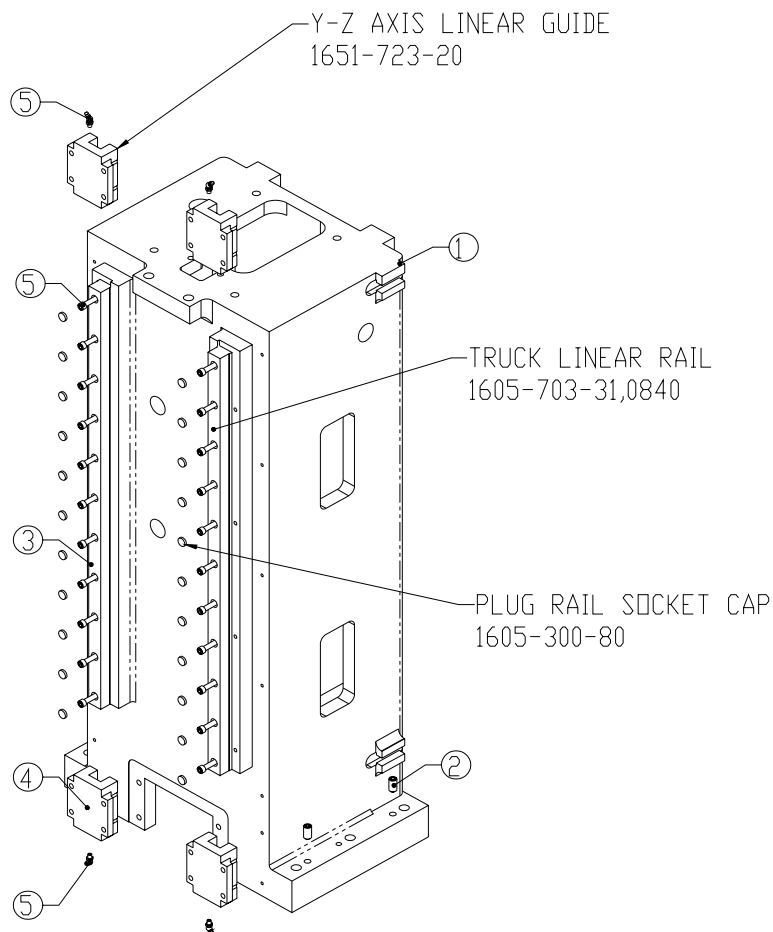
| ITEM NO. | QTY. | PART NO. | DESCRIPTION                      |
|----------|------|----------|----------------------------------|
| 1        | 1    | BAS-0050 | Base Machined LP TRM             |
| 2        | 1    | COL-0050 | Column Machined LP TRM           |
| 3        | 6    | Hdw-0555 | Screw Hexcap 5/8-11 x 3.50       |
| 4        | 6    | Hdw-0051 | Washer Hardened 5/8              |
| 5        | 4    | Hdw-0769 | Screw Set Halfdog 1/2-20 x 1.00  |
| 6        | 4    | BRG-0173 | Linear Rail Y Axis, Z Axis, TRM  |
| 7        | 44   | Hdw-0291 | Screw Socap 5/16-18 x 1 1/4      |
| 8        | 6    | Hdw-0432 | Screw Set 1.00-14 x 3.00         |
| 9        | 8    | P1m-0245 | Ftting Hdrlic Grs M6x1 Mle 45deg |
| 10       | 2    | Hdw-1318 | Plug Plastic Red                 |

