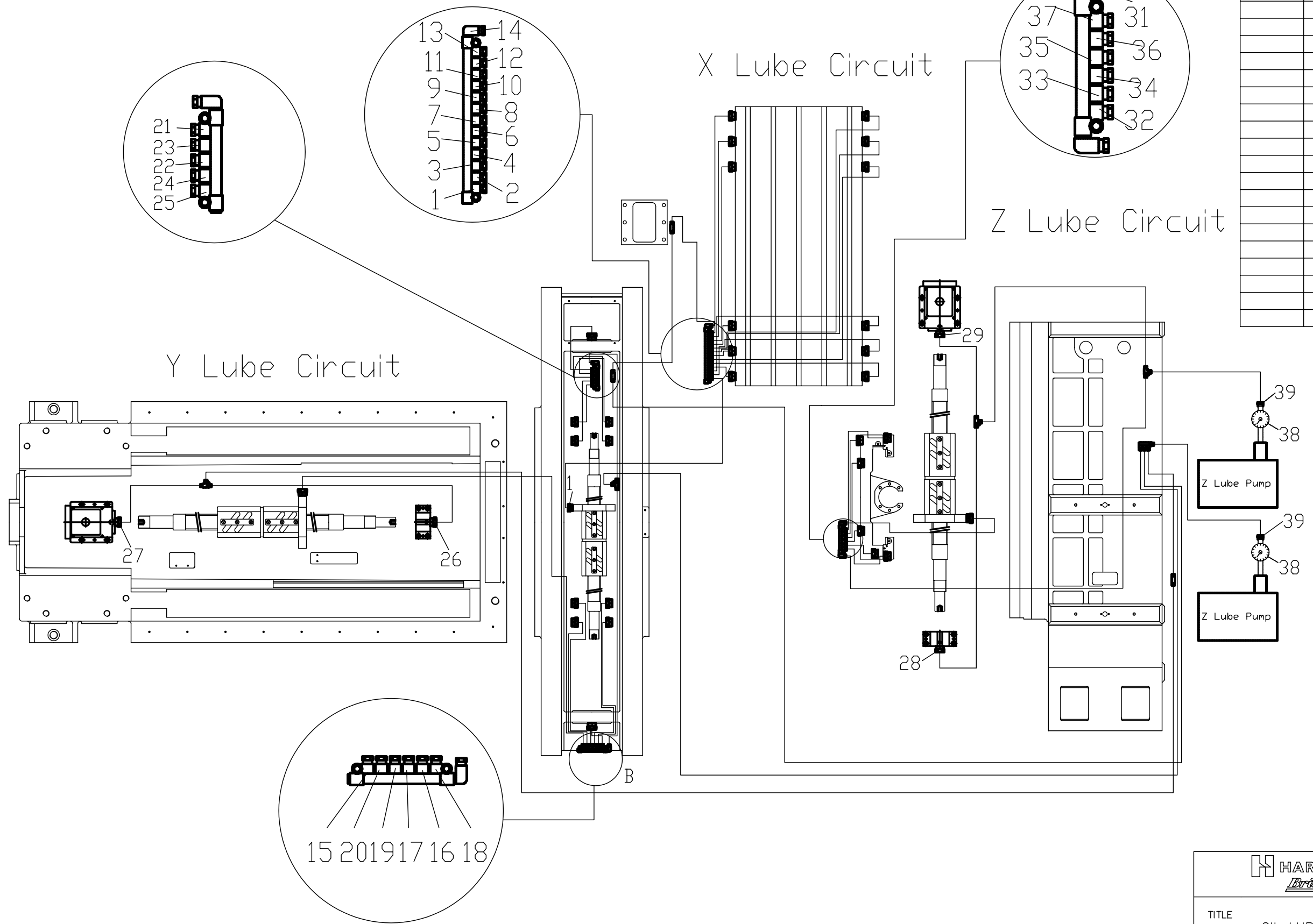


VMC1000BP3


Mechanical Parts Manual

Arrangement Drawing Contents

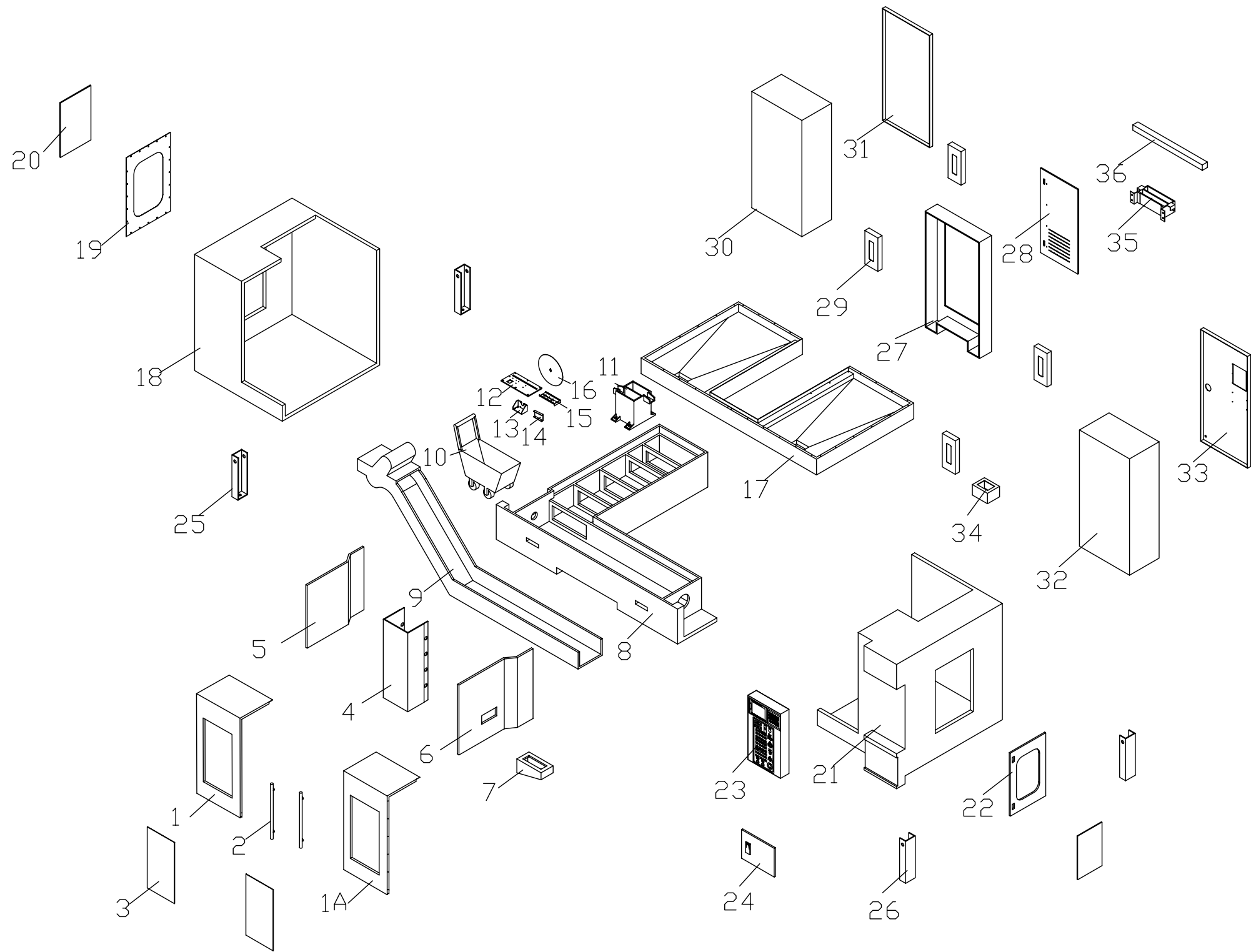
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|--------------|------------------------|
| H1000R0011 | Oil Lubrication |
| H1000R0022 | Perimeter Guards |
| H1000R0022-2 | Perimeter Guards |
| H1000R0061 | Air Control Unit |
| H1000R0071 | Coolant Tank |
| H1000R0081 | X Axis Assembly |
| H1000R0082 | Y Axis & Base Assembly |
| H1000R0083 | Z Axis Assembly |
| H1000R0084 | 20 Position ATC |
| H1000R0091-1 | Pneumatic Diagram |



| UPDATE LIST | | |
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| Date | Part # | Serial # |
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 TITLE OIL LUBRICATION
 DRG No H1000R0011 ISSUE No. 1

