

NOTES:

1. TORQUE RATINGS, Nm :

PART NUMBER	SYMMETRIC TORQUE
QM12A-1050-00L	0.0
QM12A-1050-09L	0.9
QM12A-1050-18L	1.8
QM12A-1050-23L	2.3
QM12A-1050-34L	3.4
QM12A-1050-39L	3.9

PART NUMBER	ASYMMETRIC CW TORQUE	ASYMMETRIC CCW TORQUE
QM12A-2050-23L	2.3	1.4
QM12A-2050-34L	3.4	2.0
QM12A-2050-45L	4.5	2.7
QM12A-2050-50L	5.0	3.0
QM12A-3050-23L	1.4	2.3
QM12A-3050-34L	2.0	3.4
QM12A-3050-45L	2.7	4.5
QM12A-3050-50L	5.0	3.0

2. CYCLE LIFE:  
WITHIN 25,000 CYCLES STATIC TORQUE STAY WITHIN ±20% OF TORQUE SPECIFICATION.

3. FINISH:  
A. NATURE  
B. BLACK PAINT

4. 360 DEGREE SHAFT ROTATION

5. OIL RING SEALS FOR PROTECTION AGAINST ENVIRONMENT CONTAMINATION

METRIC(MM)	[ENGLISH] (IN)
0-3 < ±0.15	0-0.118 < ±0.006
3-10 < ±0.20	0.118-0.394 < ±0.008
10-30 < ±0.25	0.394-1.181 < ±0.010
30-50 < ±0.30	1.181-2.000 < ±0.012
50-100 < ±0.40	2.000-4.000 < ±0.016
100-200 < ±0.50	4.000-8.000 < ±0.020

PROPRIETY ITEM - ALL INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS PATENT AND OTHERWISE ARE RESERVED BY LEECO TECHNOLOGIES CORPORATION

**LEECO**

APPROVED  
JLIU

DRAWN  
BCHEN

SHEET 1 OF 1

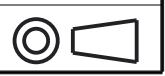
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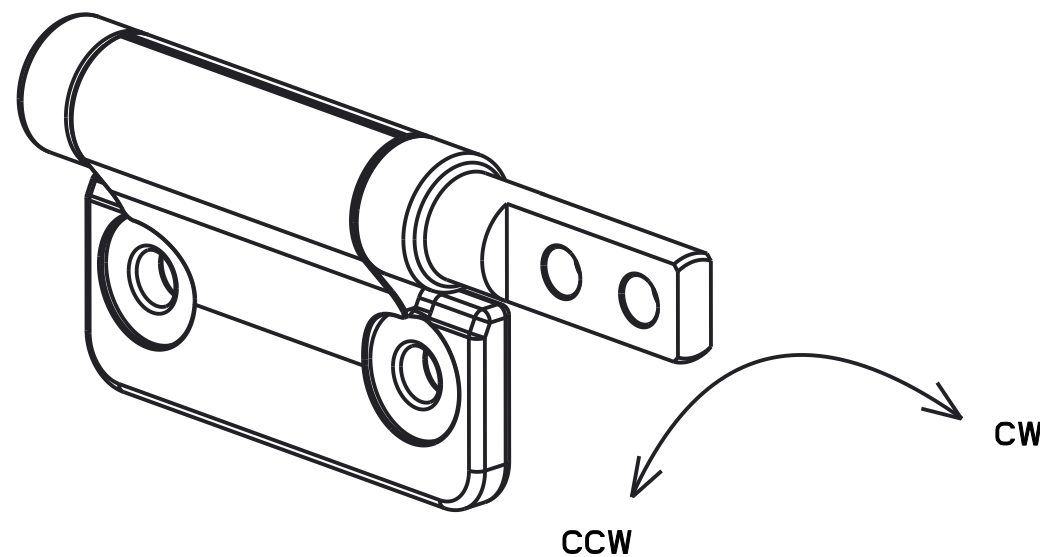
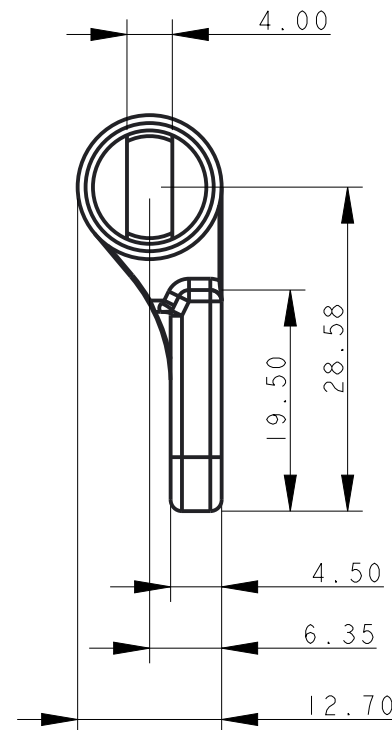
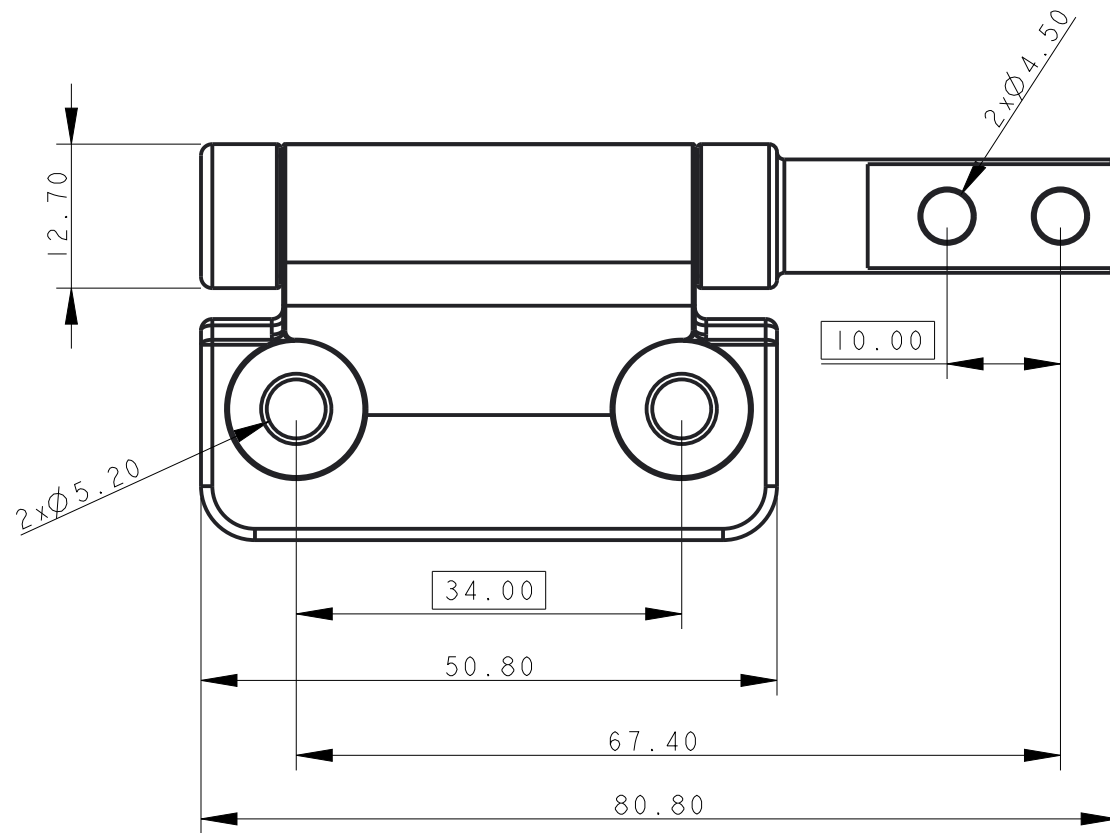
DWG NO.  
**QM12A-x050-xxL**

