EPSILON XCHANGE™ Tool Changer
Manual Tool Changer

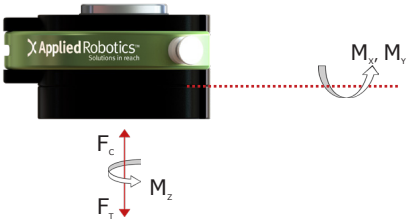
EM is a manual tool changer for exchanging robotic end-of-arm tooling (EOAT) between operations.

Advantages:

- Integrated Operating Lever Makes it Toolless
- High Strength Aluminum Alloy Body
- High Energy Density (Payload to Weight Ratio)
- Intuitive Operation
- High Connection Repeatability
- Easy and Ergonomic Insertion
- Long Life (Over 5,000 Changes)
- Prevention Against Accidental Release
  - o Dual Safety Mechanism
- Optional Connection of Utility Modules

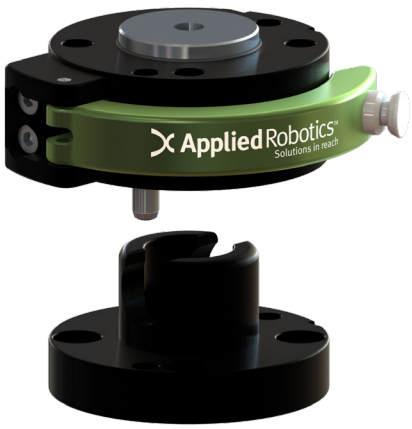
SPECIFICATIONS

Model	Recommended Payload **	Tensile Force (F_T)	Compressive Force (F_C)	Operating Moment (M_X, M_Y)	Operating Torque (M_Z)	Repeatability	Mass of Robot Side	Mass of Tool Side	Locking Force	Locking Stroke
	kg (lb)	N (lb)	kN (kip)	Nm (in-lb)	Nm (in-lb)	mm (in)	kg (lb)	kg (lb)	N (lb)	mm (in)
EM040*	8 (17.6)	540 (121)	48 (11)	50 (443)	54 (478)	± 0.02 (± 0.001)	0.13 (0.29)	0.05 (0.11)	4 - 50 (0.9 - 11.2)	0 - 0.80 (0 - 0.03)
EM050	18 (39.7)	700 (157)	80 (18)	70 (620)	80 (708)	± 0.02 (± 0.001)	0.25 (0.55)	0.10 (0.22)	4 - 50 (0.9 - 11.2)	0 - 1 (0 - 0.04)
EM063	20 (44.1)	800 (180)	160 (36)	100 (885)	100 (885)	± 0.02 (± 0.001)	0.41 (0.90)	0.20 (0.44)	5 - 60 (1.1 - 13.5)	0 - 1 (0 - 0.04)
EM080	25 (55.1)	1,000 (225)	219 (49)	130 (1,151)	140 (1,239)	± 0.02 (± 0.0001)	0.74 (1.63)	0.35 (0.77)	6 - 70 (1.3 - 15.7)	0 - 1 (0 - 0.04)
EM100	40 (88.2)	1,200 (270)	377 (85)	180 (1,593)	180 (1,593)	± 0.02 (± 0.001)	1.30 (2.87)	0.55 (1.21)	8 - 80 (1.8 - 18.0)	0 - 1 (0 - 0.04)
EM125	52 (114.6)	2,000 (450)	626 (141)	320 (2,832)	300 (2,655)	± 0.02 (± 0.001)	2.80 (6.17)	1.20 (2.65)	10 - 100 (2.2 - 22.5)	0 - 1 (0 - 0.04)



SECTIONAL DIAGRAM

Applied Robotics XCHANGE™ manual tool changing technology allows for exchanging robotic end-of-arm tooling (EOAT) between operations. The integrated operating lever adds efficiency and simplicity to processes that require frequent connection/disconnection of tooling, while also reducing the probability of human errors introduced by tooled connection methods.