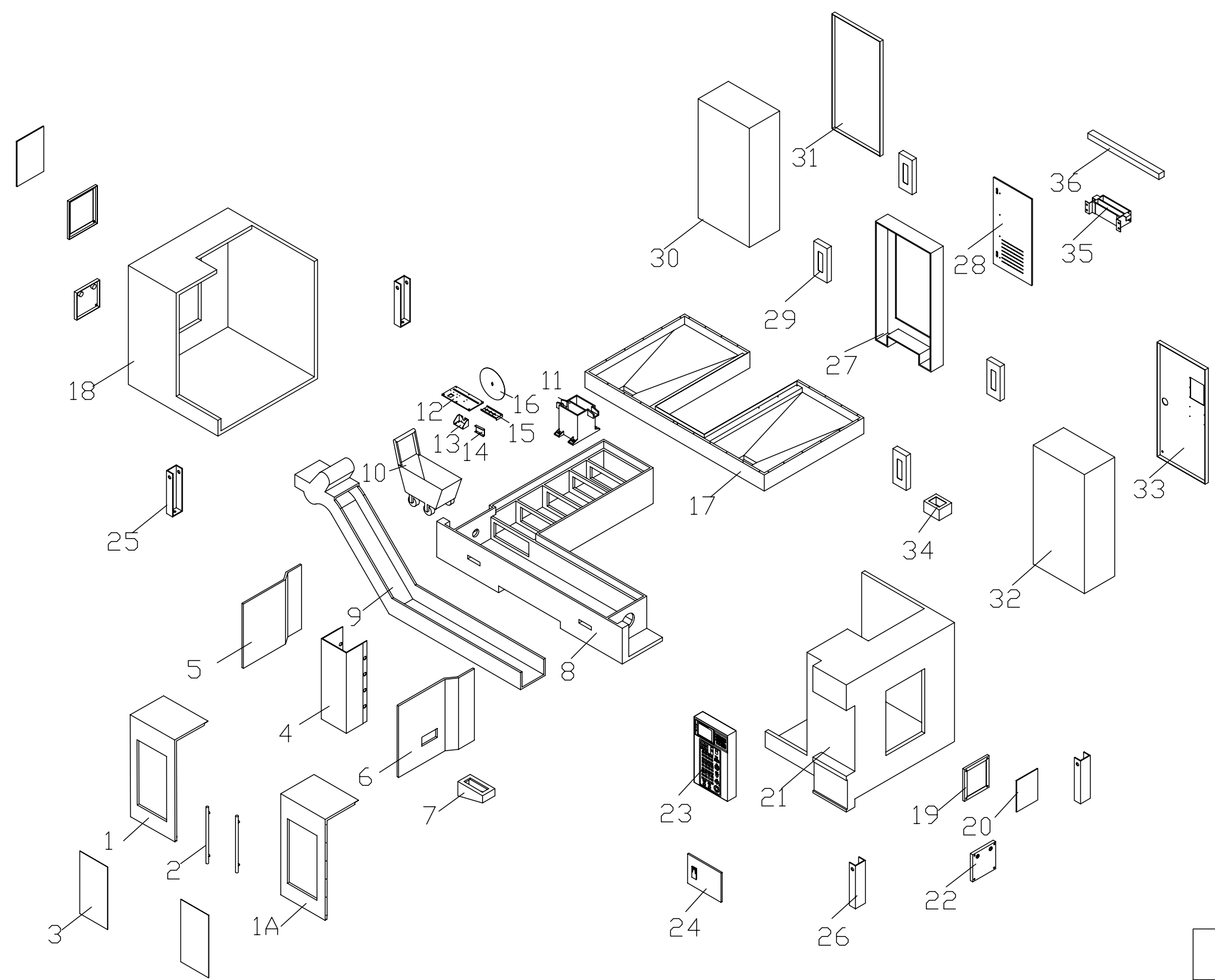
| Dwg ID | Part No. | Description | Qty. |
|--------|--------------|--------------------------------------|------|
| 1 | MFE 5017-T4P | Lubrication Unit | 2 |
| 2 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 3 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 4 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 5 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 6 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 7 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 8 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 9 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 10 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 11 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 12 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 13 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 14 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 15 | MV-5 | Metering Valve # 5 Y Ballscrew | 1 |
| 16 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 17 | MV-2 | Metering Valve # 2 X Slideway | 1 |
| 18 | MV-1 | Metering Valve # 1 X Keeper Slideway | 1 |
| 19 | MV-2 | Metering Valve # 2 Y Slideway | 1 |
| 20 | MV-2 | Metering Valve # 2 Y Slideway | 1 |
| 21 | MV-2 | Metering Valve # 2 Y Slideway | 1 |
| 22 | MV-2 | Metering Valve # 2 Y Slideway | 1 |
| 23 | MV-2 | Metering Valve # 2 Y Slideway | 1 |
| 24 | MV-1 | Metering Valve # 1 X Keeper Slideway | 1 |
| 25 | MV-2 | Metering Valve # 2 Y Slideway | 1 |
| 26 | MV-2 | Metering Valve # 2 Y End Bearing | 1 |
| 27 | MV-2 | Metering Valve # 2 Y End Bearing | 1 |



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| TITLE PERIMETER GUARDS | |
| DRG No H1000R0022 | ISSUE No. 1 |

| Dwg ID | Part No. | Description | Qty. |
|--------|--------------|--------------------------------------|------|
| 1 | sml-1000-01A | Door Front Left | 1 |
| 1A | sml-1000-02A | Door Front Right | 1 |
| 2 | sml-1000-03A | Door Handles | 2 |
| 3 | sml-1000-04A | Polycarbonate Front Window 930x505x6 | 2 |
| 4 | sml-1000-05A | Z Cover Front | 1 |
| 5 | sml-1000-06A | Z Cover Left | 1 |
| 6 | sml-1000-07A | Z Cover Right | 1 |
| 7 | sml-1000-08A | Electrical Track Junction Box | 1 |
| 8 | sml-1000-09A | Coolant Tank | 1 |
| 9 | sml-1000-10A | Swarf Conveyor | 1 |
| 10 | sml-1000-11A | Swarf Cart | 1 |
| 11 | sml-1000-12A | Oil Seperator Unit | 1 |
| 12 | sml-1000-13A | Mounting Plate | 1 |
| 13 | sml-1000-14A | Motor Mount | 1 |
| 14 | sml-1000-15A | Drip Trough | 1 |
| 15 | sml-1000-16A | Skimmer Plate | 1 |
| 16 | sml-1000-17A | Skimmer Wheel | 1 |
| 17 | sml-1000-18A | Base Tray | 1 |
| 18 | sml-1000-19A | Left Side Fixed Guard | 1 |
| 19 | sml-1000-20A | Left Side Fixed Door | 1 |
| 20 | sml-1000-21A | Side Guard Window 765x390x8 | 2 |
| 21 | sml-1000-22A | Right Side Fixed Guard | 1 |
| 22 | sml-1000-23A | Right Side Fixed Door | 1 |
| 23 | sml-1000-24A | Operation Panel Box | 1 |
| 24 | sml-1000-25A | Storage door | 1 |
| 25 | sml-1000-26A | Left Side Guard Support | 2 |
| 26 | sml-1000-27A | Right Side Guard Support | 2 |
| 27 | sml-1000-28A | Rear Guard | 1 |
| 28 | sml-1000-29A | Rear Access Door | 1 |
| 29 | sml-1000-30A | Electrical Cabinet Brackets | 4 |
| 30 | sml-1000-31A | Left Side Cabinet | 1 |
| 31 | sml-1000-32A | Left Cabinet Door | 1 |
| 32 | sml-1000-33A | Right Side Cabinet | 1 |
| 33 | sml-1000-34A | Right Cabinet Door | 1 |
| 34 | sml-1000-35A | Electrical Track Junction Box (rear) | 1 |
| 35 | sml-1000-36A | Oil / Water Seperator | 1 |
| 36 | sml-1000-37A | CrossBeam | 1 |



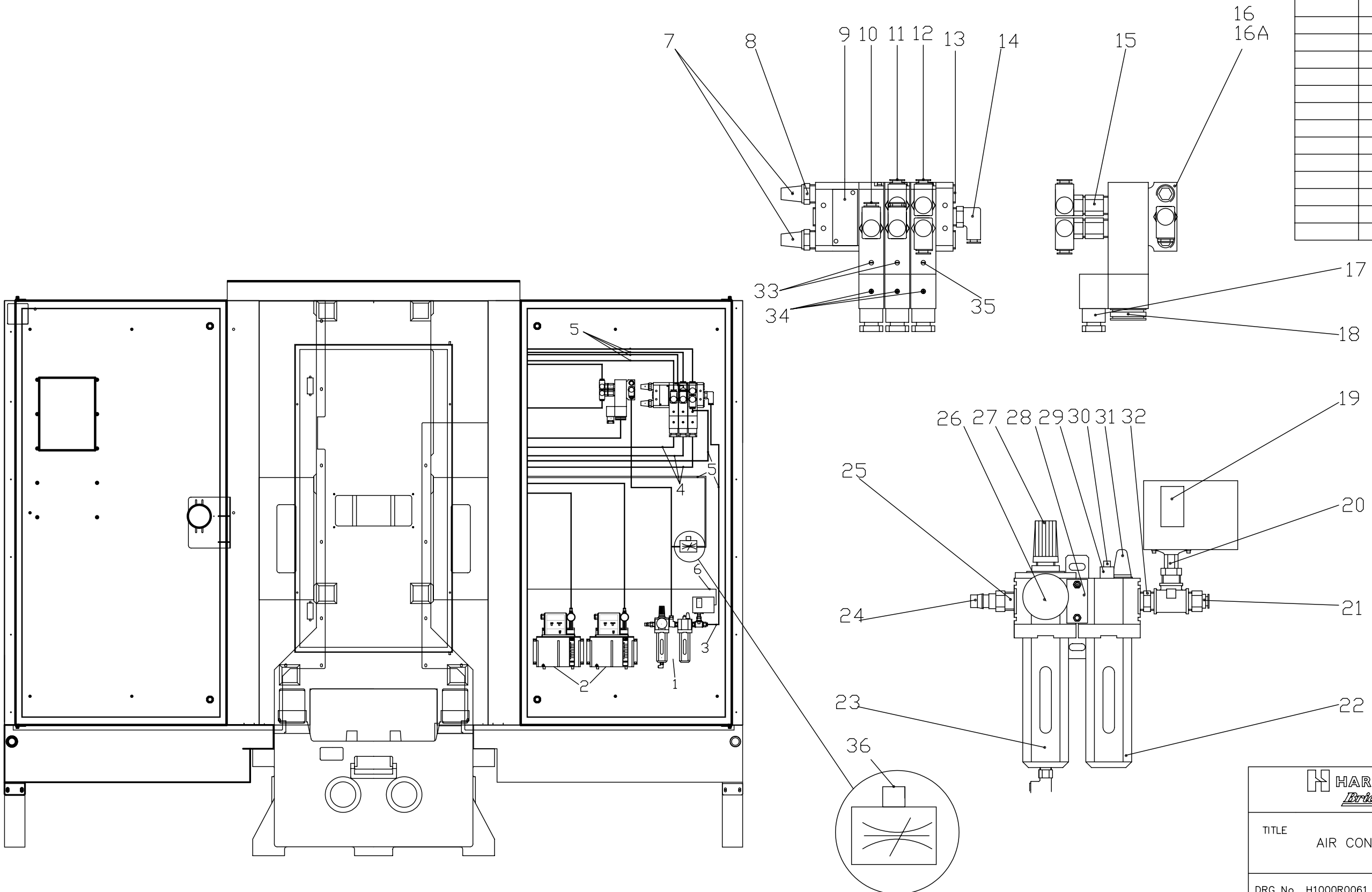
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TITLE
PERIMETER GUARDS

