

QC-21HM Hollow-Wrist Master-side Tool Changer

Product Description

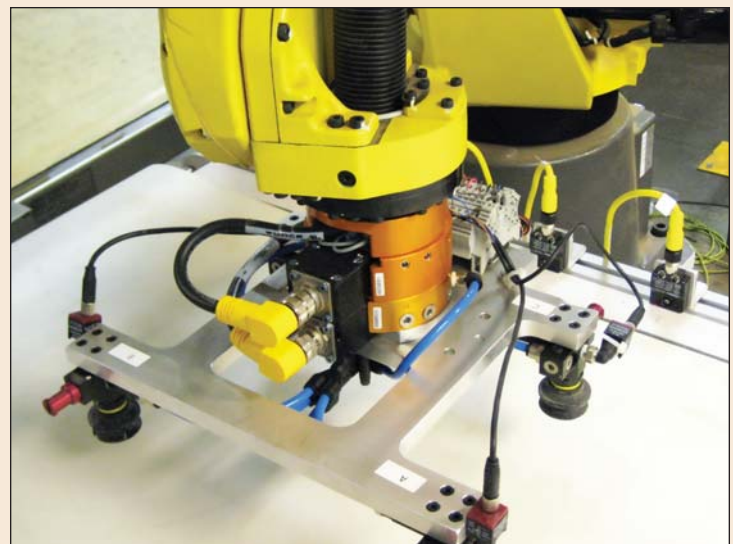
The QC-21HM Tool Changer is a new QC-21 Master that allows for routing air and electrical lines directly through its center. This feature provides direct compatibility with many of the industry's hollow-wrist robots. The QC-21HM is directly compatible with the standard QC-21 Tool assemblies, and has Lock and Unlock sensing integrated into its design for safe Coupling and Uncoupling.

Product Features

- All air lines and optional Lock and Unlock sensor connections are made along the Tool Changer center axis, enabling a direct mount to many hollow-wrist robots.
- Results in a cleaner more direct utility routing through the robot's hollow wrist.
- QC-21HM Master-side is compatible with all QC-21 Tools.
- Eight (8) pass-through air connections: (2) are 1/4" push-connect tube fittings, (6) are 1/8" push-connect tube fittings.
- Lock and Unlock connections are 1/8" push-connect tube fittings.
- Metric tube size connections are also available.
- Many optional electrical module cables can also be routed through the center.