# BASE ASSEMBLY



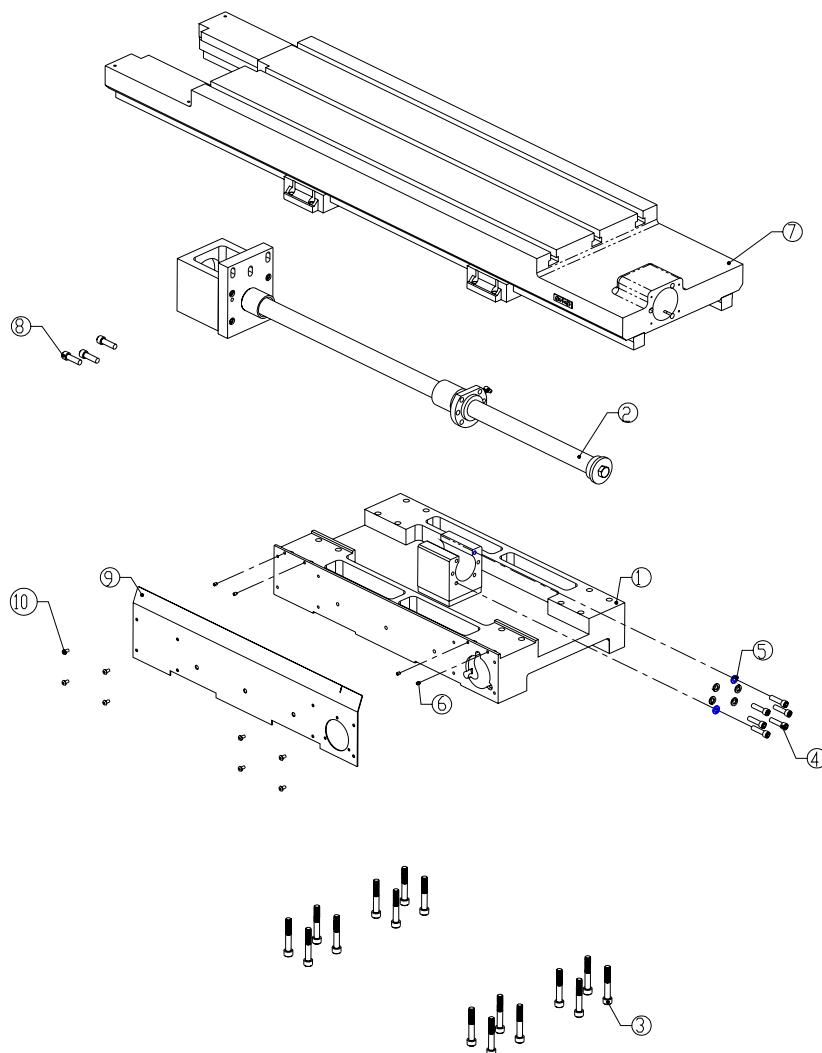
| ITEM NO. | QTY. | PART NO.         | DESCRIPTION                     |
|----------|------|------------------|---------------------------------|
| 1        | 1    | BAS-0050         | Base Machined LP TRM            |
| 2        | 22   | HDW0291          | Screw Socap 5/16-18 x 1 1/4     |
| 3        | 2    | BRG-0173         | Linear Rail Y Axis, Z Axis, TRM |
|          | 1    | 1605-703-31,1356 | Y-Z Axis Linear Guide TRM       |
|          | 2    | 1651-723-20      | Truck Linear Rail TRM           |
|          | 22   | 1605-300-80      | Plugs Rail Socket Cap           |
| 4        | 6    | HDW0432          | Screw Set 1.00-14x3.00          |
| 5        | 4    | PLM-0245         | Ftting Hdr/c Grs M6x1 M16 45deg |
| 6        | 2    | HDW-1318         | Plugs Plastic Red               |