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|---------------------|-------------|
| DRG No H1000R0022-2 | ISSUE No. 1 |
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| Dwg ID | Part No. | Description | Qty. |
|--------|--------------|--------------------------------------|------|
| 1 | sml-1000-01B | Door Front Left | 1 |
| 1A | sml-1000-02B | Door Front Right | 1 |
| 2 | sml-1000-03B | Door Handles | 2 |
| 3 | sml-1000-04B | Polycarbonate Front Window 930x505x8 | 2 |
| 4 | sml-1000-05B | Z Cover Front | 1 |
| 5 | sml-1000-06B | Z Cover Left | 1 |
| 6 | sml-1000-07B | Z Cover Right | 1 |
| 7 | sml-1000-08B | Electrical Track Junction Box | 1 |
| 8 | sml-1000-09B | Coolant Tank | 1 |
| 9 | sml-1000-10B | Swarf Conveyor | 1 |
| 10 | sml-1000-11B | Swarf Cart | 1 |
| 11 | sml-1000-12B | Oil Seperator Unit | 1 |
| 12 | sml-1000-13B | Mounting Plate | 1 |
| 13 | sml-1000-14B | Motor Mount | 1 |
| 14 | sml-1000-15B | Drip Trough | 1 |
| 15 | sml-1000-16B | Skimmer Plate | 1 |
| 16 | sml-1000-17B | Skimmer Wheel | 1 |
| 17 | sml-1000-18B | Base Tray | 1 |
| 18 | sml-1000-19B | Left Side Fixed Guard | 1 |
| 19 | sml-1000-20B | Window Frame | 2 |
| 20 | sml-1000-21B | Side Guard Window 492x362x6 | 2 |
| 21 | sml-1000-22B | Right Side Fixed Guard | 1 |
| 22 | sml-1000-23B | Right Side Fixed Door | 1 |
| 23 | sml-1000-24B | Operation Panel Box | 1 |
| 24 | sml-1000-25B | Storage door | 1 |
| 25 | sml-1000-26B | Left Side Guard Support | 2 |
| 26 | sml-1000-27B | Right Side Guard Support | 2 |
| 27 | sml-1000-28B | Rear Guard | 1 |
| 28 | sml-1000-29B | Rear Access Door | 1 |
| 29 | sml-1000-30B | Electrical Cabinet Brackets | 4 |
| 30 | sml-1000-31B | Left Side Cabinet | 1 |
| 31 | sml-1000-32B | Left Cabinet Door | 1 |
| 32 | sml-1000-33B | Right Side Cabinet | 1 |
| 33 | sml-1000-34B | Right Cabinet Door | 1 |
| 34 | sml-1000-35B | Electrical Track Junction Box (rear) | 1 |
| 35 | sml-1000-36B | Oil / Water Seperator | 1 |
| 36 | sml-1000-37B | Cable Duct | 1 |

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| TITLE AIR CONTROL UNIT | |
| DRG No. H1000R0061 | ISSUE No. 2 |

VMC1000BP3 Air Control

Drawing No. H1000R0061

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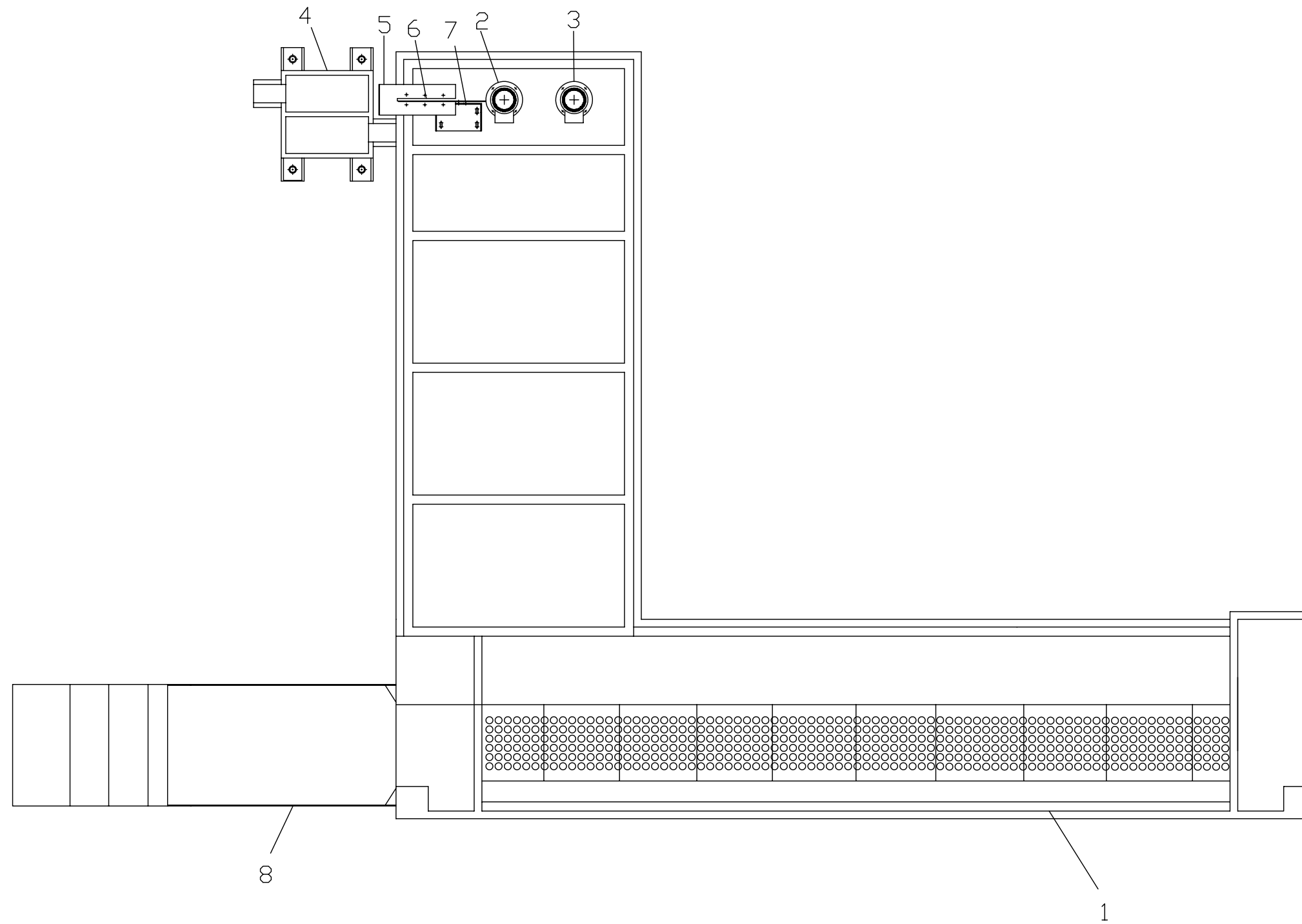
| Dwg ID | Part No. | Description | Qty. |
|--------|----------|----------------------------|------|
| 1 | M028-1 | Air Filter / Oiler Unit | 1 |
| 2 | M028-2 | Oil Lube Pumps | 2 |
| 3 | M028-3 | 10mm Air Line | 1 |
| 4 | M028-4 | 2 Core Control Cable | 4 |
| 5 | M028-5 | 10mm Air Line | 7 |
| 6 | M028-6 | 2 Core Control Cable | 1 |
| 7 | M028-7 | Exhaust Silencers | 2 |
| 8 | M028-8 | M12 Set Screw | 1 |
| 9 | BN-220-0 | Blanking Plate | 1 |
| 10 | M028-10 | 8mm Elbow (Flow Valve) | 1 |
| 11 | M028-11 | 10mm Elbow | 2 |
| 12 | M028-12 | 8mm Elbow (Flow Valve) | 2 |
| 13 | M028-13 | M12 Set Screw | 2 |
| 14 | M028-14 | 10mm Elbow | 1 |
| 15 | M028-15 | M12 Straight Connector | 2 |
| 16 | M028-16 | 4 Valve Manifold Block | 1 |
| 16A | M028-16A | 3 Valve Manifold Block | 1 |
| 17 | M028-17 | Gland | 1 |
| 18 | M028-18 | End Cap | 1 |
| 19 | M028-19 | Pressure Switch DWK4B05999 | 1 |

