

ACTION

ROBOTS • MANIPULATORS®



ROBOTS

FOR SEVERE-DUTY APPLICATIONS



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ACTION®

Severe-duty Robots

When standard "off the Shelf" Electric robots do not have the capacity or the reach **Action®** hydraulic robots with capacities up to 8,000 pounds and reaches up to 26 ft (8 meters) are available to solve your toughest material handling problems. **Action®** Robots feature highly responsive controls that are extremely easy to use. They are designed for hostile environments such as high temperature and extreme dust. These robots are custom-configured to suit both production and site requirements. Modular design provides flexibility in installation. The parallelogram boom allows maximum horizontal and vertical reach while maintaining stability and a large useful payload capacity, even at full reach. 360 degree rotation assures a large working envelope.

With over 35 years' experience in demanding industrial applications we have produced robots with a unique combination of advanced control and rugged, reliable construction. Consider the advantages of Vulcan Engineering Co. and the line of **Action®** Robots.



High Performance Hydraulic Features

Actuator mounted lock valves for safety. Five levels of filtration and closed center, high response hydraulic pumps with accumulator.



Customized for Your Application

These robots are engineered to solve tough material handling problems. Our application engineers work with you to choose tooling, mounting, and hydraulic power unit location to suit your production and installation requirements.



Advanced Controls

Precise, robotic control of complex handling motions with payloads up to 8,000 lbs and reaches out to 8 meters. Robot is controlled by a true motion controller designed for hydraulic control systems. Modern robot language structure is used to make integration into your facility seamless. Controller has capacity to control external axis for a full automation of any task.

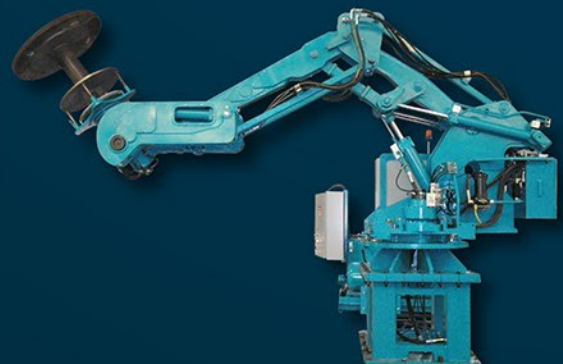


Advantages

- Large working envelope
- No telescoping joints
- High speed operations
- High reliability hydraulics
- Custom tooling designs
- Easy installation, easy maintenance

Model No.	Capacity	Power
960	1,100 lbs (500 kg)	50 HP (38 kW) power unit
1060	2,200 lbs (1000 kg)	75 HP (56 kW) power unit
1560	3,300 lbs (1500 kg)	75 HP (56 kW) power unit
1860	4,400 lbs (2000 kg)	100 HP (75 kW) power unit
2860	6,600 lbs (3000 kg)	125 HP (94 kW) power unit

*Features and options subject to change without notice





Additional Robot Features

Hydraulic System

- All valves are mounted on the rear of machine for easy maintenance
- Closed center, constant pressure type system for fast response and extended service
- Plumbing and tubing engineered, not "shop built," for proper routing resulting in long life, fewer connections, and reduced twisting.
- The hydraulic fluid is either cooled or heated while being constantly cleaned, even with robot shut down. Fluid temperature control ensures consistent viscosity, resulting in smooth operation and peak performance. This temperature-controlled "kidney loop" enables the manipulator to be idle for any period of time and re-started in optimum operating condition.



Structure

- Adjustable swing stops to allow for easy maintenance.
- All structural components machined for proper alignment of mating components.
- Heavy structures and weldments for minimum deflection, allowing for higher acceleration and longer life of bearings and related components
- Finite Element Analysis used in the design of booms and pins joints.
- Deep-section booms and linkage, designed with no interference points, provide maximum unit strength, minimum deflection and minimum stress.
- Sealed bearing joints block contaminants and extend life of pins and bearings.

Actuator Group

- Oversized fastener between rod eye and rod, for ease of assembly and reliable tightness
- Induction hardened cylinder rods for scratch/chip resistance and maximum rod seal life
- Pilot pressure lock valves mounted directly to the load-carrying

actuators. In the event of a damaged hose, fitting, control valve, or loss of pump pressure, the actuators lock into a secure position.

- Cylinders designed to bottom out before any booms or linkage providing less stress in components and longer life.

Controls

- Industrial PC based user interface with color touch screen and alphanumeric-touch-pad
- Program and parameter backup to hard disk
- RAID Level 1 hard disk controller with dual hard drives. In the event of a failure of one hard-drive the system will continue to function until the failed hard drive can be replaced. Upon replacement of failed hard drive the data from the remaining drive will be automatically mirrored to the new hard drive.
- Virtually unlimited procedures, program lines and teach points available.
- Teach pendant
- Motion Controller
 - The Motion Controller is specifically designed for control of hydraulic systems
 - 5 coordinated axes of motion
 - Specifically developed software available



Attachment

- Designed specifically for the application
- Heavy duty structure used for long life and maintainability
- Modular design, easy to add axis in the future if the application changes or the machine is redeployed



ROBOTS

Action® Robots are a product of Vulcan Engineering Co.



Custom Designs for Special Jobs
Custom tooling designs are available for shearing, grinding and more.

Optional Additions:

- Different jaw configurations and openings
- Yaw
- 90° Pitch (60° standard)
- Roll
- Offset heads for limited space requirements
- Specially designed Investment Casting continuous rotating tooling
- Base Extensions
- Centralized Lubrication
- Automatic Lubrication

Scan the Code

Use your smart phone and scan this QR code to get more info on Action® Robots!



OTHER APPLICATIONS

For material removal and other robotic applications, use your smart phone to scan the QR code or visit our website to see the full array of robotic solutions and integration from Vulcan Engineering Co.



<http://www.vulcangroup.com>