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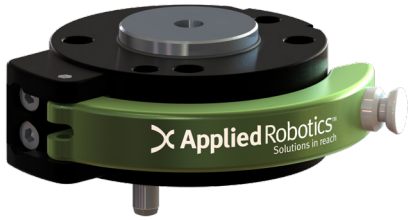
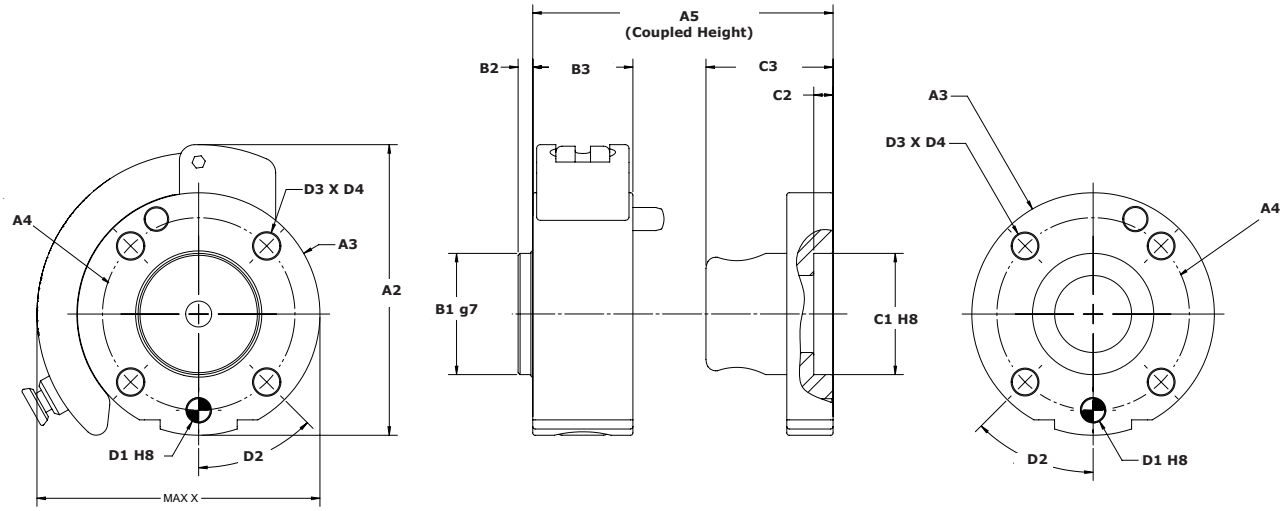
PRODUCT INFORMATION

ROBOT SIDE ADAPTOR



TOOL SIDE ADAPTOR



	Overall Dimensions					Robot Side Dimensions			Tool Side Dimensions			Bolting Pattern				
MODEL	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**C1**	**C2**	**C3**	**D1**	**D2**	**D3**	**D4-A**	**D4-B**
EM040	57 (2.24)	62.5 (2.46)	50 (1.97)	40 (1.57)	32 (1.26)	25 (0.98)	3.8 (0.15)	22 (0.87)	25 (0.98)	5 (0.20)	28 (1.10)	6 (0.24)	45º	4	M6	M8
EM050	73.3 (2.89)	75.6 (2.98)	63 (2.48)	50 (1.97)	38 (1.50)	31.5 (1.24)	3.8 (0.15)	26 (1.02)	31.5 (1.24)	5 (0.20)	33 (1.30)	6 (0.24)	45º	4	M6	M8***
EM063	90 (3.54)	87.24 (3.43)	80 (3.15)	63 (2.48)	45 (1.77)	40 (1.57)	3.8 (0.15)	32 (1.26)	40 (1.57)	5 (0.20)	38.5 (1.52)	6 (0.24)	45º	4	M6	M8
EM080	110 (4.33)	113.5 (4.47)	100 (3.94)	80 (3.15)	47 (1.85)	50 (1.97)	3.8 (0.15)	32 (1.26)	50 (1.97)	6 (0.24)	39 (1.54)	8 (0.31)	30º	6	M8	M10
EM100	147 (5.39)	140 (5.51)	125 (4.92)	100 (3.94)	50 (1.97)	63 (2.48)	3.8 (0.15)	35 (1.38)	63 (2.48)	6 (0.24)	41 (1.61)	8 (0.31)	30º	6	M8	M10
EM125	174 (6.85)	180 (7.09)	160 (6.30)	125 (4.92)	70 (2.76)	80 (3.15)	3.8 (0.15)	50 (1.97)	80 (3.15)	10 (0.39)	64 (2.52)	10 (0.39)	30º	6	M10	M12

* Dimensions are in millimeters (inches).
** Interfacing to the tool changer adaptors can be done either by bolting through the adaptor (ISO 9409-1 specification, D4-A) or by bolting directly into the adaptor (D4-B).
*** The EM050 Tool Side Adaptor is also available with a bolt directly into version: M6 threads on the 50 mm bolt pattern (ISO 9409-1) Specification.
**** All dimensions are descriptive and subject to variation for technical upgrading. We reserve the right to make variations without prior notification.

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