TITLE  
**QM12A LEFT**

MATERIAL  
**STEEL & ZINC**

REV  
**A3**





NOTES:

1. TORQUE RATINGS, Nm :

PART NUMBER	SYMMETRIC TORQUE
QM12A-1050-00R	0.0
QM12A-1050-09R	0.9
QM12A-1050-18R	1.8
QM12A-1050-23R	2.3
QM12A-1050-34R	3.4
QM12A-1050-39R	3.9

PART NUMBER	ASYMMETRIC CW TORQUE	ASYMMETRIC CCW TORQUE
QM12A-2050-23R	2.3	1.4
QM12A-2050-34R	3.4	2.0
QM12A-2050-45R	4.5	2.7
QM12A-2050-50R	5.0	3.0
QM12A-3050-23R	1.4	2.3
QM12A-3050-34R	2.0	3.4
QM12A-3050-45R	2.7	4.5
QM12A-3050-50R	3.0	5.0

2. CYCLE LIFE:  
WITHIN 25,000 CYCLES STATIC TORQUE STAY WITHIN  $\pm 20\%$  OF TORQUE SPECIFICATION.

3. FINISH:  
A. NATURE  
B. BLACK PAINT

4. 360 DEGREE SHAFT ROTATION

5. OIL RING SEALS FOR PROTECTION AGAINST ENVIRONMENT CONTAMINATION

METRIC(MM)	[ENGLISH] (IN)
0-3 <math>\pm 0.15</math>	0-0.118 <math>\pm 0.006</math>
3-10 <math>\pm 0.20</math>	0.118-0.394 <math>\pm 0.008</math>
10-30 <math>\pm 0.25</math>	0.394-1.181 <math>\pm 0.010</math>
30-50 <math>\pm 0.30</math>	1.181-2.000 <math>\pm 0.012</math>
50-100 <math>\pm 0.40</math>	2.000-4.000 <math>\pm 0.016</math>
100-200 <math>\pm 0.50</math>	4.000-8.000 <math>\pm 0.020</math>

**LEEEO**

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DRAWN  
BCHEN

DWG NO.

QM12A-x050-xxR

TITLE

QM12A RIGHT

MATERIAL

STEEL & ZINC

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SHEET 1 OF 1

SCALE: 1.000

REV

A3