# COLUMN ASSEMBLY



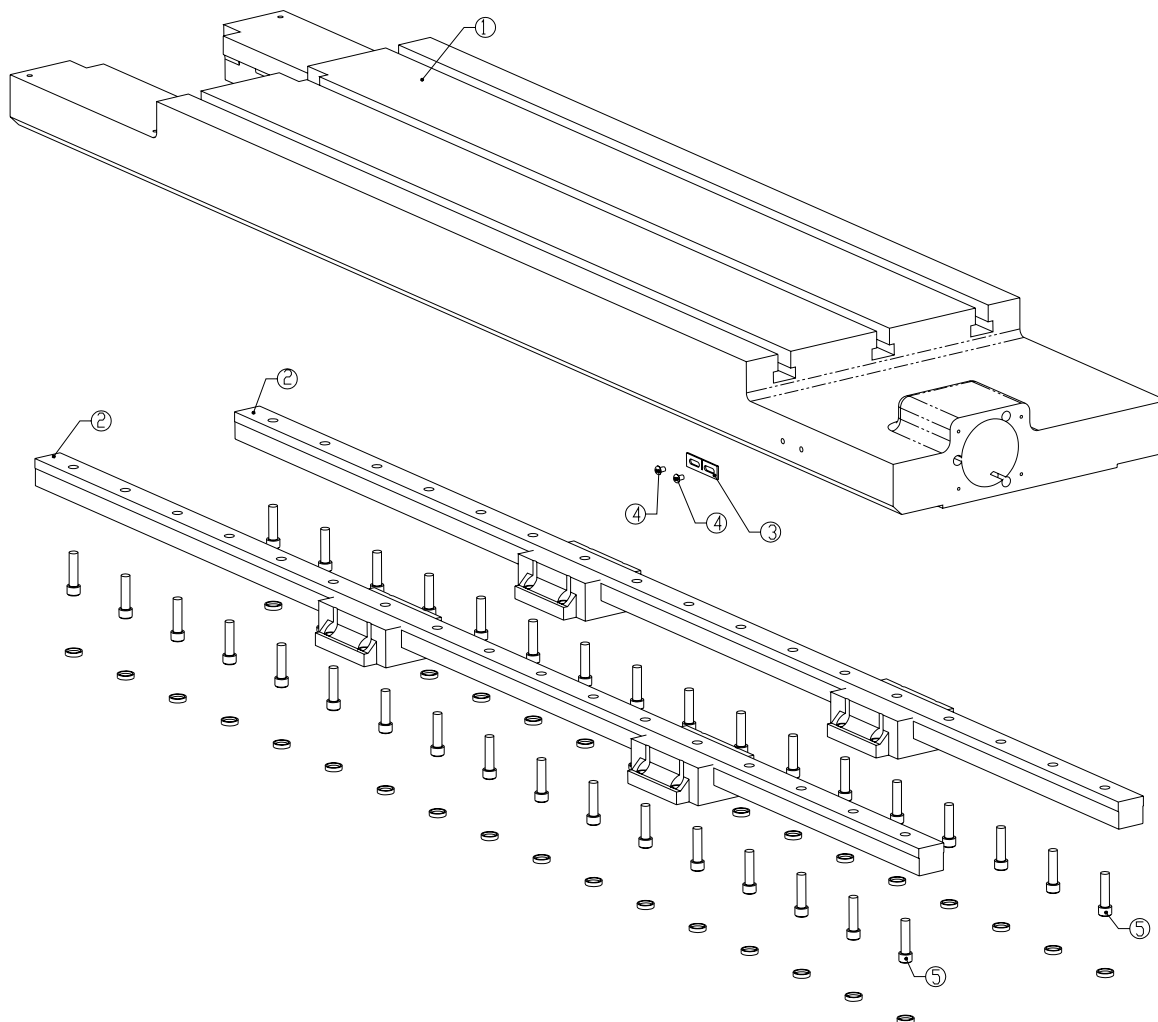
| ITEM NO. | QTY. | PART NO.         | DESCRIPTION                      |
|----------|------|------------------|----------------------------------|
| 1        | 1    | COL-0050         | Column Machined LP TRM           |
| 2        | 4    | HDW-0769         | Screw Set Halfdog 1/2-20 x 1.00  |
| 3        | 2    | BRG-0173         | Linear Rail Y Axis, Z Axis, TRM  |
|          | 1    | 1605-703-31,1356 | Y-Z Axis Linear Guide TRM        |
|          | 2    | 1651-723-20      | Truck Linear Rail TRM            |
|          | 22   | 1605-300-80      | Plugs Rail Socket Cap            |
| 4        | 22   | HDW-0291         | Screw Socap 5/16-18 x 1 1/4      |
| 5        | 4    | PLM-0245         | Ftting Hdrlic Grs M6x1 Mle 45deg |

