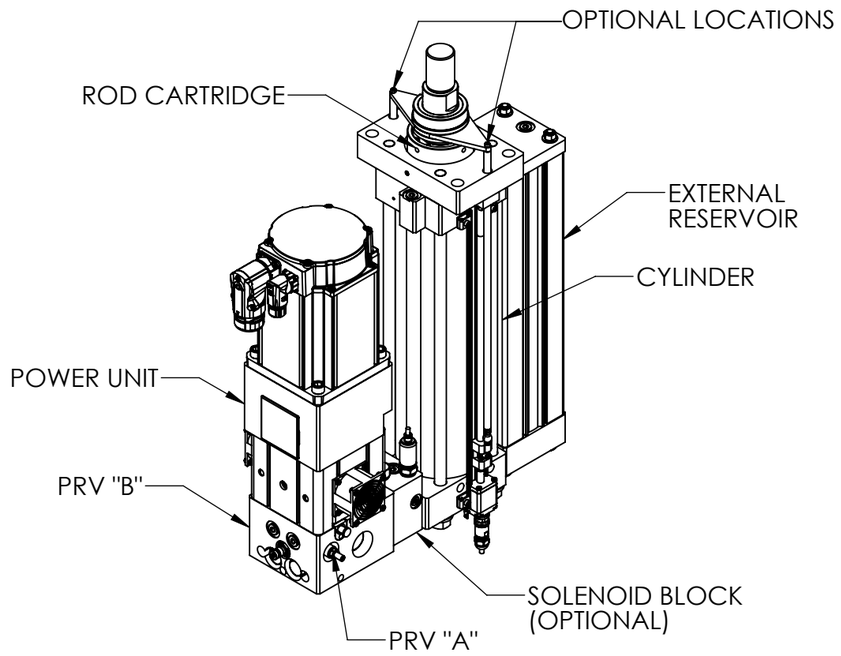
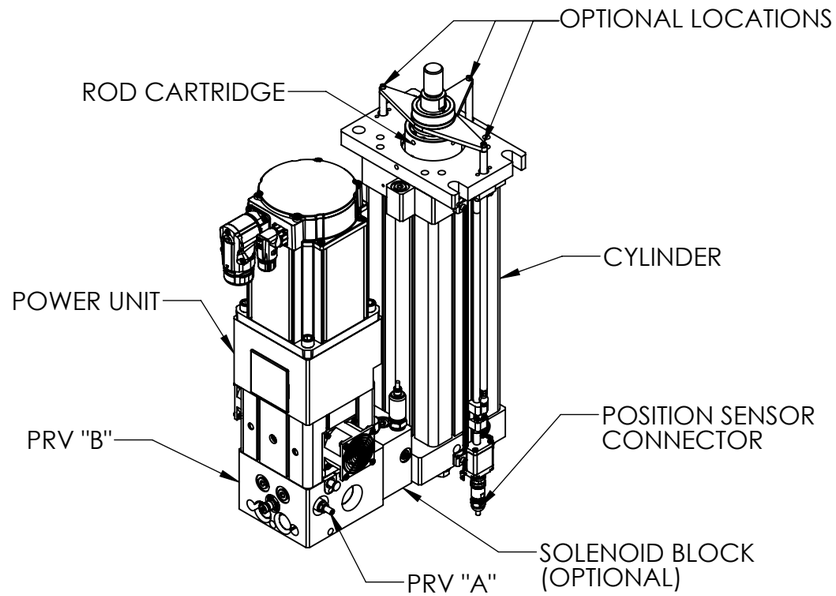
NOTES:

1) DIMENSIONS ARE IN INCHES [MILLIMETERS]
2) CYLINDER MATERIAL: 6061-T6 ALUMINUM OR STEEL
   a) MANIFOLD MATERIAL: 6061-T6 ALUMINUM
   b) EXTRUSION MATERIAL: 6063-T6 ALUMINUM
3) ELECTRICAL CHARACTERISTICS (SEE ALSO SHEET 9)
   a) DC: 24, 48 VDC
   b) AC:
      i) 230 VAC 1-PHASE, 3-PHASE
      ii) 460 VAC 3-PHASE
4) MECHANICAL CHARACTERISTICS:
   a) 36in STROKE IS STANDARD
   b) CONSULT FACTORY FOR >36in STROKE
   c) INCREMENTS OF 1mm
   d) AVAILABLE CYLINDER SIZES (in):
      i) 1.00 v) 3.25
      ii) 1.50 vi) 4.00
      iii) 2.00 vii) 5.00
      iv) 2.50 viii) 6.00
   e) HOLDING VALVE OPTIONS:
      i) CHECK VALVE
      ii) LOCKING SOLENOID
      iii) COUNTERBALANCE
   f) INGRESS PROTECTION RATING: IP65 EXCEPT AS LISTED BELOW:
      i) FAN: IP55
      ii) FAN FINGER GUARD: IP25
5) TEMPERATURE RANGE:
   a) AMBIENT: -10C TO 40C
   b) OPERATING: -10C TO 80C
   c) STORAGE: -20C TO 100C
6) ACTUATOR TO BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE SAFETY STANDARDS.
7) ACTUATOR TO BE INSTALLED WITH LOAD GUIDED TO MINIMIZE SIDE LOAD ON THE PISTON ROD.
8) ACTUATOR TO BE ATTACHED TO CHASSIS GROUND WITH MINIMUM 0.5" WIDE BRAIDED WIRE STRIP. (McMaster-Carr # 6949K62 OR SIMILAR) USE LOCATION SHOWN ON ACTUATOR & GROUND OTHER END TO MACHINE FRAME OR ELECTRICAL CONTROL BOX.
9) THE ACTUATOR IS A CLOSED-FACTORY PRESSURIZED SYSTEM. ADJUSTING ANY VALVES OR OPENING ANY PORTS WITHOUT FACTORY AUTHORIZATION CAN CAUSE PREMATURE ACTUATOR FAILURE OR DAMAGE.
10) THE CUSTOMER IS RESPONSIBLE FOR ALL SAFETY, FAULT AND ALARM CONDITIONS.
11) THE SHA USES PRESSURE RELIEF VALVES TO PROTECT THE MACHINE AND ACTUATOR. THEY ARE DESIGNED FOR PEAK PRESSURES AND SHORT DURATIONS 2-3 SECONDS. IF THE ACTUATOR IS BEING COMMANDED TO MOVE, THE MOTOR IS SPINNING, AND THE POSITION FEEDBACK SHOWS THAT THERE IS NO MOVEMENT (POSSIBLY ONE CAN ALSO LOOK AT EXCESSIVE CURRENT) THEN THE CUSTOMER'S SUPERVISORY SYSTEM (E.G. PLC) NEEDS TO STOP MOTION WITHIN 2-3 SECONDS.
    a) DAMAGE TO THE ACTUATOR IS POSSIBLE WITHOUT THE ABOVE IMPLEMENTATION.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
0	ISSUED	1/10/2023	WNJ





EXTEND AND RETRACT PRV POSITIONS		
POWER UNIT ORIENTATION	"A"	"B"
PARALLEL STANDARD	EXTEND	RETRACT
INLINE	EXTEND	RETRACT
90 DEGREE MIDDLE	RETRACT	EXTEND
90 DEGREE BEHIND	RETRACT	EXTEND
180 DEGREE PARALLEL	RETRACT	EXTEND

UNLESS OTHERWISE SPECIFIED:

TOLERANCES	SURFACE FINISH
.XX ±.010 .XXX ±.005 .XXXX ±.0015 ANGLES ±30'	125
EDGE BREAKS & RADII	CONCENTRICITY
EXTERIOR: .020 MAX. X 45° INTERIOR: .020 R. MAX.	I.D./O.D. EACH END: .005 T.I.R. END TO END: .010 T.I.R.