VMC1000BP3 Air Control

Drawing No. H1000R0061

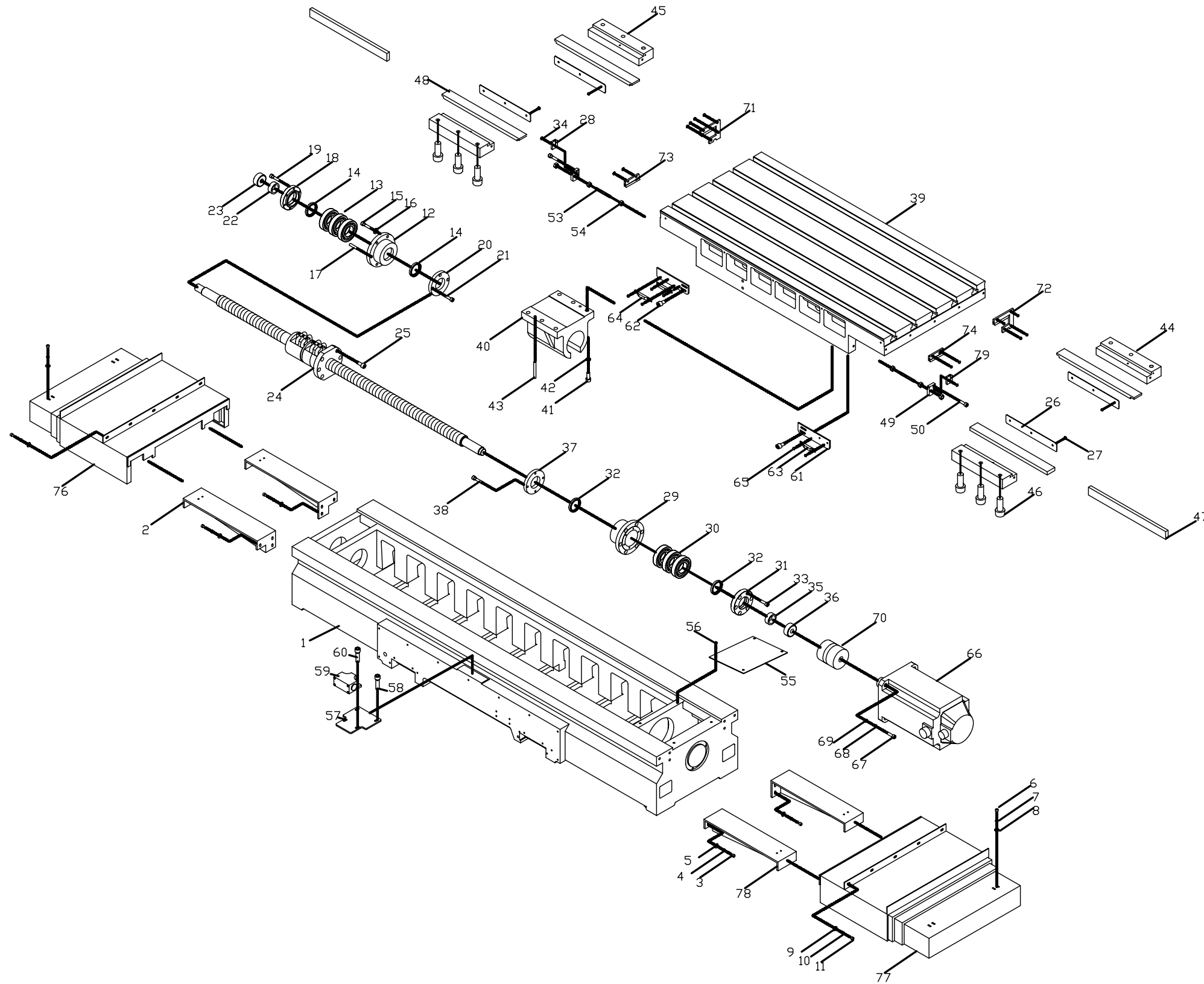
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| Dwg ID | Part No. | Description | Qty. |
|--------|----------|--------------------------------------|------|
| 20 | M028-20 | Brass Reducer | 1 |
| 21 | M028-21 | 10mm Straight Connector | 1 |
| 22 | M028-22 | Oil Lube Container | 1 |
| 23 | M028-23 | Water Filter | 1 |
| 24 | M028-24 | Hose Barb | 1 |
| 25 | M028-25 | Air Isolator Valve | 1 |
| 26 | M028-26 | Pressure Gauge | 1 |
| 27 | M028-27 | Pressure Adjustment Knob | 1 |
| 28 | M028-28 | Bracket | 1 |
| 29 | M028-29 | Oil Filler Plug | 1 |
| 30 | M028-30 | Oil Flow Adjuster | 1 |
| 31 | M028-31 | Oil Sight | 1 |
| 32 | M028-32 | Brass Connector | 1 |
| 33 | M028-33 | Single Action Solenoid (valves only) | 3 |
| 34 | M028-34 | 24 vdc Coils (coils only) | 3 |
| 35 | M028-35 | Double Action Solenoid Valve | 1 |
| 36 | M028-36 | Spindle Air Purge Control Valve | 1 |




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| TITLE Coolant Tank | |
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| TITLE X Axis Assembly | |
| DRG No H1000R0081 | ISSUE No. 1 |

| Dwg ID | Part No. | Description | Qty. |
|--------|-------------|--|------|
| 1 | H 100R00041 | X Axis Casting | 1 |
| 2 | AK-2604AH | Cover Guide | 2 |
| 3 | 8*6-16 | Cap Screw M6 x 16 | 4 |
| 4 | 8-102003 | M6 Spring Washer | 4 |
| 5 | 8-101001 | M6 Flat Washer | 4 |
| 6 | 8*6-16 | Cap Screw M6X20 | 8 |
| 7 | 8-102003 | M6 Spring Washer | 8 |
| 8 | 8-101001 | M6 Flat Washer | 8 |
| 9 | 8-101001 | M6 Flat Washer | 8 |
| 10 | 8-102003 | M6 Spring Washer | 8 |
| 11 | 8*6-16 | Cap Screw M6 x 16 | 8 |
| 12 | M-850R0141 | Bearing Housing | 1 |
| 13 | C30 | Bearings C30TAC62B | 3 |
| 14 | HO-7D1 | Seal | 2 |
| 15 | 9-12*35 | Cap Screw M12x35 | 6 |
| 16 | 8-102009 | M12 Spring Washer | 6 |
| 17 | #6*50 | Tapered Pin | 2 |
| 18 | M-850R0172 | Bearing Housing Cap | 1 |
| 19 | BNO9A | Cap Screw M8 x 30 | 6 |
| 20 | M-850R0591 | Poly Soft Stop | 1 |
| 21 | 8*6-16 | Cap Screw M6 x 16 | 4 |
| 22 | M-850R0961 | Spacer Ring | 1 |
| 23 | CH320102 | Lock Nut | 1 |
| 24 | M1000R0101 | Ballscrew R40-10B2-FDW-1390-1650-0.008 | 1 |
| 25 | 8-10*35 | Cap Screw M10 x 35 | 6 |
| 26 | H1000S0091 | Retaining Plates | 4 |
| 27 | 8*6-12 | Button Head Screws M6 x 12 | 12 |
| 28 | H1000R0281 | Way Wiper (small left) | 2 |
| 29 | M-850R0141 | Bearing Housing | 1 |
| 30 | C30 | Bearings C30TAC62B | 3 |
| 31 | M-850R0172 | Seal Retainer Plate | 1 |

| Dwg ID | Part No. | Description | Qty. |
|--------|------------|----------------------------|------|
| 32 | HO-7D1 | Seal | 2 |
| 33 | BNO9A | Cap Screw M8 x 30 | 6 |
| 34 | BN04A | Tapered Pin | 2 |
| 35 | M-850R0961 | Spacer Ring | 1 |
| 36 | CH320102 | Lock Nut | 1 |
| 37 | M-850R0591 | Poly Soft Stop | 1 |
| 38 | 8*6-16 | Cap Screw M6 x 16 | 4 |
| 39 | H1000R0051 | Worktable Casting | 1 |
| 40 | L-850R0211 | Ballscrew Mounting Casting | 1 |
| 41 | 9-12*25 | Cap Screw M10 x 25 | 6 |
| 42 | 8-6T | M10 Spring Washer | 6 |
| 43 | #6*50 | Tapered Pin #6 x 50 | 2 |
| 44 | H1000L0141 | Gib Retainer right | 2 |
| 45 | H1000R0141 | Gib Retainer left | 2 |
| 46 | S010M12L35 | Cap Screw M12x35 | 12 |
| 47 | S023000M12 | M12 Spring Washer | 2 |
| 48 | H1000R0171 | Tapered Gib | 4 |
| 49 | H1000S0011 | Gib Retainer Plate right | 2 |
| 50 | S010M10L10 | Cap Screw M10 x 10 | 4 |
| 51 | H1000S0021 | Gib Retainer Plate left | 4 |
| 52 | S010M10L10 | Cap Screw M10 x 10 | 8 |
| 53 | T010M10L60 | M10 Thread x 60mm | 6 |
| 54 | N010M8H | M8 Hex Nuts | 18 |
| 55 | M-850S0071 | Cover Plate | 1 |
| 56 | S003M06L10 | Button Head Screws M6 x 10 | 4 |
| 57 | H1000S0041 | X Axis Limit Switch Mount | 1 |
| 58 | S010M08L10 | Cap Screw M8 x 10 | 4 |
| 59 | SHL-Q2255 | Limit Switch | 1 |
| 60 | S010M06L16 | Cap Screws M6 x 20 | 4 |

