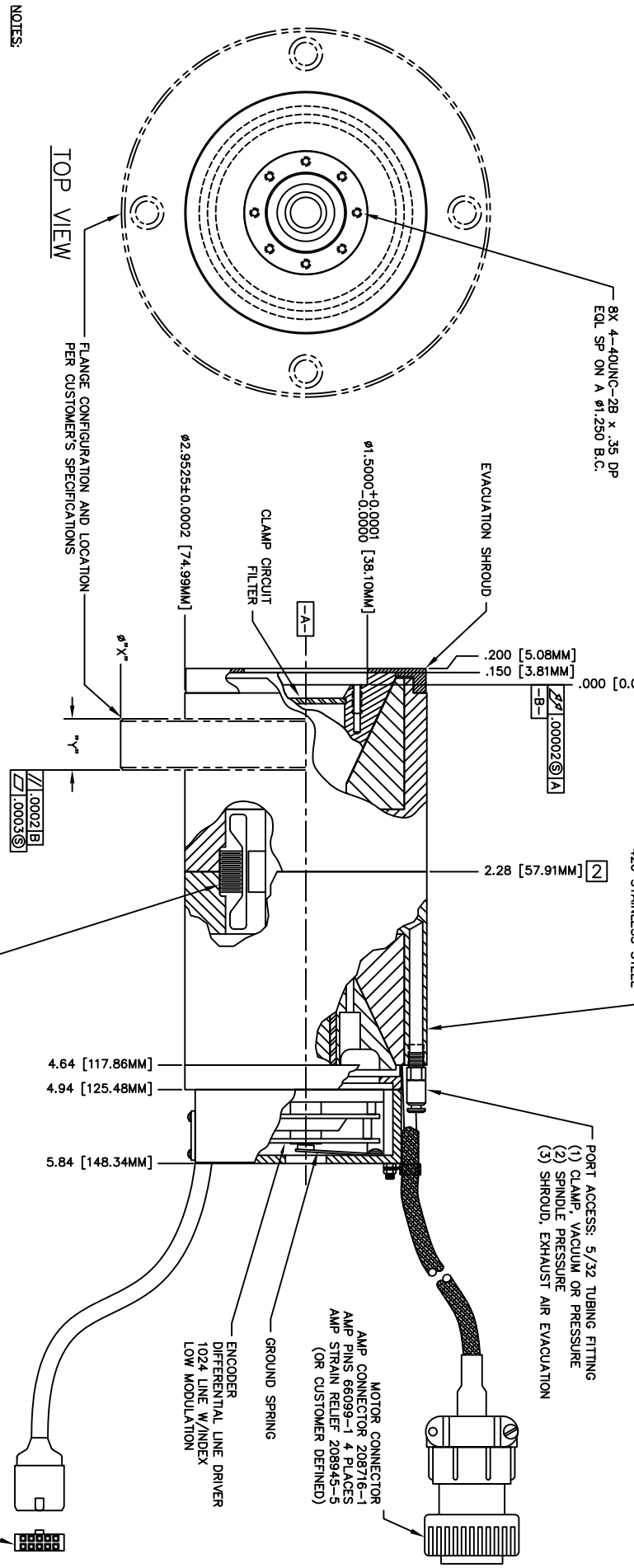


REV	DESCRIPTION	DATE	APPROVED



- NOTES:
- 1] DESIGNATION OF RADIAL STIFFNESS (SINGLE PLANE).
  - 2] DESIGNATION OF RADIAL STIFFNESS (DUAL PLANE).
  3. SEAGULL SOLUTIONS STANDARD CLAMP INTERFACE SHOW. SPINDLES CAN BE CONFIGURED WITH OTHER INTERFACE GEOMETRY TO MEET CUSTOMER'S SPECIFICATIONS.

MOTOR SPECIFICATIONS, NON-COOGING 3 PHASE BRUSHLESS D.C., 8 POLE	
TORQUE CONSTANT	2.80 OZ-IN/AMP
VOLTAGE CONSTANT	2.00 V/KRPM
MOTOR CONSTANT	1.80 OZ-IN/VW
ELECTRICAL TIME CONSTANT	0.15 MSEC
PEAK TORQUE	95.0 OZ-IN
PEAK CURRENT	35 AMPS
TERMINAL RESISTANCE	0.97 OHMS
TERMINAL INDUCTANCE	0.145 MH

SPINDLE SPECIFICATIONS @ 80 PSI	
MAXIMUM CONTINUOUS SPEED (ENCODER LIMITED)	30,000 RPM
AXIAL ROTATIONAL ERROR (REPEATABLE)	< 2 μin
AXIAL ROTATION ERROR (NON-REPEATABLE)	< 1 μin
RADIAL ROTATIONAL ERROR (REPEATABLE)	< 2 μin
RADIAL ROTATION ERROR (NON-REPEATABLE)	< 0.5 μin
MAXIMUM AXIAL LOAD / WORKING	90 lbs / 60 lbs
MAXIMUM RADIAL LOAD (DUAL PLANE) / WORKING	84 lbs / 60 lbs
MAXIMUM RADIAL LOAD (SINGLE PLANE) / WORKING	42 lbs / 30 lbs
AXIAL STIFFNESS	80,000 lbs/in
RADIAL STIFFNESS (DUAL PLANE)	800,000 lbs/in
RADIAL STIFFNESS (SINGLE PLANE)	400,000 lbs/in
ANGULAR STIFFNESS	3,200,000 RADIAN
WORKING AIR GAP	.00023±.00004
POLAR INERTIA (SPINDLE ONLY)	.028 oz-in-sec <sup>2</sup>
TOTAL WEIGHT	< 7 lbs (WITHOUT FLANGE)

PNEUMATIC REQUIREMENTS	
BEARING AIR SUPPLY PRESSURE	80±5 PSI
AIR SUPPLY HUMIDITY	NON CONDENSING AT 35° F (1.7° C)
AIR SUPPLY FILTRATION	.5 MICRON-OIL FREE
BEARING FLOW CONSUMPTION	<math>\triangle C4</math> 15 SCFH MAX
AMBIENT/MOUNTING PLATE TEMP RANGE:	32°-80°F
AMBIENT AIR HUMIDITY:	90% OR LESS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES: 3°  
TOLERANCES:  
3 FRA DEC: ±  
2 FRA DEC: ±

NEXT ASSEMBLY/USED ON: [ ]

DATE: 10/20/01

SCALE: 1/1

SHEET: 1 OF 1

COMPUTER FILE NAME: 07100C1.DWG

SEAGULL SOLUTIONS

HI-CAPACITY BICONIC AIR BEARING SPINDLE

DRAWING NO. 07100

REV A