Kyntronics
6565 DAVIS INDUSTRIAL PWKY
SOLON, OHIO 44139

MATERIAL: N/A

FINISH: N/A

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN BY:	WNJ	1/10/23
CHECKED BY:	N/A	N/A
APPVD. BY:	N/A	N/A

INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5M
DIMENSIONS IN INCHES
THIRD ANGLE PROJECTION

CAGE CODE: 7XK37

DESC: KYNTRONICS SHA SOLUTION

SIZE	DWG. NO.	REV
B	ASM-00528	0

SCALE: 1:8 | WEIGHT: N/A | SHEET 1 OF 9

Series No.	Max Extend Speed in/s (mm/s)	Max Retract Speed
SxxC10-xx	34.54 (877)	56.69 (1,440)
SxxC15-xx	15.35 (390)	27.64 (702)
SxxC20-xx	8.64 (219)	11.51 (292)
SxxC25-xx	5.53 (140)	7.92 (201)
SxxC32-xx	3.27 (83)	3.98 (101)

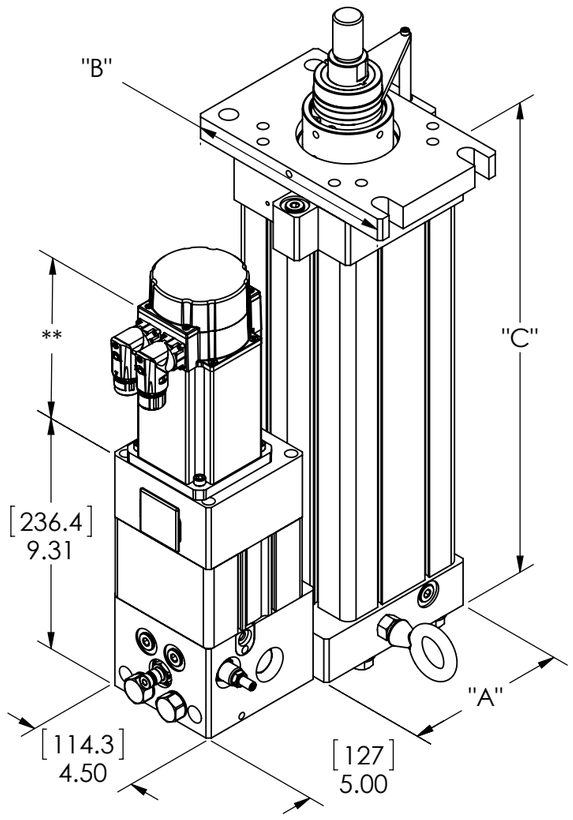
Series No.	Base Weight* (lbs)	Add per inch of stroke (lb)
SxxC10-xx	52.61	1.12
SxxC15-xx	51.94	1.47
SxxC20-xx	53.42	1.51
SxxC25-xx	93.15	1.98
SxxC32-xx	93.89	2.09

Series No.	Max Extend Force lbf (kN)	Max Retract Force
SxxC10-xx	2,344 (10.4)	1,428 (6.4)
SxxC15-xx	5,275 (23.5)	2,930 (13.0)
SxxC20-xx	9,378 (41.7)	7,033 (31.3)
SxxC25-xx	14,654 (65.2)	10,221 (45.5)
SxxC32-xx	24,765 (110.2)	20,332 (90.4)

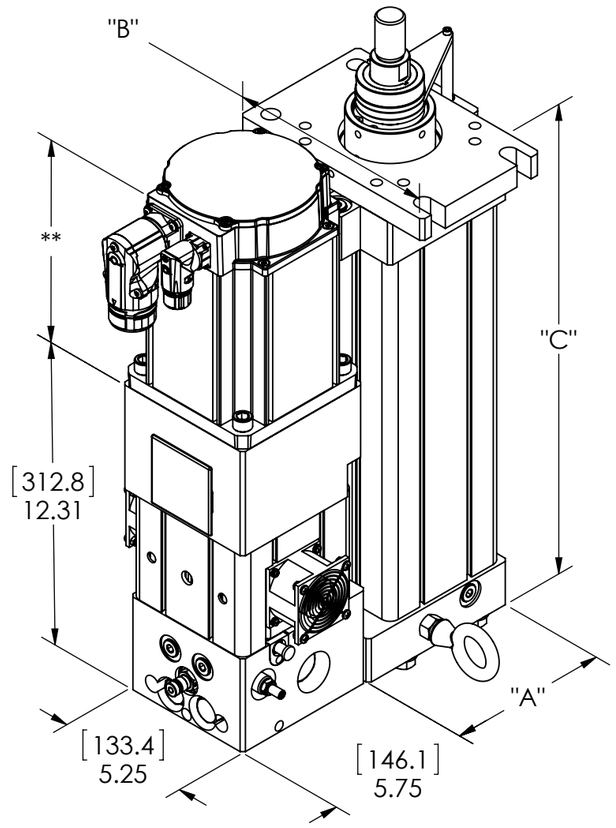
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
-	See Sheet1	-	-

* BASED ON FRONT FLANGE OPTION, NO MOTOR

** BASED ON MOTOR SELECTION



(SMALL MANIFOLD)



(LARGE MANIFOLD)

Series No.	Rod Size (in)	Dim "A" in (mm)	Dim "B" in (mm)	Dim "C" * in (mm)
SxxC10-xx	0.625	5.63 (143)	7.00 (177.8)	Stroke + 6.48 (164.6)
SxxC15-xx	1.000	5.63 (143)	7.00 (177.8)	Stroke + 6.48 (164.6)
SxxC20-xx	1.000	5.63 (143)	7.00 (177.8)	Stroke + 6.48 (164.6)
SxxC25-xx	1.375	6.50 (165)	8.50 (216)	Stroke + 6.98 (177.3)
SxxC32-xx	1.375	6.50 (165)	8.50 (216)	Stroke + 6.98 (177.3)

UNLESS OTHERWISE SPECIFIED:

TOLERANCES	SURFACE FINISH
.XX ±.010 .XXX ±.005 .XXXX ±.0015 ANGLES ±30'	125
EDGE BREAKS & RADII	CONCENTRICITY
EXTERIOR: .020 MAX. X 45° INTERIOR: .020 R. MAX.	I.D./O.D. EACH END: .005 T.I.R. END TO END: .010 T.I.R.