VMC1000BP3 X Axis Assembly

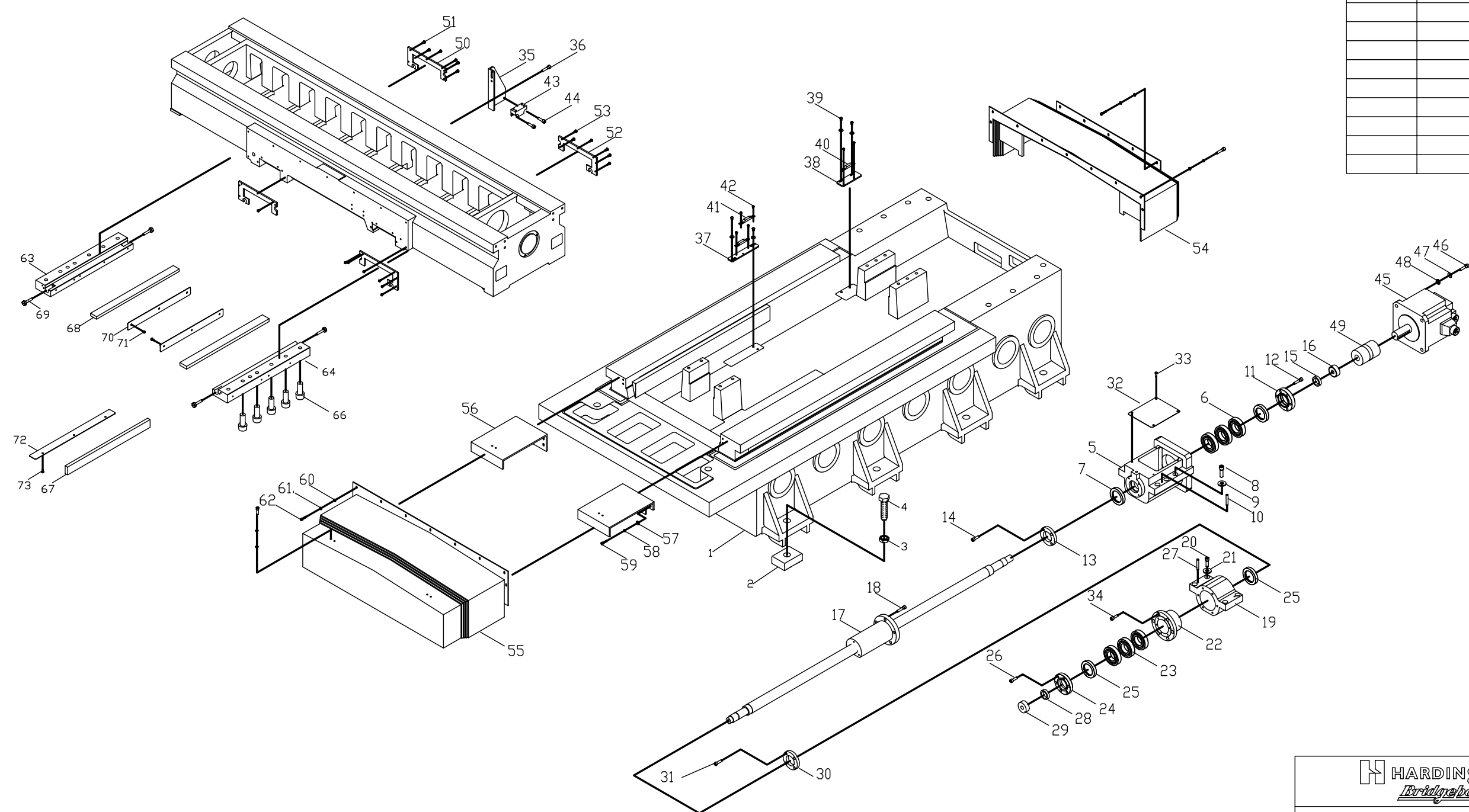
Drawing No. H1000R0081


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| Dwg ID | Part No. | Description | Qty. |
|--------|--------------------|---------------------------|------|
| 61 | H1000S0071 | X Limit Bracket | 2 |
| 62 | 8-6*16 | Cap Screw M6 x 16 | 2 |
| 63 | M-850R0441 | X Positive Limit Striker | 1 |
| 64 | M-850R0442 | X Negative Limit Striker | 1 |
| 65 | 8-5*16 | Button Head Screw M5 x 6 | 1 |
| 66 | 1FK7083-5AF71-1AG3 | X Axis Feed Motor Siemens | 1 |
| 67 | 9-12*35 | Cap Screws M12 x 40 | 4 |
| 68 | 8-6T | M12 Flat Washer | 4 |
| 69 | 8-102009 | M12 Spring Washer | 4 |
| 70 | ADS 150 | Motor Coupling Siemens | 1 |
| 71 | H1000R0261 | Way Wiper Left Rear | 1 |
| 72 | H1000R0271 | Way Wiper Right Rear | 1 |
| 73 | H1000R0281 | Way Wiper Left Front | 1 |
| 74 | H1000R0291 | Way Wiper Right Front | 1 |
| 75 | 8-5*16 | Button Head Screw M6 x 10 | 16 |
| 76 | AK-2604AH | X Axis Way Cover Left | 1 |
| 77 | AK-2604AR | X Axis Way Cover Right | 1 |
| 78 | AK-2604AR | Cover Guide | 2 |
| 79 | H1000R0282 | Way Wiper (small right) | 2 |

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| TITLE Y Axis & Base Assembly | |
| DRG No H1000R0082 | ISSUE No. 1 |

| Dwg ID | Part No. | Description | Qty. |
|--------|-------------|---------------------------------------|------|
| 1 | H1000R0011 | Y Axis Casting | 1 |
| 2 | M-850R0251 | Leveling Pad | 8 |
| 3 | M-1000R0241 | Screw Lock Nut 1.5mm pitch | 8 |
| 4 | M-1000R0231 | Leveling Screw M30 x 100 | 8 |
| 5 | M-850R0084 | Motor Mounting Casting | 1 |
| 6 | C30 | Bearing C30TAC62B | 3 |
| 7 | HO-7D1 | Seal | 2 |
| 8 | 9-12*35 | Cap Screw M12 x 40 | 6 |
| 9 | 8-1002003 | M12 Spring Washer | 6 |
| 10 | #6*50 | Tapered Pin #6 x 50 | 2 |
| 11 | M-850R0161 | Seal Retainer Plate | 1 |
| 12 | 8-8*25 | Cap Screw M8 x 20 | 6 |
| 13 | M-850R0151 | Poly Soft Stop | 1 |
| 14 | 8*6-16 | Cap Screw M6 x 16 | 4 |
| 15 | M-850R0961 | Spacer Ring | 1 |
| 16 | CH320102 | Lock Nut | 1 |
| 17 | H1000R0081 | Ballscrew R40-10B2-FDW-860-1150-0.008 | 1 |
| 18 | 8-10*35 | Cap Screw M10 x 25 | 6 |
| 19 | M-850R0131 | Bearing Housing Casting | 1 |
| 20 | 9-12*35 | Cap Screw M12 x 40 | 4 |
| 21 | 8-102003 | M12 Spring Washer | 4 |
| 22 | M-850R0141 | Bearing Housing | 1 |
| 23 | C30 | Bearing C30TAC62B | 3 |
| 24 | M-850R0172 | Bearing Housing Cap | 1 |
| 25 | HO-7D1 | Seal 42 x 52 x 8 | 2 |
| 26 | 8-8*25 | Cap Screw M6 x 16 | 6 |
| 27 | #6*50 | Tapered Pin # 6 x 50 | 2 |
| 28 | M-850R0962 | Spacer Ring | 1 |
| 29 | CH320102 | Lock Nut | 1 |
| 30 | M-850R0421 | Poly Soft Stop | 1 |
| 31 | 8*6-16 | Cap Screw M6 x 16 | 4 |