# SADDLE / TABLE / BALLSCREW



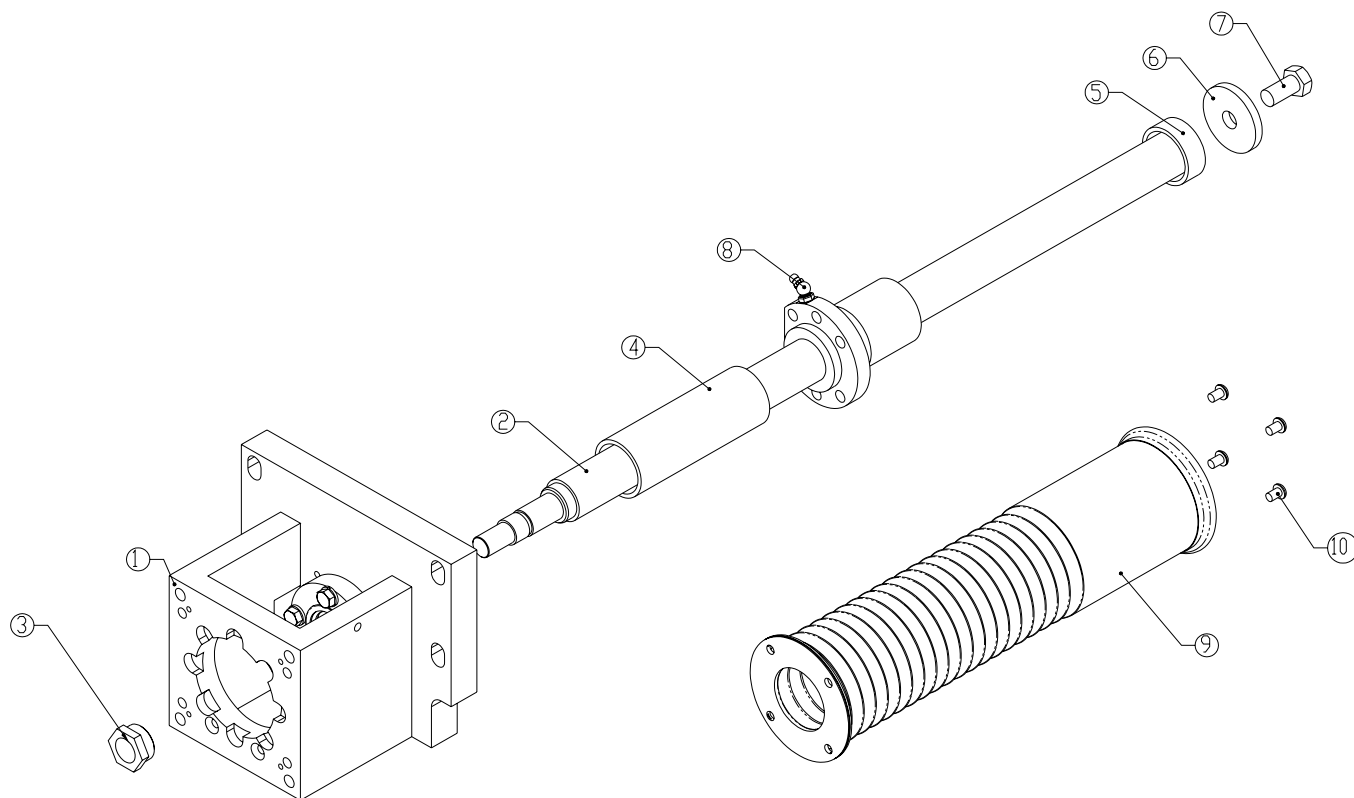
| ITEM NO. | QTY. | PART NO.                                | DESCRIPTION                |
|----------|------|-----------------------------------------|----------------------------|
| 1        | 1    | SDL_0088 Saddle BallNut Assy            |                            |
| 2        | 1    | BLS_0376 Ballscrew Assy X Axis          |                            |
| 3        | 16   | Hdw_1321 SHCS M10 1.5x65mm              |                            |
| 4        | 6    | Hdw_0291 screw socap .3125-18x1 .25     | Alloy Steel Black Finish   |
| 5        | 6    | Hdw_0281 washer lock .3125              |                            |
| 6        | 4    | Hdw_0426 Set Screw 10-32x.250           |                            |
| 7        | 1    | TBL_0049 TABLE ASSEMBLY TRM             |                            |
| 8        | 3    | HDW-0779                                | SECREW, SOCAP .375 16X1.25 |
| 9        | 1    | STM_1696 FRONT COVER SADDLE TRM         |                            |
| 10       | 8    | Hdw_0349 screw button socap 10 .32x.375 | 18-8 Stainless Steel       |