Kyntronics
6565 DAVIS INDUSTRIAL PWKY
SOLON, OHIO 44139

MATERIAL: N/A

FINISH: N/A

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN BY:	WNJ	1/10/23
CHECKED BY:	N/A	N/A
APPVD. BY:	N/A	N/A

INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5M
DIMENSIONS IN INCHES
THIRD ANGLE PROJECTION

CAGE CODE: 7XK37

DESC: KYNTRONICS SHA SOLUTION

SIZE	DWG. NO.	REV
B	ASM-00528	0

SCALE: 1:5 | WEIGHT: N/A | SHEET 2 OF 9

Series No.	Max Extend Speed in/s (mm/s)	Max Retract Speed
SxxC40-xx	2.16 (55)	2.88 (73)
SxxC50-xx	1.38 (35)	2.16 (55)
SxxC60-xx	0.96 (24)	1.45 (37)

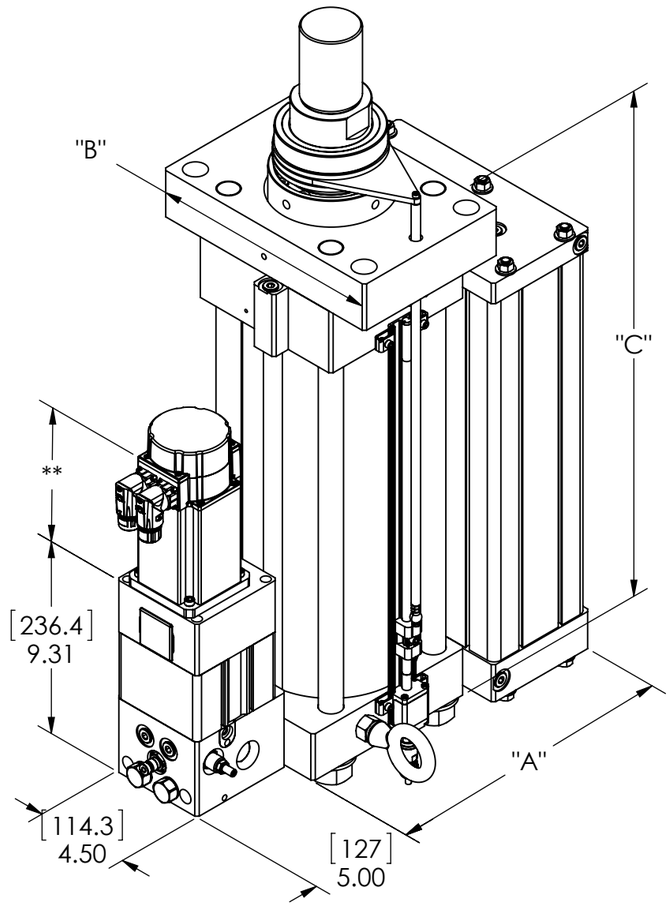
Series No.	Base Weight* (lbs)	Add per inch of stroke (lb)
SxxC40-xx	116.59	3.82
SxxC50-xx	211.29	7.28
SxxC60-xx	276.16	8.93

Series No.	Max Extend Force lbf (kN)	Max Retract Force lbf (kN)
SxxC40-xx	37,514 (166.9)	28,135 (125.2)
SxxC50-xx	58,616 (260.7)	37,514 (166.9)
SxxC60-xx	84,407 (375.5)	55,685 (247.7)

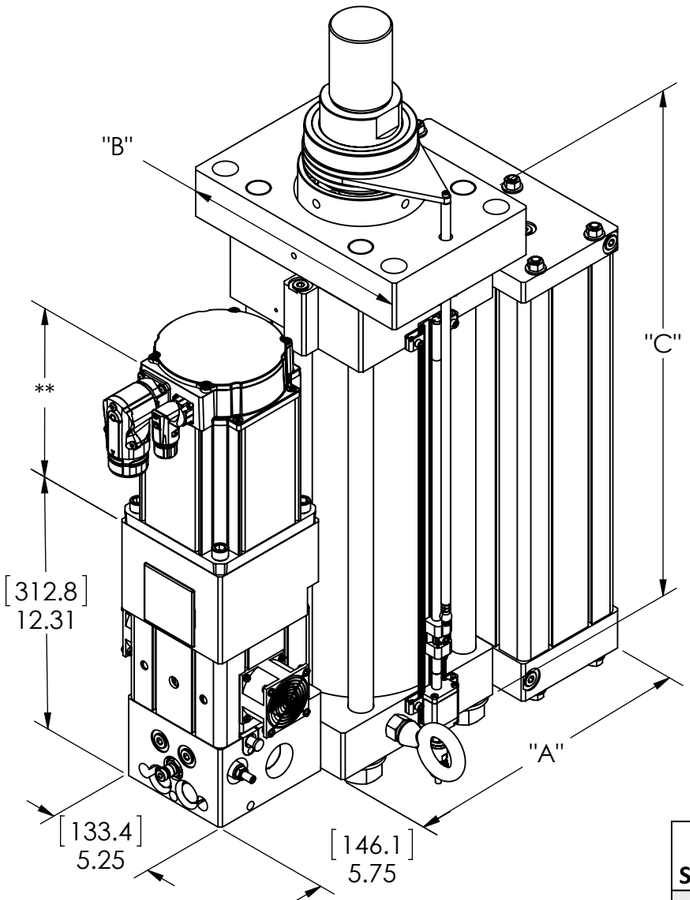
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
-	See Sheet1	-	-

* BASED ON FRONT FLANGE OPTION, NO MOTOR

** BASED ON MOTOR SELECTION



(SMALL MANIFOLD)



(LARGE MANIFOLD)

Series No.	Rod Size (in)	Dim "A" in (mm)	Dim "B" in (mm)	Dim "C" * in (mm)
SxxC40-xx	2.000	10.63 (270)	7.63 (193.8)	Stroke + 10 (254)
SxxC50-xx	3.000	12.90 (327.7)	9.75 (247.7)	Stroke + 11.5 (292.1)
SxxC60-xx	3.500	13.90 (353.1)	11.25 (285.8)	Stroke + 12.5 (317.5)

UNLESS OTHERWISE SPECIFIED:

TOLERANCES	SURFACE FINISH
.XX ±.010 .XXX ±.005 .XXXX ±.0015 ANGLES ±30'	125
EDGE BREAKS & RADII	CONCENTRICITY
EXTERIOR: .020 MAX. X 45° INTERIOR: .020 R. MAX.	I.D./O.D. EACH END: .005 T.I.R. END TO END: .010 T.I.R.

Kyntronics
6565 DAVIS INDUSTRIAL PWKY
SOLON, OHIO 44139

MATERIAL: N/A

FINISH: N/A

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN BY:	WNJ	1/10/23
CHECKED BY:	N/A	N/A
APPVD. BY:	N/A	N/A

INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5M
DIMENSIONS IN INCHES
THIRD ANGLE PROJECTION

CAGE CODE: 7XK37

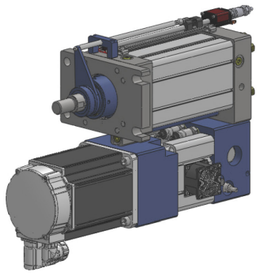
DESC: KYNTRONICS SHA SOLUTION

SIZE: B | DWG. NO.: ASM-00528 | REV: 0

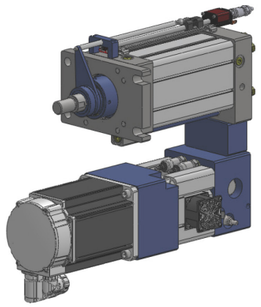
SCALE: 1:5 | WEIGHT: N/A | SHEET 3 OF 9

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
-	See Sheet1	-	-

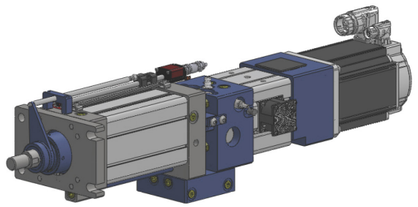
PRODUCT CONFIGURATIONS



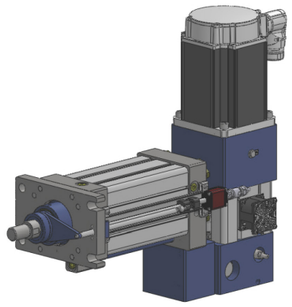
PARALLEL STANDARD



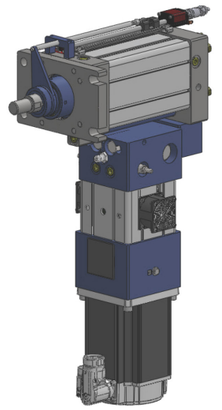
PARALLEL XX" SPACER



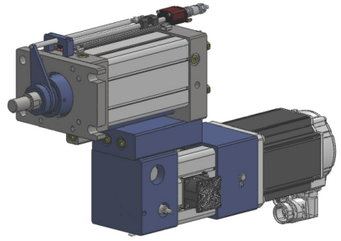
IN-LINE



90 DEGREE BEHIND PU

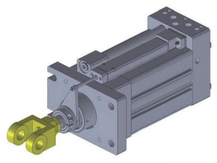


90 DEGREE MIDDLE

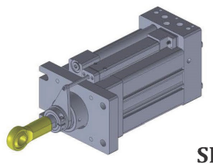


180 DEGREE

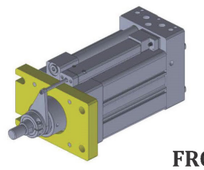
MOUNTING OPTIONS



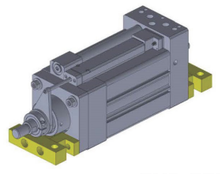
CLEVIS



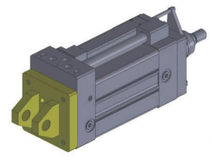
SPHERICAL BALL JOINT



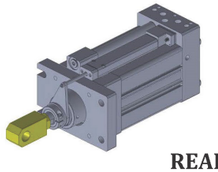
FRONT FLANGE



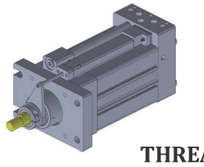
END FEET



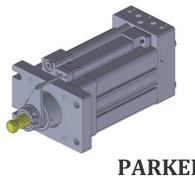
REAR CLEVIS (0DEG, 90DEG)



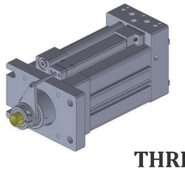
REAR EYE



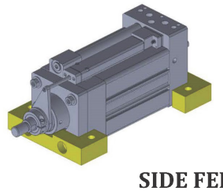
THREADED MALE (STD & SI)



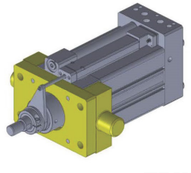
PARKER STYLE 55



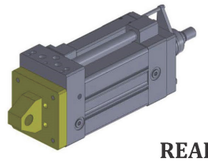
THREADED FEMALE (STD & SI)



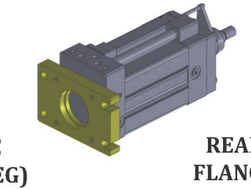
SIDE FEET



TRUNNION



REAR EYE (0DEG, 90DEG)



REAR FLANGE

UNLESS OTHERWISE SPECIFIED:

TOLERANCES	SURFACE FINISH
.XX ±.010 .XXX ±.005 .XXXX ±.0015 ANGLES ±30'	125
EDGE BREAKS & RADII	CONCENTRICITY
EXTERIOR: .020 MAX. X 45° INTERIOR: .020 R. MAX.	I.D./O.D. EACH END: .005 T.I.R. END TO END: .010 T.I.R.

Kyntronics
6565 DAVIS INDUSTRIAL PWKY
SOLON, OHIO 44139

MATERIAL: N/A

FINISH: N/A

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN BY:	WNJ	1/10/23
CHECKED BY:	N/A	N/A
APPVD. BY:	N/A	N/A

INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5M
DIMENSIONS IN INCHES
THIRD ANGLE PROJECTION

CAGE CODE: 7XK37

DESC: KYNTRONICS SHA SOLUTION

SIZE	DWG. NO.	REV
B	ASM-00528	0

SCALE: 1:8 | WEIGHT: N/A | SHEET 4 OF 9

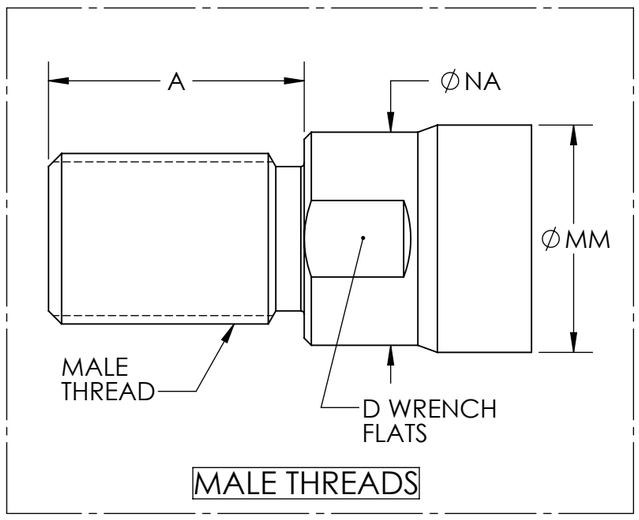
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
-	See Sheet1	-	-

ROD END DETAILS (INCH)

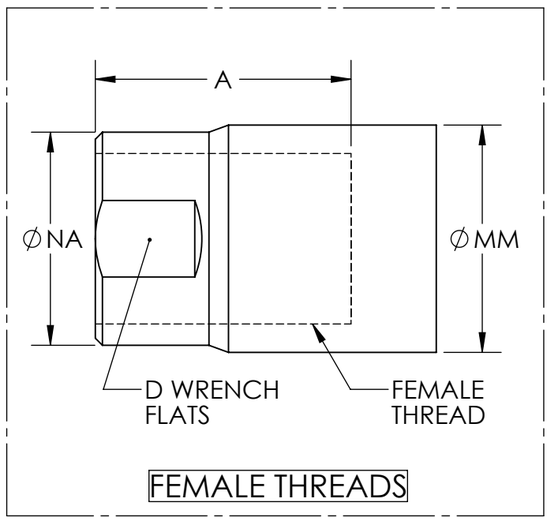
Series No.	MM ROD Ø (in)	MALE THREAD	FEMALE THREAD	A (in)	AD (in)	AE (in)	AF (in)	ØAM (in)	D (in)	NA (in)
SxxC10-xx	0.625	1/2-20	7/16-20	0.75	0.63	0.25	0.38	0.56	0.50	0.56
SxxC15-xx	1.000	3/4-16	3/4-16	1.13	0.94	0.37	0.69	0.94	0.88	0.94
SxxC20-xx	1.000	3/4-16	3/4-16	1.13	0.94	0.37	0.69	0.94	0.88	0.94
SxxC25-xx	1.375	1-14	1-14	1.63	1.06	0.37	0.88	1.31	1.25	1.31
SxxC32-xx	1.375	1-14	1-14	1.63	1.06	0.37	0.88	1.31	1.25	1.31
SxxC40-xx	2.000	1-1/2-12	1-1/2-12	2.25	1.69	0.62	1.38	1.88	1.69	1.88
SxxC50-xx	3.000	2-1/4-12	2-1/4-12	3.50	2.44	0.87	2.25	2.88	2.63	2.88
SxxC60-xx	3.500	2-1/2-12	2-1/2-12	3.50	2.69	1.00	2.50	3.25	3.00	3.25

ROD END DETAILS (METRIC)