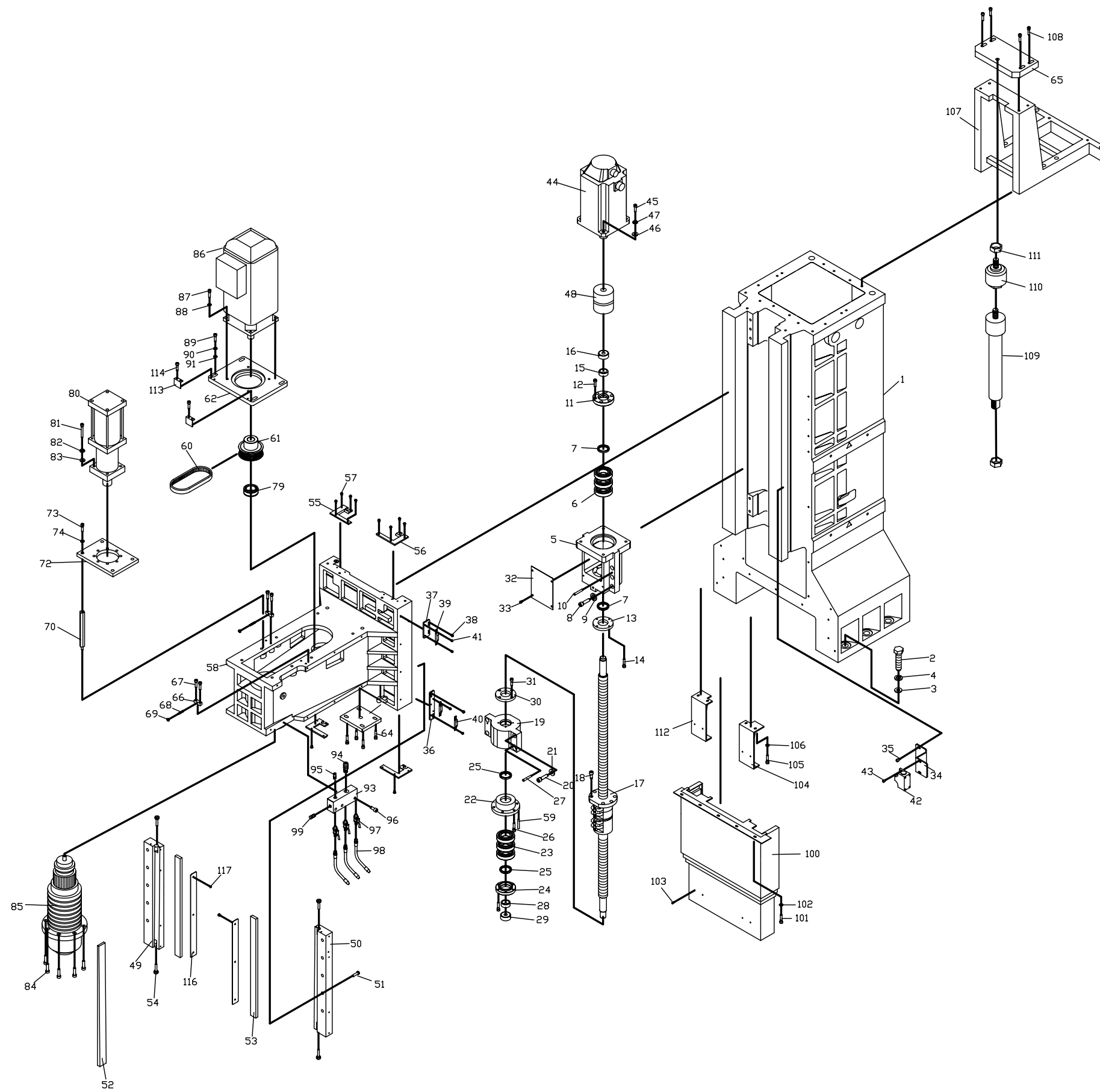
| Dwg ID | Part No. | Description | Qty. |
|--------|--------------------|----------------------------|------|
| 32 | M-850S0071 | Cover Plate | 1 |
| 33 | 8-5*16 | Cap Screw M6 x 10 | 4 |
| 34 | 8-8*20A | Cap Screw M8 x 16 | 6 |
| 35 | H1000S0131 | Y Limit Switch Bracket | 1 |
| 36 | 8-6*20 | Cap screw M6 x 10 | 2 |
| 37 | M-850S0152 | Cap Screw M6X20 | 1 |
| 38 | M-850S0141 | Rear Striker Plate | 1 |
| 39 | 8*6-16 | Cap Screw M6 x 12 | 2 |
| 40 | M-850R0441 | Y Negative Limit Striker | 1 |
| 41 | M-850R0442 | Y Positive Limit Striker | 1 |
| 42 | 8-5*16 | Cap Screw M5 x 10 | 2 |
| 43 | LA-1001 | Limit Switch | 1 |
| 44 | 8-6*25 | Cap Screw M6 x 15 | 2 |
| 45 | 1FK7083-5AF71-1AG3 | Y Axis Feed Motor | 1 |
| 46 | 9-12*35 | Cap Screw M10 x 25 | 4 |
| 47 | 8-6T | Spring Washer | 4 |
| 48 | 8-102003 | M12 Flat Washer | 4 |
| 49 | ADS 150 | Motor Coupling | 1 |
| 50 | H1000R0301 | Way Wiper Rear Left | 2 |
| 51 | 8-5*16 | Button Head Screws M6 x 12 | 10 |
| 52 | H1000R0311 | Way Wiper Rear Right | 2 |
| 53 | 8-5*16 | Button Head Screws M6 x 12 | 10 |
| 54 | AK2602A | Y Slideway Cover Rear | 1 |
| 55 | AK2601A | Y Slideway Cover Front | 1 |
| 56 | AK2601A | Y Slideway Cover Bracket | 2 |
| 57 | 8-101001 | M10 Flat Washer | 10 |
| 58 | 8-102003 | M10 Spring Washer | 10 |
| 59 | 8*6-16 | Cap Screw M10 x 15 | 10 |
| 60 | 8-101001 | M6 Flat Washer | 18 |

VMC1000BP3 Y Axis Assembly

Drawing No. H1000R0082

Aug-06

| Dwg ID | Part No. | Description | Qty. |
|--------|------------|----------------------------|------|
| 61 | 8-102003 | M6 Flat Washer | 18 |
| 62 | 8*6-16 | Cap Screw M6 x 16 | 18 |
| 63 | H1000R0181 | Y Axis Keeper Plate Left | 1 |
| 64 | H1000R0191 | Y Axis Keeper Plate Right | 1 |
| 65 | N/A | M8 Spring Washer | 4 |
| 66 | 9-12*45 | Cap Screw M20 x 20 | 10 |
| 67 | H1000R0201 | Jib Vertical Right | 1 |
| 68 | H1000R0211 | Jib Horizontal Left | 1 |
| 69 | M-850R0301 | M8 Gib Screw | 2 |
| 70 | H1000S0101 | Retainer Plates | 2 |
| 71 | 8BH5*10 | Button Head Screws M5 x 16 | 6 |
| 72 | H1000S0121 | Retainer Plate | 1 |
| 73 | 8BH5*10 | Button Head Screws M5 x 16 | 3 |



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| HARDINGE <i>Bridgeport</i> | |
| TITLE Z Axis Assembly | |
| DRG No H1000R0083 | ISSUE No. 1 |

VMC1000BP3 Z Axis Assembly

Drawing No. H1000R0083

Aug-06

| Dwg ID | Part No. | Description | Qty. |
|--------|-------------|---------------------------------------|------|
| 1 | H 1000R0011 | Z Axis Column Casting | 1 |
| 2 | 8-24*90 | Hex Screw M24 x 90 | 6 |
| 3 | 8-1014 | M24 Flat Washer | 6 |
| 4 | 9-M24 | M24 Spring Washer | 6 |
| 5 | M-850R0084 | Motor Mounting Casting | 1 |
| 6 | C30 | Bearings C30TAC62B | 3 |
| 7 | HO-7D1 | Seal | 2 |
| 8 | 9-12*35 | Cap Screw M12 x 40 | 6 |
| 9 | 8-102009 | M12 Spring Washer | 6 |
| 10 | #6*50 | Tapered Pin #6 x 50 | 2 |
| 11 | M-850R0161 | Seal Retainer Plate | 1 |
| 12 | 8-8*25 | Cap Screw M8 x 20 | 6 |
| 13 | M-850R0151 | Poly Soft Stop | 1 |
| 14 | 8*6-16 | Cap Screw M6 x 16 | 4 |
| 15 | M-850R0961 | Spacer Ring | 1 |
| 16 | CH320102 | Lock Nut | 1 |
| 17 | M1000R0082 | Ballscrew R40-10B2-FDW-860-1150-0.008 | 1 |
| 18 | 8-10*35 | Cap Screw M10 x 25 | 6 |
| 19 | M-850R0131 | Bearing Housing Casting | 1 |
| 20 | 9-12*35 | Cap Screw M12 x 40 | 4 |
| 21 | 8-102009 | M12 Spring Washer | 4 |
| 22 | M-850R0141 | Bearing Housing | 1 |
| 23 | C30 | Bearing C30TAC62B | 3 |
| 24 | M-850R0172 | Bearing Housing Cap | 1 |
| 25 | HO-7D1 | Seal 42 x 52 x 8 | 2 |
| 26 | 8-8*25 | Cap Screw M6 x 16 | 6 |
| 27 | #6*50 | Tapered Pin # 6 x 50 | 2 |
| 28 | M-850R0961 | Spacer Ring | 1 |
| 29 | CH320102 | Lock Nut | 1 |
| 30 | M-850R0421 | Poly Soft Stop | 1 |
| 31 | 8*6-16 | Cap Screw M6 x 16 | 4 |