# TABLE ASSEMBLY



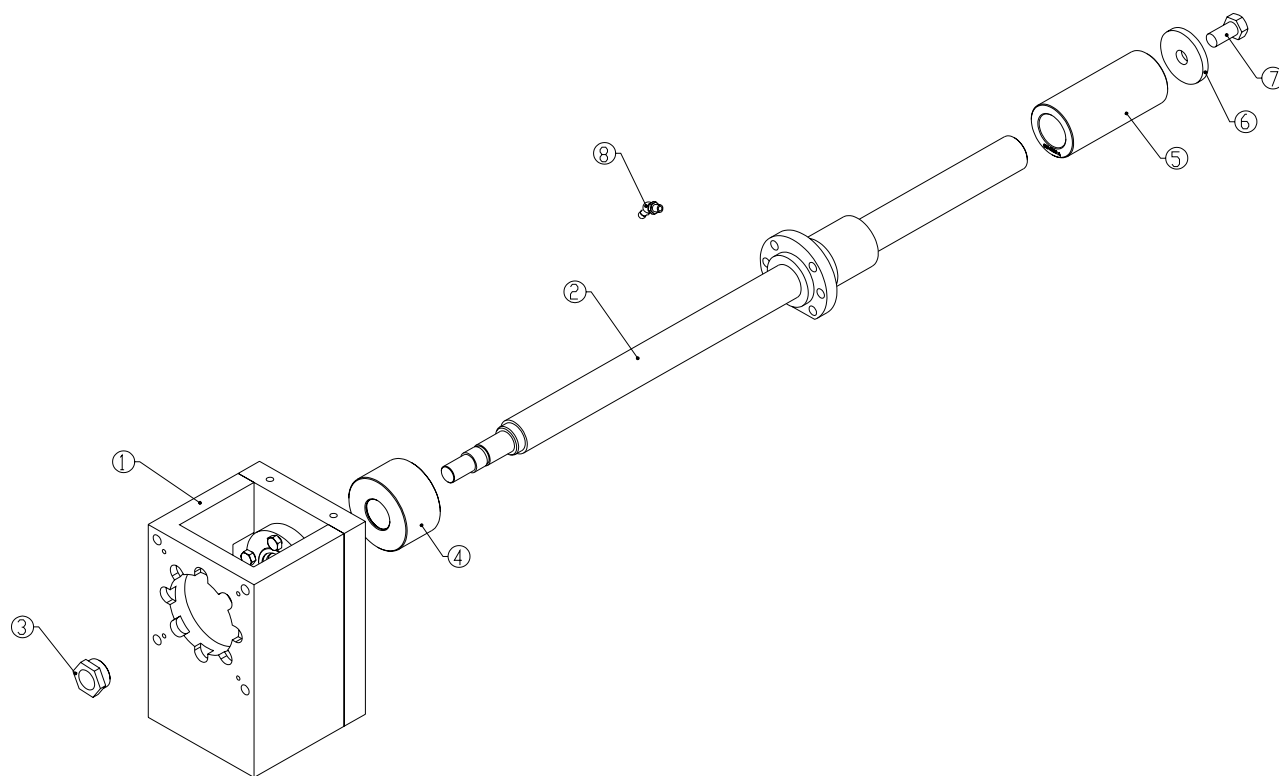
| ITEM NO. | QTY. | PART NO. | DESCRIPTION                  |
|----------|------|----------|------------------------------|
| 1        | 1    | TBL-0048 | TABLE MACHINED, TRM          |
| 2        | 2    | BRG0174  | LINEAR GUIDE, X AXIS, TRM    |
| 3        | 1    | STM0593  | COLD START BRACKET X AXIS    |
| 4        | 2    | HDW0352  | SCREW BUTTON HEAD 8-32 x 1/4 |
| 5        | 34   | HDW0291  | SCREW SCAP 5/16-18 x 1 1/4   |
|          |      |          |                              |