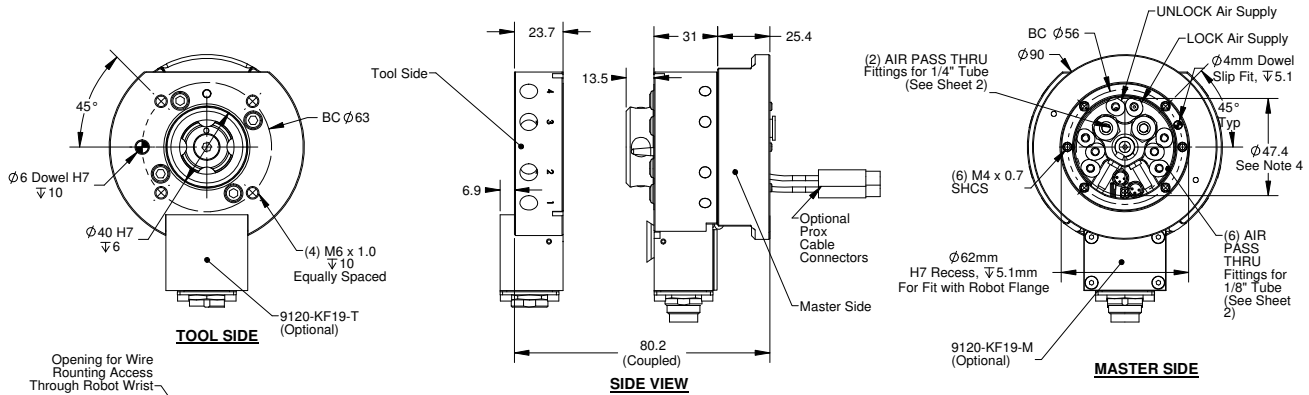
QC-21HM Master-side and QC-21 Tool-side



QC-21HM Tool Changer mounted on a Hollow-Wrist Robot

Specifications	Values	Comments
Suggested Payload Limit	55 lb (25 kg)	Higher payloads possible with lower moment rating.
Locking Force @ 80 psi (5.5 bar)	520 lb (2300 N)	Fail-safe takes over when load exceeds locking force.
Static Moment Capacity – (X and Y)	500 lbf-in (56 Nm)	Dynamic moment capacity 3x higher than static moment capacity.
Static Moment Capacity – (Z)	690 lbf-in (78 Nm)	
Positional Repeatability – (X,Y, and Z)	0.0006 in (0.015 mm)	Repeatability tested at rated load at one million cycles.
Weight – when coupled (no accessory modules)	2.35 lb (0.9 kg)	Master plate 1.65 lb (0.62 kg); Tool plate 0.7 lb (0.3 kg).
Max. distance between Master and Tool plate before locking	0.12 in (3.0 mm)	No-Touch Locking technology allows Master and Tool plates to lock with plate separation.
Pneumatic pass-through Ports (qty) size	(8) 1/8 NPT	Max. pressure of 100 psi (7 bar). Metric ports available. Contact ATI for more information.

ATI reserves the right to change these specifications.

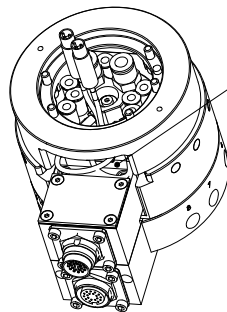
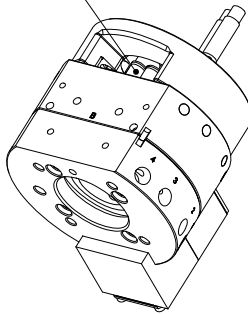


Opening for Wire Rounting Access Through Robot Wrist

TOOL SIDE

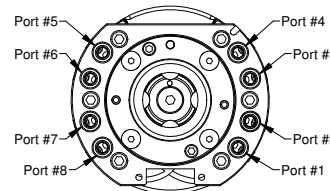
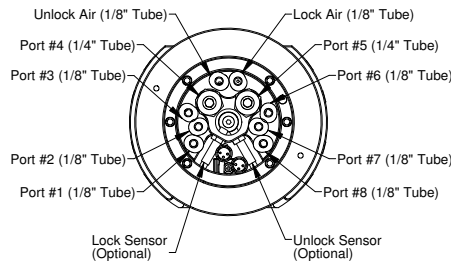
SIDE VIEW

MASTER SIDE



Robot Mounting Side

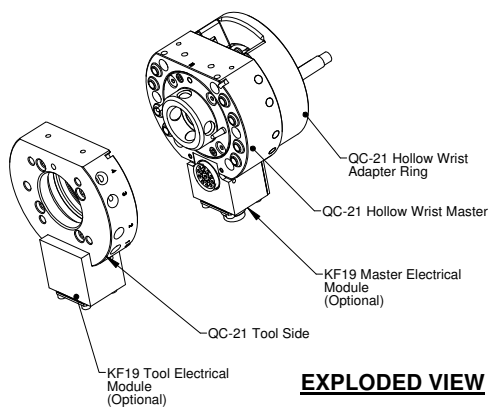
Master-Tool Coupling Side



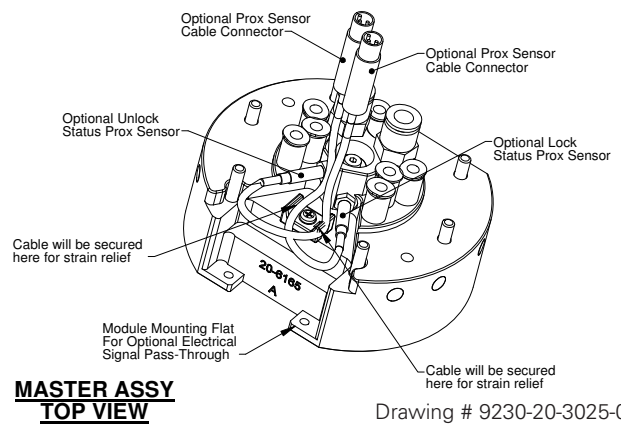
AIR LINE CONNECTION DIAGRAM

NOTES:

1. Mounting Hardware Included on Master Side
2. Drawing shows a master side assembly for direct mount to Hollow Wrist Robots.
3. Tool Side QC-21 is standard product.
4. Dimension Indicates the perimeter for pneumatic fittings.



EXPLODED VIEW



MASTER ASSY TOP VIEW

Drawing # 9230-20-3025-01