| Dwg ID | Part No. | Description | Qty. |
|--------|--------------------|---------------------------|------|
| 32 | M-850S0071 | Cover Plate | 1 |
| 33 | 8-5*16 | Button Head Screw M6 x 10 | 4 |
| 34 | H1000S0051 | Switch Mounting Plate | 1 |
| 35 | 8-6*20 | Cap Screw M6 x 20 | 2 |
| 36 | M1000S2051 | Lower Striker Bracket | 1 |
| 37 | H1000S0081 | Upper Striker Bracket | 1 |
| 38 | 8*6-16 | Button Head Screw M6 x 16 | 4 |
| 39 | M-850R0441 | Upper Limit Striker | 1 |
| 40 | M-850R0442 | Lower Limit Striker | 2 |
| 41 | 8-5*16 | Button Head Screw M6 x 10 | 2 |
| 42 | LA-1001 | Limit Switch | 1 |
| 43 | 8-6*25 | Cap Screw M6 x 12 | 2 |
| 44 | 1FK7083-5AF71-1AH3 | Z Axis Feed Motor Siemens | 1 |
| 45 | 9-12*35 | Cap Screw M12 x 40 | 4 |
| 46 | 8-6T | Flat Washer M12 | 4 |
| 47 | 8-102009 | Spring Washer M12 | 4 |
| 48 | ADS150 | Motor Coupling | 1 |
| 49 | H1000R0211 | Keeper Plate Left | 1 |
| 50 | M-850R0181 | Keeper Plate Right | 1 |
| 51 | 9-12*45 | Cap Screw M 12 x 60 | 10 |
| 52 | H1000R0241 | Gib Left Side | 1 |
| 53 | H1000R0251 | Gib Right Side | 2 |
| 54 | M-850R0301 | Gib Adjusting Screw | 4 |
| 55 | H1000R0321 | Way Wiper Upper Left | 2 |
| 56 | H1000R0331 | Way Wiper Upper Right | 2 |
| 57 | 8-5*16 | Button Head Screw M6 x 12 | 16 |
| 58 | H1000R0031 | Z Axis Casting | 1 |
| 59 | #6*50 | Taper Pin #6 x 50 | 2 |
| 60 | 5GTx935x30 | Spindle Pully Belt | 1 |

| Dwg ID | Part No. | Description | Qty. |
|--------|--------------|------------------------------------|------|
| 61 | M-850R0705 | Spindle Pulley | 1 |
| 62 | H1000R0341 | Spindle Mounting Plate | 1 |
| 63 | H1000R0351 | Steel Plate | 1 |
| 64 | 8-10*25 | Cap Screw M6 x 25 | 4 |
| 65 | H1000R0371 | Balance Cylinder Plate | 1 |
| 66 | M1000R0451 | Tension Block | 2 |
| 67 | 8-1005006 | Cap Screws M8 x 16 | 4 |
| 68 | 9-8*40 | Set Screw M8 x 40 | 2 |
| 69 | 8-104101 | Hex Nut M8 | |
| 70 | H1000R1141 | Stand Off | 4 |
| 71 | N/A | N / A | 1 |
| 72 | M-850R0352 | Mounting Plate | 1 |
| 73 | 8-10*25 | Cap Screw M8 x 25 | 4 |
| 74 | 8-M10 | Spring Washer M8 | 4 |
| 75 | M-850R0461 | Spring | 4 |
| 76 | S010M12L40 | Cap Screw M12 x 40 | 4 |
| 77 | S021000M12 | Spring Washer M12 | 4 |
| 78 | M-850R0471 | Flat Washer Special M8 | 4 |
| 79 | TLK300 38*44 | Spring Stand Off | 2 |
| 80 | M00072 | Drawbar Assembly | 1 |
| 81 | 8-10*35 | Cap Screw M10 x 35 | 4 |
| 82 | 8-M10 | Spring Washer M10 | 4 |
| 83 | 8-101005 | Flat Washer M10 | 4 |
| 84 | 8-10*40 | Cap Screws M10 x 40 | 8 |
| 85 | V10 D | Spintech BT 40 8,000 rpm Spindle | 1 |
| 85 A | CF-30001 | Spintech BT 40 10,000 rpm Spindle | 1 |
| 85 B | CF-3E | Spintech BT 40 12,000 rpm Spindle | 1 |
| 85 C | CC09A | Spintech ISO 40 8,000 rpm Spindle | 1 |
| 85 D | CF-3C | Spintech ISO 40 10,000 rpm Spindle | 1 |
| 85 E | CF-3G | Spintech ISO 40 12,000 rpm Spindle | 1 |

| Dwg ID | Part No. | Description | Qty. |
|--------|--------------------|------------------------------------|------|
| 85 F | CF-30014 | Spintech CAT 40 8,000 rpm Spindle | 1 |
| 85 G | CF-30004 | Spintech CAT 40 10,000 rpm Spindle | 1 |
| 85 H | CF-3K | Spintech CAT 40 12,000 rpm Spindle | 1 |
| 85 I | CF-30017 | Spintech DIN 40 8,000 rpm Spindle | 1 |
| 85 J | CF-30018 | Spintech DIN 40 10,000 rpm Spindle | 1 |
| 85 K | CF-3Q | Spintech DIN 40 12,000 rpm Spindle | 1 |
| 86 | 1PH7107-2NF02-0LJ0 | Spindle Motor Siemens | 1 |
| 87 | 8-10*40 | Cap Screws M12 x 35 | 4 |
| 88 | M10 | Spring Washer M12 | 4 |
| 89 | 9-12*40 | Cap Screw M12 x 40 | 4 |
| 90 | 8-102009 | Spring Washer M12 | 4 |
| 91 | 8-6T | Spring Washer M12 | 4 |
| 92 | N/A | N/A | N/A |
| 93 | M-850R0361 | Aluminium Air / Water Manfold | 1 |
| 94 | YX-A0001 | Tail Piece | 4 |
| 95 | 3/8PP | Air Fitting | 1 |
| 96 | 8-6*35 | Cap Screw M6 x 35 | 1 |
| 97 | YW001001 | Valve | 1 |
| 98 | HJ-3001 | Snap Lock Outlets | 2 |
| 99 | 9-12*16 | Plug M12 x 12 | 3 |
| 100 | AK2603A | Slideway Cover | 3 |
| 101 | 8*6-16 | Cap Screw M6 x 16 | 1 |
| 102 | 8-102003 | Flat Washer M6 | 1 |
| 103 | 8-100405 | Countersunk Screw M6 | 5 |
| 104 | AK2603A | Z Slideway Cover Bracket Right | 5 |
| 105 | 8*6-16 | Cap Screw M6 x 20 | 2 |
| 106 | 8-102003 | Flat Washer M6 | 1 |

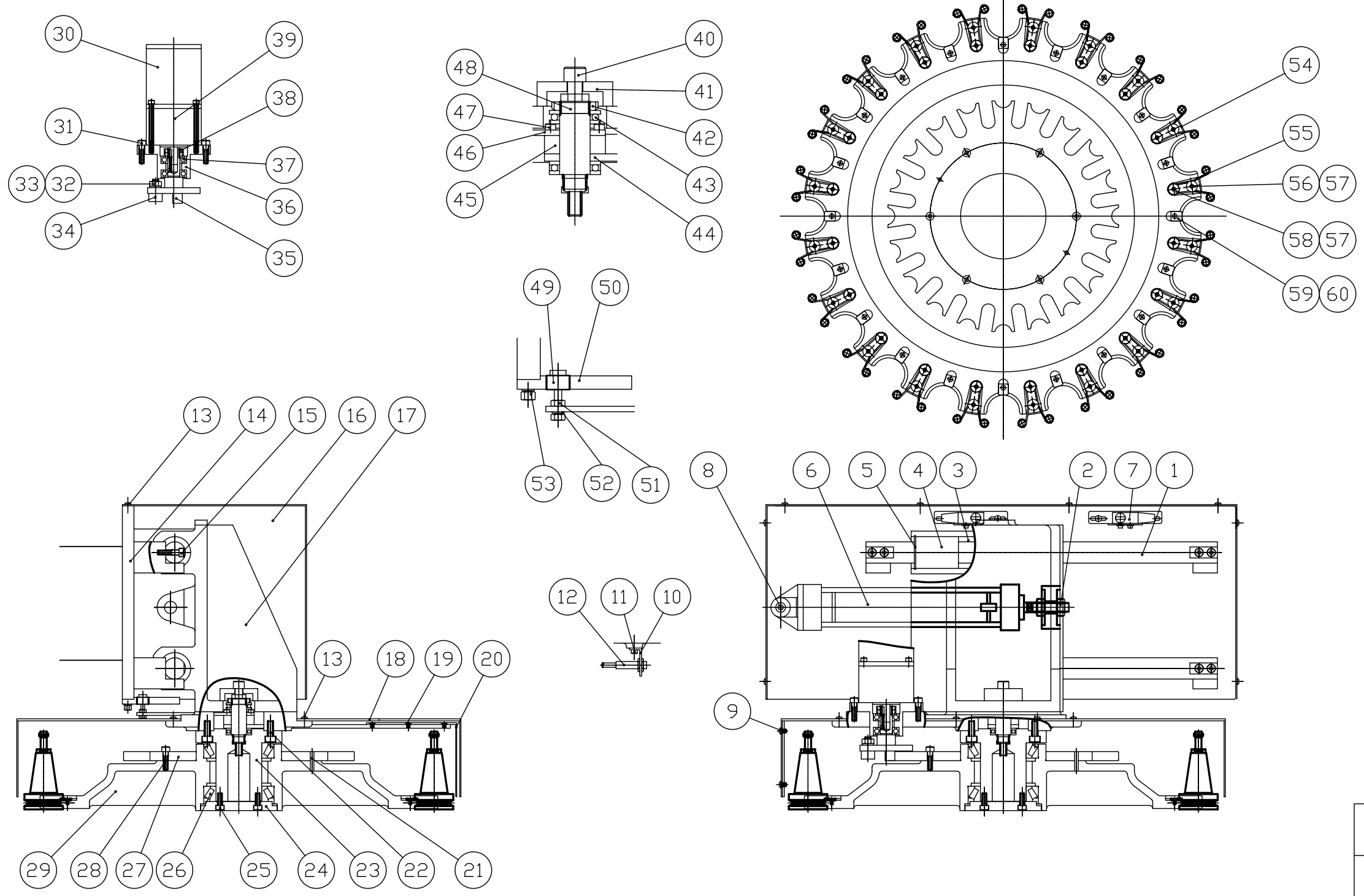
VMC1000BP3 Z Axis Assembly

Drawing No. H1000R0083

Aug-06

| Dwg ID | Part No. | Description | Qty. |
|--------|------------|-------------------------------|------|
| 107 | H1000R0361 | Z Balance Cylinder Bracket | 4 |
| 108 | 8-6*35 | Cap Screws M6 x 35 | 4 |
| 109 | IN-407002 | Oil / Gas Balance Cylinder | 1 |
| 110 | IN-407002 | Balance Cylinder Coupling | 4 |
| 111 | IN-407002 | Lock Nut M 16 x 1.5 pitch | 1 |
| 112 | AK2603A | Z Slideway Cover Bracket Left | 1 |
| 113 | H1000S0191 | Tension Plate | 2 |
| 114 | H1000S0191 | Cap Screw M | 1 |
| 115 | N/A | M6 x 16 | N/A |
| 116 | H1000S0111 | Retainer Strip | 2 |
| 117 | 8-5*16 | Cap Screw M5 x 16 | 6 |