# Y AXIS BALLSCREW



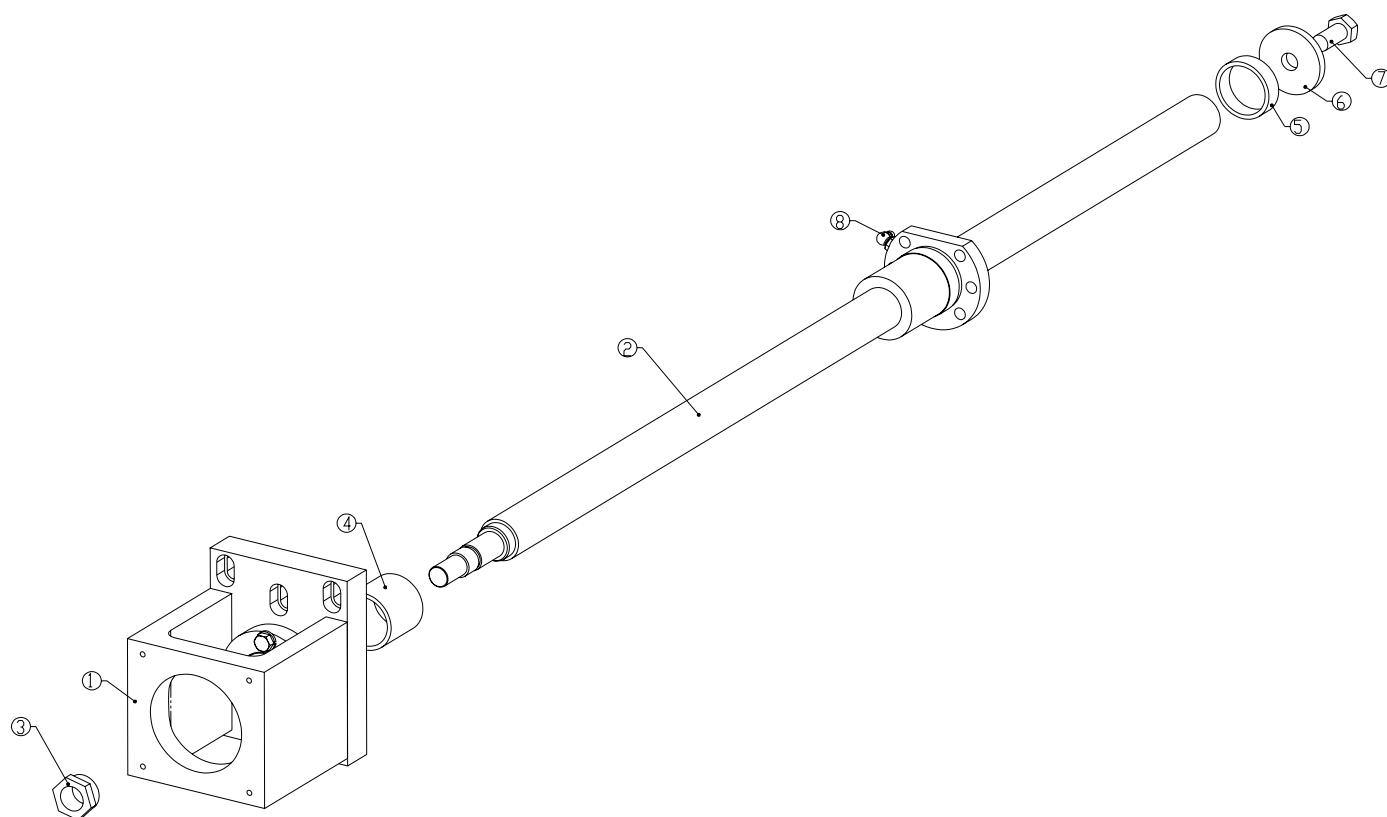
| ITEM NO. | QTY. | PART NO.                                       | DESCRIPTION |
|----------|------|------------------------------------------------|-------------|
| 1        | 1    | BIs-0307 Bearing Mount Y Axis                  |             |
| 2        | 1    | BIs-0346 BallScrew y & z Axis TRM, 32mm x 5mm  |             |
| 3        | 1    | BIs-0047 Retainer BIs Nut 2216 5020a 400mm HMC |             |
| 4        | 1    | BIs-0367 Stop Limit Front Y Axis               |             |
| 5        | 1    | BIs-0383 Stop Limit Rear Y Axis                |             |
| 6        | 1    | Hdw-0859 Washer X Axis IS Adapter 6030         |             |
| 7        | 1    | Hdw-1196 Screw Hexcap G8 1/2-13 UNC x 1        |             |
| 8        | 1    | Plm-0245 Fttng Hdrlc grs m 6x1 mle 45deg.      |             |
| 9        | 1    | Cvr-0183 Cover Bellows Y Axis BallScrew        |             |
| 10       | 4    | Hdw-0347 Screw Button Socap 1/4-20 x 3/8       |             |