Series No.	MM ROD Ø (in)	MALE THREAD	FEMALE THREAD	A (mm)	AD (mm)	AE (mm)	AF (mm)	ØAM (mm)	D (mm)	NA (mm)
SxxC10-xx	0.625	M12x1.25	M10x1.25	16	16.0	6.3	9.7	14.3	12.7	14.3
SxxC15-xx	1.000	M20x1.5	M20x1.5	28	23.9	9.5	17.5	23.8	22.2	23.8
SxxC20-xx	1.000	M20x1.5	M20x1.5	28	23.9	9.5	17.5	23.8	22.2	23.8
SxxC25-xx	1.375	M26x1.5	M27x2.0	36	26.9	9.5	22.4	33.3	31.8	33.3
SxxC32-xx	1.375	M26x1.5	M27x2.0	36	26.9	9.5	22.4	33.3	31.8	33.3
SxxC40-xx	2.000	M39x2.0	M39x2.0	56	42.9	15.8	35.1	47.6	42.9	47.6
SxxC50-xx	3.000	M58x2.0	M58x2.0	85	62.0	22.2	57.2	73.0	66.7	73.0
SxxC60-xx	3.500	M64x2.0	M64x3.0	85	68.3	25.4	63.5	82.6	76.2	82.6



MALE THREADS



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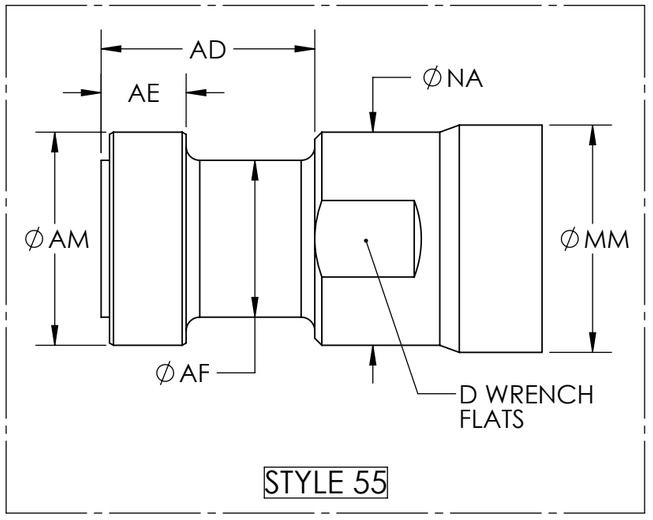


STYLE 55

UNLESS OTHERWISE SPECIFIED:

TOLERANCES	SURFACE FINISH
.XX ±.010 .XXX ±.005 .XXXX ±.0015 ANGLES ±30'	125
EDGE BREAKS & RADII	CONCENTRICITY
EXTERIOR: .020 MAX. X 45° INTERIOR: .020 R. MAX.	I.D./O.D. EACH END: .005 T.I.R. END TO END: .010 T.I.R.

Kyntronics
6565 DAVIS INDUSTRIAL PWKY
SOLON, OHIO 44139

MATERIAL: N/A

FINISH: N/A

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN BY:	WNJ	1/10/23
CHECKED BY:	N/A	N/A
APPVD. BY:	N/A	N/A

INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5M
DIMENSIONS IN INCHES
THIRD ANGLE PROJECTION

CAGE CODE: 7XK37

DESC: KYNTRONICS SHA SOLUTION

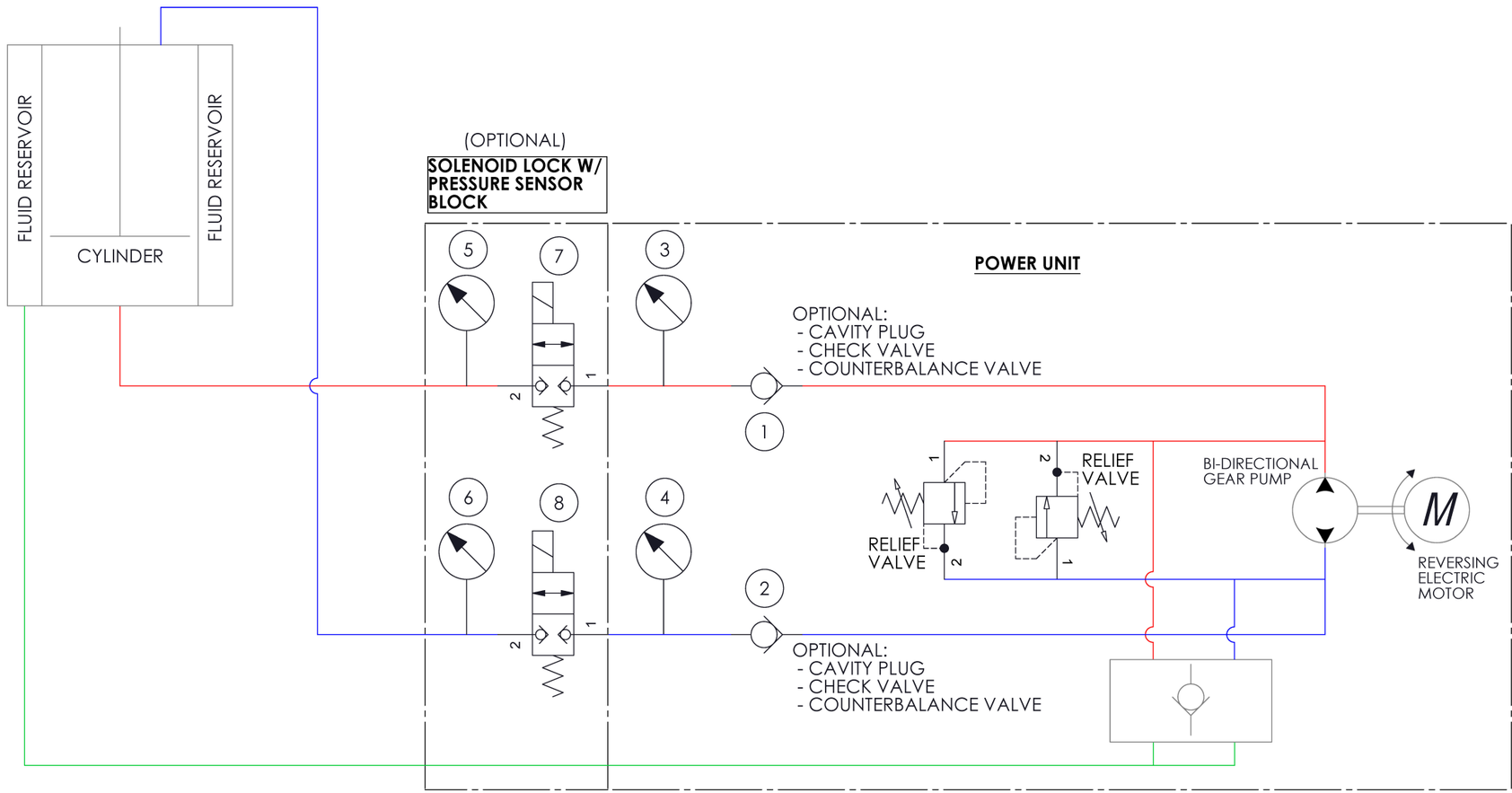
SIZE	DWG. NO.	REV
B	ASM-00528	0

SCALE: 1:8 | WEIGHT: N/A | SHEET 5 OF 9

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
-	See Sheet1	-	-

HYDRAULIC SCHEMATIC NOTES:

1) STANDARD:
   a. SELF-CONTAINED SERVO ELECTO-HYDRAULIC ACTUATOR
   b. FOUR QUADRANT CONTROL
   c. BI-DIRECTIONAL PUMP
   d. PRESSURIZED RESERVOIR
   e. 1IN TO 8IN CYLINDERS
   f. RELIEF VALVES FOR BOTH EXTEND AND RETRACT
   g. CLOSED CELL FOAM FOR ROD COMPENSATION
   h. CAN BE USED IN ANY ORIENTATION (NO VENTING)
   i. USES SYNTHETIC HYDRAULIC OIL, ISO 68
2) CONFIGURABLE:
   a. CHECK VALVE & COUNTERBALANCE VALVE (1 & 2)
   b. PRESSURE SENSORS FOR FORCE CONTROL OR MONITORING (3, 4, 5 & 6)
      i. LOCATION DEPENDS ON THE OPTIONAL SOLENOID LOCKING VALVE BLOCK
   c. SOLENOID LOCKING VALVES (7 & 8)



UNLESS OTHERWISE SPECIFIED:

TOLERANCES	SURFACE FINISH
.XX ±.010 .XXX ±.005 .XXXX ±.0015 ANGLES ±30'	125
EDGE BREAKS & RADII	CONCENTRICITY
EXTERIOR: .020 MAX. X 45° INTERIOR: .020 R. MAX.	I.D./O.D. EACH END: .005 T.I.R. END TO END: .010 T.I.R.

