

Sigma 3.1

Heavy-duty modular tool changers

Higher strength, lower weight and a low profile maximizes robot load capability, while enhanced modularity and interchangeability increases flexibility.



Features and Benefits

- Higher payload capacity – up to 350kg
- Unique six-sided design accommodates more utilities
- A Sigma 3.1 and Sigma 5.1 common profile provides modularity and allows for interchangeability of utility modules
- Connects directly to your robot face plate, eliminating adaptor plate
- Low profile reduces inertial forces
- Supports wide variety of bus communication systems

Applications

- Spot welding
- Material handling
- Machine loading/unloading
- Mold changing
- Docking systems
- Pallet coupling systems
- Pick and place operations
- Press transfer

Not exactly what your application requires? Applied Robotics can design a solution that meets your particular application needs.

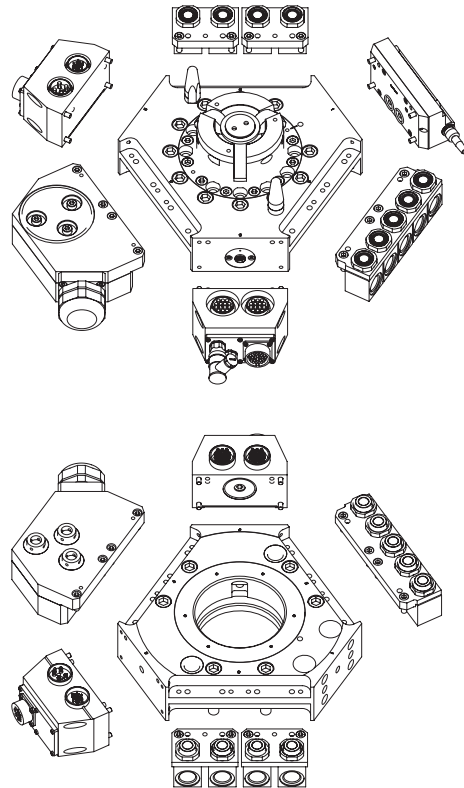
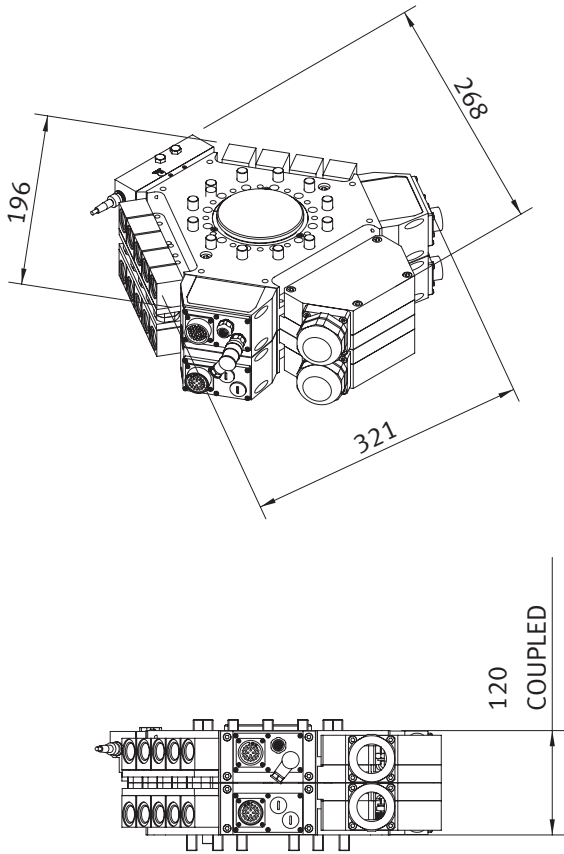
SPECIFICATIONS

| Description | Robot Adaptor | Tool Adaptor |
|-----------------------------|-----------------------|-----------------|
| Payload | 350 kg | |
| Moment – Mx, My | 15000 in lbs/1,695 Nm | |
| Moment – Mz | 15700 in lbs/1,780 Nm | |
| Height | 60 mm | 60 mm |
| Width x Length | 268 mm x 321 mm | |
| Weight * | 16.5 lbs/7.34 kg | 11.2lbs/5.13 kg |
| Couple/Uncouple Port | 1/4 BSPP | na |
| Couple Status Sensor | Couple/Uncouple | na |
| Repeatability – X,Y | +/- 0.02 mm | |
| Repeatability – Z | +/- 0.013 mm | |
| Operating Temp. | 5 – 60 Deg C | |
| Operating Pressure | 6 bar +/- 1 | |

Note: Specifications provided are maximum recommended limits under static conditions. For correct product sizing, consideration must be given to all applicable dynamic forces, including manipulator inertia, tooling configuration and external process forces.

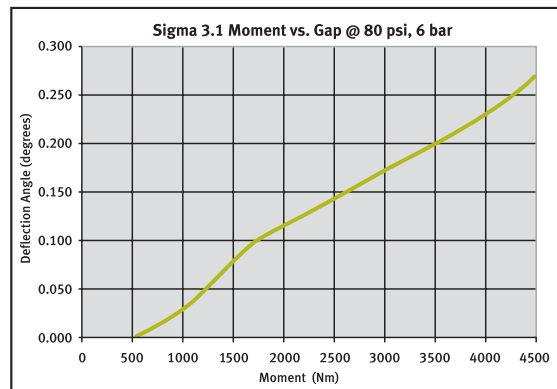
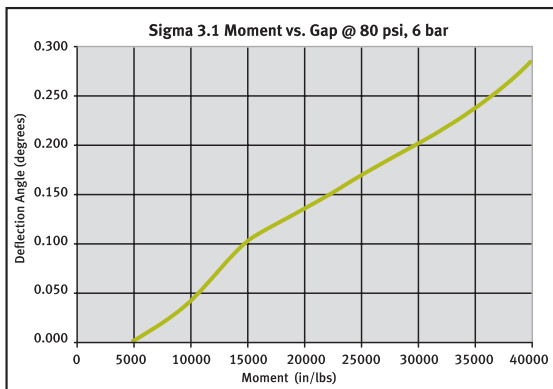
* Without modules

Engineering Data



All dimensions in millimeters

Moment Charts (Moment/Deflection curve shown represents the orientation that yields maximum deflection)



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