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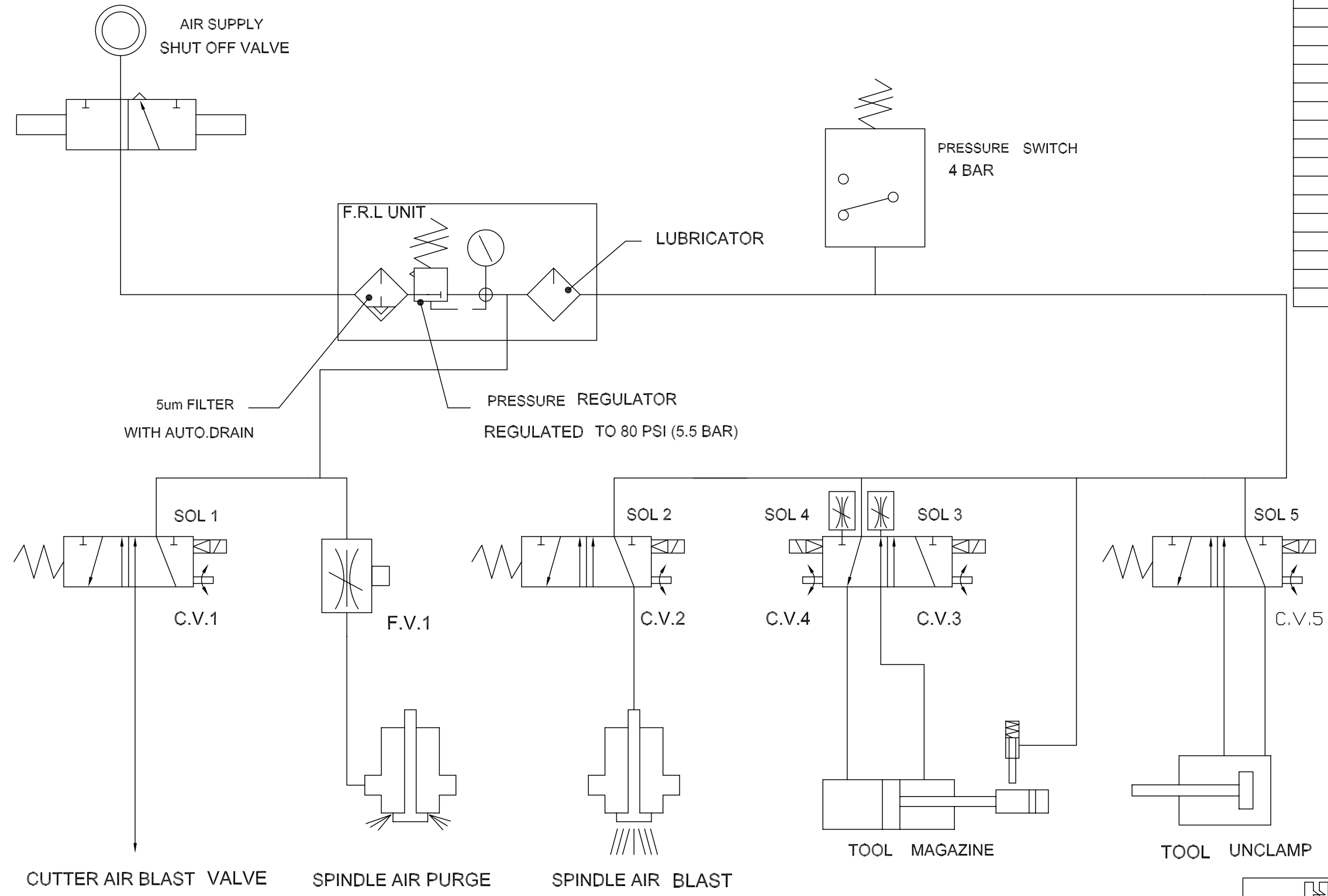
HARDINGE
Bridgport

TITLE
20 Position ATC

DRG No H100R0084 ISSUE No. 1

| Dwg ID | Part No. | Description | Qty. |
|--------|----------------|------------------------|------|
| 1 | MT416004 | Guide Rails | 2 |
| 2 | M18 x 1.25p | Hex Nut | 2 |
| 3 | MT416122 | Spacer Ring | 2 |
| 4 | LM355270-UU | Linear Bearing | 4 |
| 5 | R52 | C Clip | 4 |
| 6 | CSCA63x20x255 | Air Cylinder | 1 |
| 7 | Fotek-FC-1 | Reed Switch | 1 |
| 8 | M8 x 1.25p | Hex Bolt | 2 |
| 9 | M6x1.0px8L | Button Head Screw | 4 |
| 10 | VA041000 | Sensor Bracket | 1 |
| 11 | M6x1.0px16L | Hex Bolt | 2 |
| 12 | FL7M-3T6HD-R3Z | Sensor | 3 |
| 13 | M6x1.0px16L | Button Head Screw | 2 |
| 14 | MT422401 | Mounting Plate | 1 |
| 15 | M8 x 1.25px40L | Hex Bolt | 8 |
| 16 | MT420309 | Sheetmetal Guard | 1 |
| 17 | MT420103 | ATC Carriage | 1 |
| 18 | MT420336 | Tool Magazine Cover | 1 |
| 19 | M5x0.8px12L | Button Head Screw | 3 |
| 20 | MT420305 | Sliding Guard | 1 |
| 21 | #10x35L | Bevel Pin | 2 |
| 22 | M10x1.5px40L | Hex Bolt | 4 |
| 23 | MT416008 | Fixing Shaft | 1 |
| 24 | MT422404 | Lower Press Plate | 1 |
| 25 | M8x1.25px20L | Hex Bolt | 4 |
| 26 | 32015 | Conical Roller Bearing | 2 |
| 27 | MT420301 | Dividing Plate | 1 |
| 28 | M8x1.25px20L | Hex Bolt | 6 |
| 29 | MT420101 | Tool Magazine | 1 |
| 30 | MTR560-41U-Y | ATC Motor | 1 |

| Dwg ID | Part No. | Description | Qty. |
|--------|----------------|-----------------------------|------|
| 31 | M8x1.25px40L | Hex Bolt | 4 |
| 32 | M10x1.5p | Hex Nut | 1 |
| 33 | Spring 10mm | Spring Washer | 1 |
| 34 | CF10 | Bearing | 1 |
| 35 | MT416016 | Drive Shaft | 1 |
| 36 | MT416014 | Bearing Seat | 1 |
| 37 | 6004 ZZ | Needle Roller Bearing | 2 |
| 38 | AN04 | Bearing Lock Nut | 2 |
| 39 | 5GN25K | Gearbox | 1 |
| 40 | M12x1.75px115L | Hex Bolt | 1 |
| 41 | CR010A | Cover | 1 |
| 42 | AN05 | Bearing Lock Nut | 1 |
| 43 | 51105 | Thrust Bearing | 2 |
| 44 | MT420303-1 | Rocking Arm | 1 |
| 45 | MT420407 | Spacer Ring | 1 |
| 46 | MT420303-2 | Rocking Arm | 1 |
| 47 | M5x0.8px30L | Hex Bolt | 4 |
| 48 | MT420406 | Connecting Rod | 1 |
| 49 | CF8 | Cam Roller | 1 |
| 50 | MT420304 | Cam Plate | 1 |
| 51 | M8X1.25P | Hex Nut | 1 |
| 52 | M6 Flat | Flat Washer | 3 |
| 53 | M6x1.0px25L | Hex Bolt | 3 |
| 54 | 01-20 | Tool Number Plate | 20 |
| 55 | 2x8x59x202 | Spring | 20 |
| 56 | VA040200 | Spring Pin Sleeve (outside) | 20 |
| 57 | M6x1.0px25L | Hex Bolt | 20 |
| 58 | VA040300 | Spring Pin Sleeve (inside) | 20 |
| 59 | VA040700 | Tool Fixing Block | 20 |
| 60 | M4x0.7px10L | Countersunk Screw | 20 |



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| TITLE Air Control Unit | |
| DRG No H1000R0091-1 | ISSUE No. 2 |