Kyntronics
6565 DAVIS INDUSTRIAL PWKY
SOLON, OHIO 44139

MATERIAL: N/A

FINISH: N/A

DO NOT SCALE DRAWING

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CHECKED BY:	N/A	N/A
APPVD. BY:	N/A	N/A

INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5M
DIMENSIONS IN INCHES
THIRD ANGLE PROJECTION

CAGE CODE: 7XK37

DESC: KYNTRONICS SHA SOLUTION

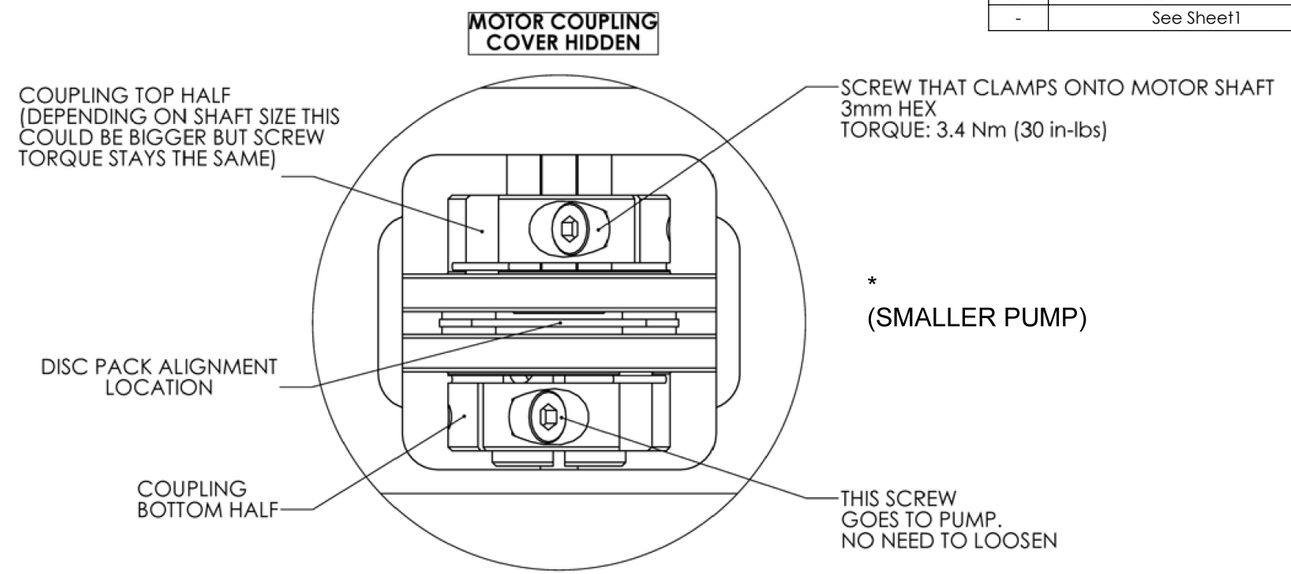
SIZE	DWG. NO.	REV
B	ASM-00528	0

SCALE: 1:8 | WEIGHT: N/A | SHEET 6 OF 9

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
-	See Sheet1	-	-

MOTOR MOUNTING PROCEDURE:

1) VERIFY THE SCREW THAT CLAMPS ONTO THE MOTOR SHAFT IS LOOSE TO ALLOW SHAFT TO SLIP IN.
2) ATTACHING THE MOTOR TO THE MOTOR PLATE
   a) ALIGN MOTOR KEY TO THE COUPLING KEYWAY BEFORE LOWERING DOWN THE MOTOR TO THE MOTOR PLATE.
   b) TURN THE COUPLING SO THE CLAMP SCREWS ARE VISIBLE THROUGH THE COUPLING ACCESS HOLE.
   c) USE MOTOR MOUNTING SCREWS TO SECURE THE MOTOR TO THE MOTOR PLATE.
   d) USE LOCTITE 262 ON MOTOR SCREWS FOR VIBRATION.
3) SECURING THE MOTOR COUPLING TO THE MOTOR SHAFT
   a) VERIFY IN THE PREVIOUS STEP THE MOTOR SHAFT SLIPPED INTO THE COUPLING.
   b) VERIFY THE COUPLING DISK PACK IS ALIGNED BEFORE TIGHTENING CLAMP SCREW.
      i) COUPLING IN THE VIEW WILL SHOW THE ONE SIDE ATTACHED TO THE TOP HALF OF THE COUPLING AND ANOTHER SIDE ATTACHED TO THE BOTTOM HALF OF THE COUPLING.
      ii) BOTH SIDES SHOULD BE PARALLEL TO EACH OTHER.
   c) ONCE THE TWO HALVES ARE VERIFIED TO BE CORRECT THE SCREW CAN BE TORQUED DOWN.
   d) TORQUE FOR THE SCREW THAT CLAMPS ONTO THE MOTOR SHAFT IS NOTED IN THE VIEW
   e) THE MOTOR SHOULD NOW BE SECURED TO THE UNIT.

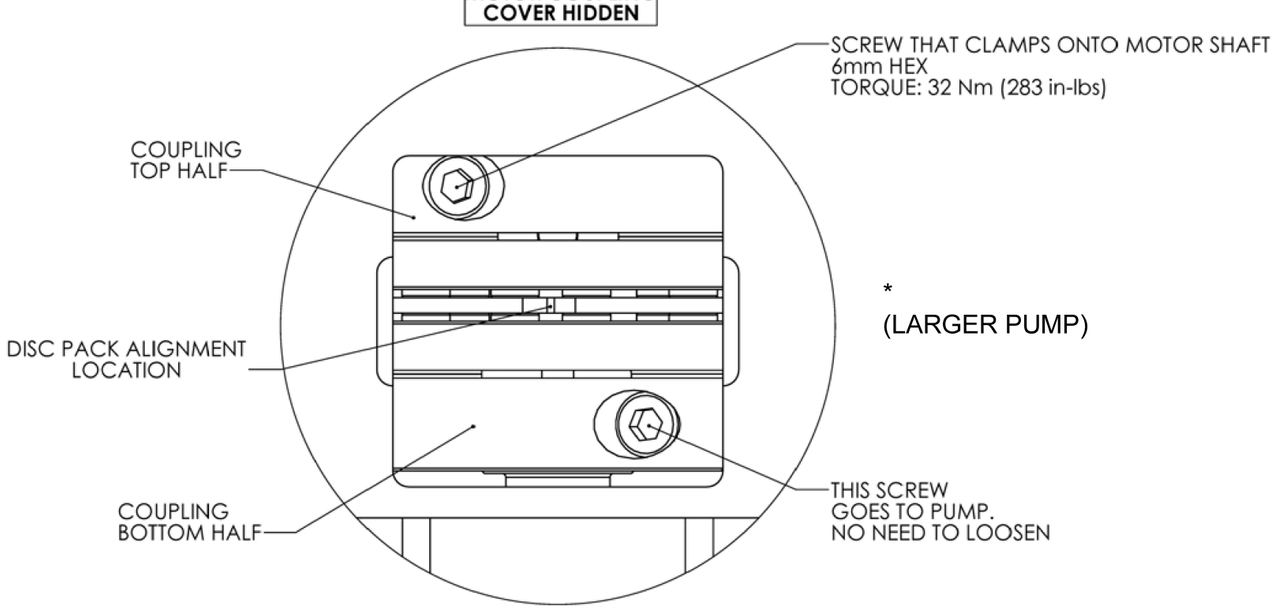


*
(SMALLER PUMP)