# Z AXIS BALLSCREW



| ITEM NO. | QTY. | PART NO.                                       |
|----------|------|------------------------------------------------|
| 1        | 1    | Bls-0009 Bearing Mount Z Axis                  |
| 2        | 1    | Bls-0346 BallScrew y & z Axis TRM, 32mm x 5mm  |
| 3        | 1    | Bls-0047 Retainer BIs Nut 2216 5020a 400mm HMC |
| 4        | 1    | Bls-0326 Stop Limit Upper Z Axis EMC           |
| 5        | 1    | Bls-0323 Stop Limit Lower Z Axis EMC           |
| 6        | 1    | Hdw-0859 Washer X Axis IS Adapter 6030         |
| 7        | 1    | Hdw-1196 Screw Hexcap G8 1/2-13 UNC x 1        |
| 8        | 1    | P1m-0245 Fitting Hdrlic grs m 6x1 mle 45deg.   |

# X AXIS BALLSCREW



| ITEM NO. | QTY. | PART NO.                                       | DESCRIPTION |
|----------|------|------------------------------------------------|-------------|
| 1        | 1    | Bls-0370 Bearing Mount X Axis Trm              |             |
| 2        | 1    | Bls-0345 BallScrew X Axis TRM                  |             |
| 3        | 1    | Bls-0047 Retainer Bls Nut 2216 5020a 400mm HMC |             |
| 4        | 1    | Bls-0380 Stop Limit Left X Axis                |             |
| 5        | 1    | Bls-0381 Stop Limit Right X Axis               |             |
| 6        | 1    | Hdw-0859 Washer X Axis LS Adapter 6030         |             |
| 7        | 1    | Hdw-1196 Screw Hexcap G8 1/2-13 UNC x 1, L.H.  |             |
| 8        | 1    | Plm-0312 Fitting Hdric grs m6x1 r1e 90deg.     |             |