MAINTENANCE PROCEDURE:

1) ACTUATOR NEEDS TO BE DISABLED & TURNED OFF BEFORE MAINTENANCE CHECK.
   a) HAVE ROD EXTENDED OUT SOME FOR ROD SURFACE CHECK.
2) VERIFY CYLINDER ROD SURFACE IS NOT DAMAGED.
   a) LOOK OVER ROD WHEN UNIT IS EXTENDED TO VERIFY IF ANY VISIBLE MARKS ARE ON ROD.
   b) ANY SCRATCHES OR DENTS ON CYLINDER ROD COULD CAUSE UNIT TO LEAK FLUID ON THE ROD SIDE.
3) VERIFY IF PUMP FANS ARE RUNNING PROPERLY (IF FANS ARE INSTALLED).
   a) FANS DON'T HAVE FILTERS BUT HAS A FAN GUARD.
   b) FANS SHOULD BE FREE TO SPIN WITH NO DEBRIS WHICH CAN CAUSE THE FANS TO FAIL.
   c) FANS NOT RUNNING COULD CAUSE THE UNIT TO OVERHEAT.
4) TAMPER AND VIBRATION DETECTION PAINT IS NOT DAMAGED.
   a) MULTIPLE AREAS OF THE ACTUATOR HAVE PAINT ON CERTAIN COMPONENTS.
   b) VERIFY IF ANY OF PAINT HAS BEEN BROKEN IN TWO PIECES. THIS CAN SHOW SIGNS OF A COMPONENT LOOSE OR TAMPERING.
   c) ONLY EXCEPTION FOR BROKEN PAINT IS IF THE PRESSURE RELIEF VALVES NEEDED TO BE ADJUSTED.

**** BASED ON PUMP SOLUTION PROVIDED***



*
(LARGER PUMP)

UNLESS OTHERWISE SPECIFIED:

TOLERANCES	SURFACE FINISH
.XX ±.010 .XXX ±.005 .XXXX ±.0015 ANGLES ±30'	125
EDGE BREAKS & RADII	CONCENTRICITY
EXTERIOR: .020 MAX. X 45° INTERIOR: .020 R. MAX.	I.D./O.D. EACH END: .005 T.I.R. END TO END: .010 T.I.R.

Kyntronics
6565 DAVIS INDUSTRIAL PWKY
SOLON, OHIO 44139

MATERIAL: N/A
FINISH: N/A
DO NOT SCALE DRAWING

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DRAWN BY:	WNJ	1/10/23
CHECKED BY:	N/A	N/A
APPVD. BY:	N/A	N/A

INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5M
DIMENSIONS IN INCHES
THIRD ANGLE PROJECTION

CAGE CODE: 7XK37

DESC: KYNTRONICS SHA SOLUTION

SIZE	DWG. NO.	REV
B	ASM-00528	0

SCALE: 1:1 | WEIGHT: N/A | SHEET 7 OF 9

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
-	See Sheet1	-	-

AC FIELDBUS AVAILABILITY:

STANDARD DRIVE OFFERING:

- MODBUS RTU OVER RS485
- MODBUS TCP/IP
- ETHERNET/IP
- PROFINET RT
- ETHERCAT
- CANOPEN
- PROFIBUS
- DEVICENET

DC FIELDBUS AVAILABILITY:

STANDARD:

- MODBUS RTU OVER RS485
- CAN

OPTIONAL ISOLATED:

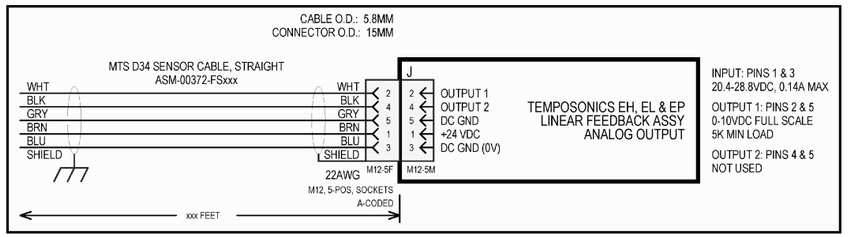
- PROFINET RT (CLASSB) AND IRT (CLASSC)
- ETHERNET/IP WITH DLR
- ETHERCAT
- POWERLINK
- MODBUSTCP/IP
- MODBUS RTU OVER RS485
- CANOPEN
- PROFIBUS

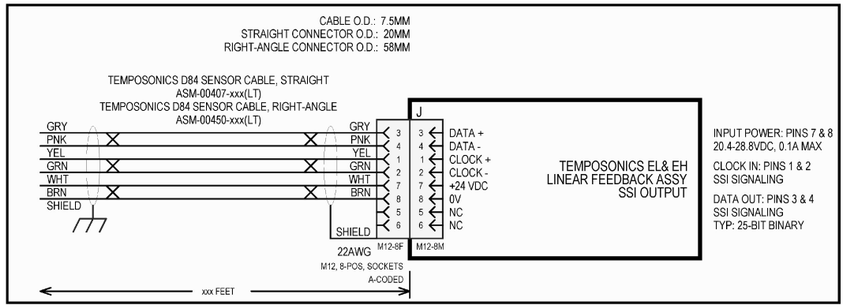
CONTROL STANDARDS:

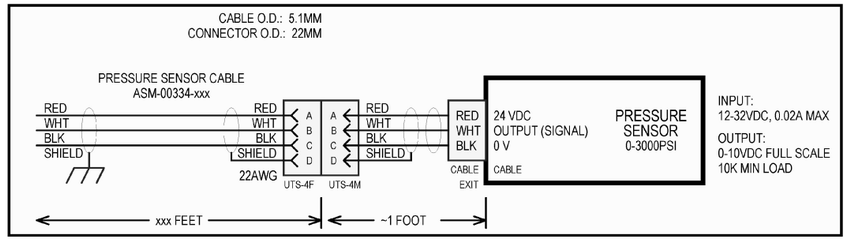
- POSITION
- FORCE (INTERNAL PRESSURE SENSOR OR EXTERNAL LOAD CELL)
- POSITION WITH FORCE LIMITING
- AUTO TUNING

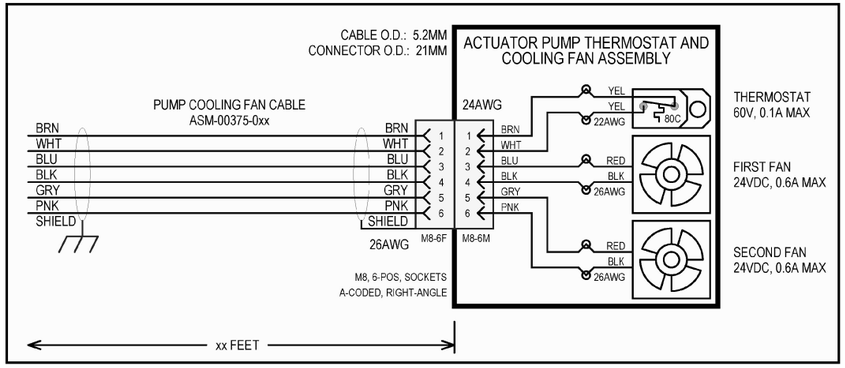
OTHER AVAILABLE SOFTWARE ITEMS:

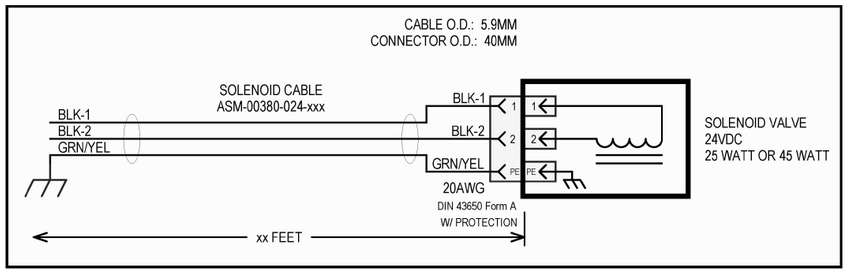
- ROCKWELL AOI
  - EASY SETUP FOR POSITION & FORCE CONTROL
  - AUTO TUNING











UNLESS OTHERWISE SPECIFIED:

TOLERANCES	SURFACE FINISH
.XX ±.010 .XXX ±.005 .XXXX ±.0015 ANGLES ±30'	125
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Kyntronics
6565 DAVIS INDUSTRIAL PWKY
SOLON, OHIO 44139

MATERIAL: N/A

FINISH: N/A

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APPVD. BY:	N/A	N/A

INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5M
DIMENSIONS IN INCHES
THIRD ANGLE PROJECTION

CAGE CODE: 7XK37

DESC: KYNTRONICS SHA SOLUTION

SIZE	DWG. NO.	REV
B	ASM-00528	0

SCALE: 1:8 | WEIGHT: N/A | SHEET 8 OF 9

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
-	See Sheet1	-	-

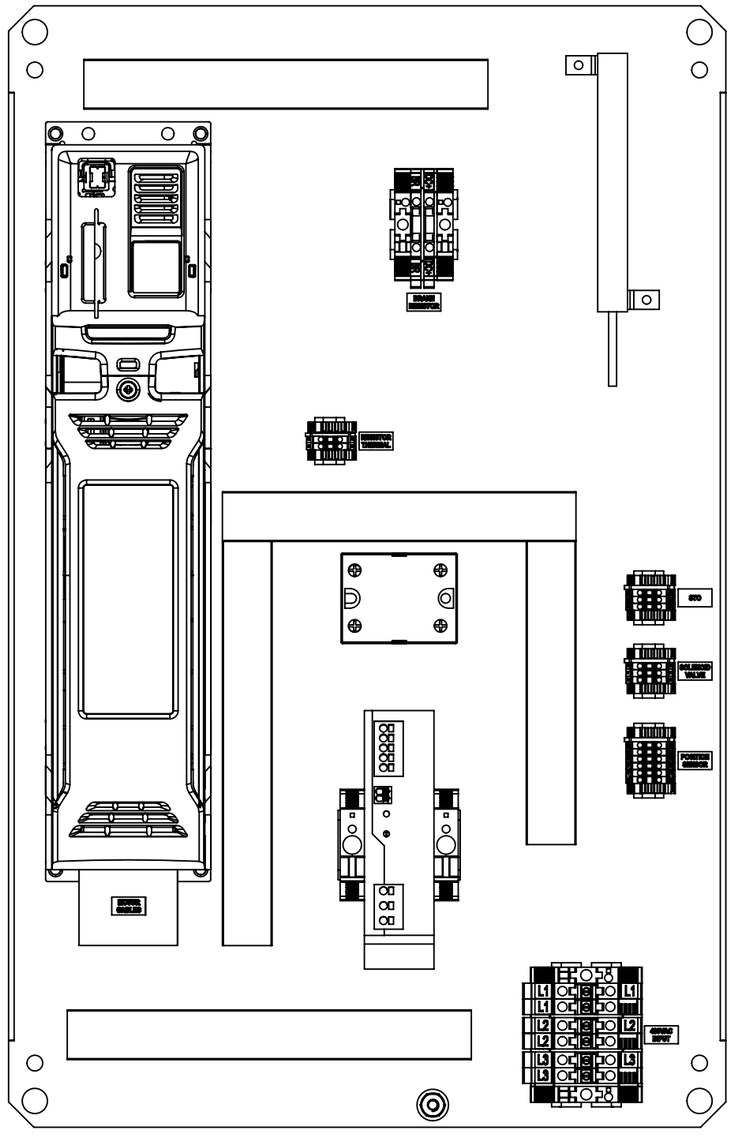
ELECTRICAL OFFERING:

- STANDARD OFFERING INCLUDES A TYPICAL SUB-PANEL/BACKPLATE
- INCLUDED ON THE PANEL:
  - DRIVE & TERMINAL BLOCKS
  - WIRED & TESTED TO THE SPECIFICATIONS
  - LABELED TERMINAL BLOCKS
    - WHEN CABLES ARE INCLUDED, THESE ARE SOMETIMES ATTACHED TO THE TERMINAL BLOCKS AND SHIPPED TOGETHER
  - SOFTWARE IS LOADED, CONFIGURED & TESTED
  - PROPER CIRCUIT PROTECTION IS RECOMMENDED

- OPTIONS:
  - FULL ENCLOSURE WITH DISCONNECT
  - DRIVE PROTECTION FUSES
  - DYNAMIC BRAKING RESISTORS
  - ATTACHED HMI

COMMON TRIP ERROR CODES TABLE:

ERROR CODE	ERROR DESCRIPTION
1	RESERVED 001 - PUMP THERMOSTAT TRIPPED.
2	OVERVOLTS - ENERGY FROM AN OVERHAULING LOAD OR FAST DECEL HAS RAISED THE DC BUS TOO HIGH.
3	INSTANTANEOUS OVERCURRENT – CANNOT BE RESET FOR TEN SECONDS.
6	EXTERNAL TRIP.3 - LOAD DUMP RESISTOR THERMOSTAT TRIPPED.
19	BRAKE R TOO HOT - ENERGY DUMPED INTO THE BRAKING RESISTOR DURING FAST DECELS HAS OVERHEATED IT.
20	MOTOR TOO HOT - THIS IS ESTIMATED BY A MATHEMATICAL MODEL; NOT A SENSOR.



UNLESS OTHERWISE SPECIFIED:

TOLERANCES	SURFACE FINISH
.XX ±.010 .XXX ±.005 .XXXX ±.0015 ANGLES ±30'	125
EDGE BREAKS & RADII	CONCENTRICITY
EXTERIOR: .020 MAX. X 45° INTERIOR: .020 R. MAX.	I.D./O.D. EACH END: .005 T.I.R. END TO END: .010 T.I.R.

Kyntronics
6565 DAVIS INDUSTRIAL PWKY
SOLON, OHIO 44139

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INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5M
DIMENSIONS IN INCHES
THIRD ANGLE PROJECTION

CAGE CODE: 7XK37

DESC: KYNTRONICS SHA SOLUTION

SIZE	DWG. NO.	REV
B	ASM-00528	0

SCALE: 1:3 | WEIGHT: N/A |