

ERDP Remote Drive

Patent Pending

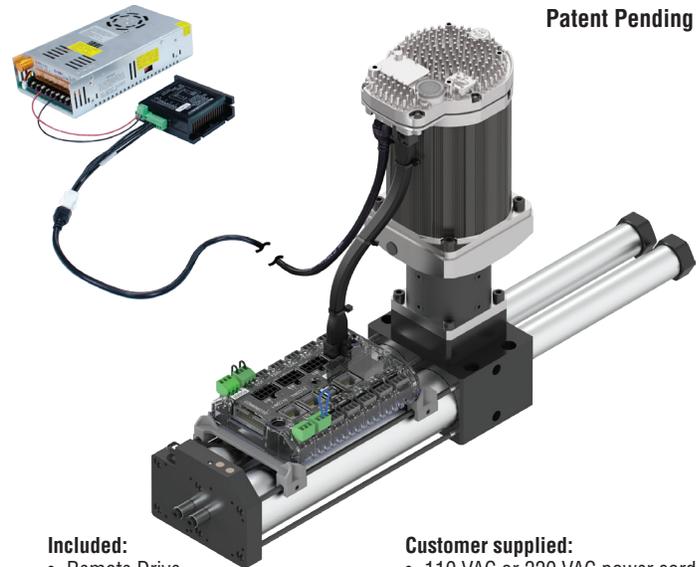
The PHD Remote Drive electrically powers pneumatic grippers, clamps, and short travel linear actuators, independent of factory air systems. Unlike a conventional pneumatic system, the remote drive and attached actuator(s) form a closed loop system with no air exhausted during operation to increase energy efficiency.

Major Benefits

- Pneumatic actuator(s) is driven the same as a standard pneumatic valve, and can power multiple actuators simultaneously.
- Powers appropriately sized actuator with up to 100 psi [7 bar] operating pressure.
- Programmed to emulate behavior of pneumatic actuator (i.e. grip - release).
- Maintains force to pneumatic actuators. Motor brake can be added to reduce energy consumption during long gripping or clamping intervals. Contact PHD for more details.
- Consult PHD for other sizes and options.

Operation

- Force produced against the exhaust-side piston is redirected to help compress the compression-side air.
- Energy expended to compress air on the compression side is recovered during subsequent expansion.
- Two-piece piston opens during the expansion cycle to replace air leaked.
- Pneumatic actuator(s) connects directly to the remote drive with standard pneumatic tubing.
- Remote drive connects to your digital controls.



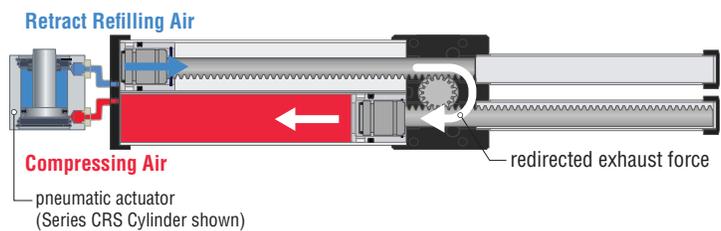
Included:

- Remote Drive
- Remote Drive Controller
- Regeneration Clamp
- Motor Power Supply - 50/60 Hz at 110 VAC or 220 VAC adjustable input

Customer supplied:

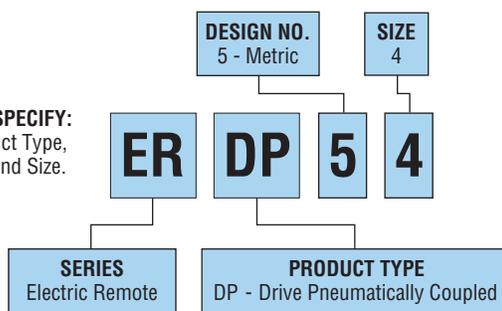
- 110 VAC or 220 VAC power cord
- 24 VDC power supply for controller
- PLC connection
- Air lines

CLOSED LOOP SYSTEM



ORDERING DATA

TO ORDER, SPECIFY:
Series, Product Type,
Design No., and Size.



NOTE:

Other sizes, options, and accessories available. Consult PHD.

Foldback motor models available for reduced footprint



Uses

- Electrifies pneumatic actuators.
- Reduces energy consumption and carbon footprint.
- Supplies air where centrally produced compressed air is not available
- Provides quiet operation.
- Eliminates weight of a motor integral to the actuator (transfer bar and robot arm weight limitations).
- One motor powers multiple actuators.

Application Examples

- Automated guided vehicles
 - Welding cells
 - Crossbar robotic feeding
 - Medical/Hospitals
 - Packaging
 - Robotic EOAT
 - Assembly cells
 - Food processing
- And many others
- Consult PHD with your application needs.

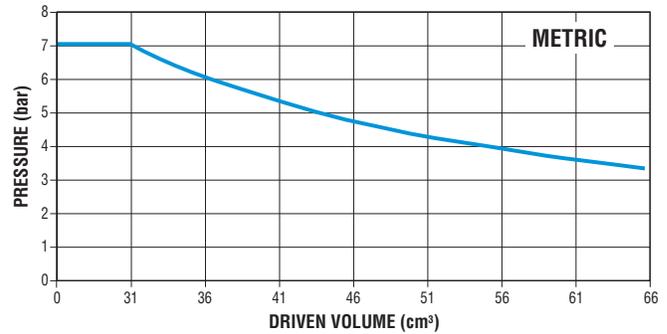
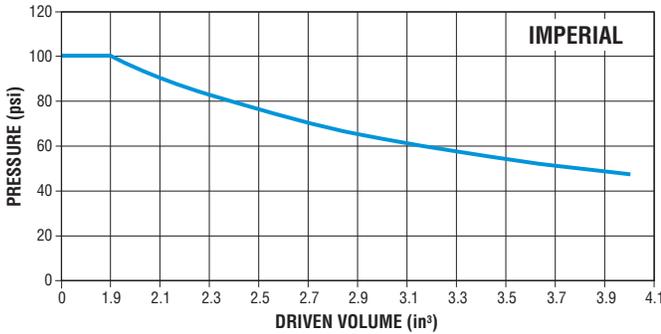
SPECIFICATIONS	ERDP54
MOTOR POWER SUPPLY ⁽¹⁾	480 W ⁽³⁾ , 110/220 VAC, 50/60 Hz Input
MOTOR CONTROLLER POWER SUPPLY ⁽²⁾	5 W Minimum, 24 VDC
TYPICAL NOISE LEVEL	50 dB
ACTION TIME ⁽⁴⁾	380 mS Maximum
WEIGHT	17.44 lb [7.91 kg]

NOTES:

- 1) Supplied with remote drive
- 2) Supplied by customer
- 3) Maximum capability of power supply; typical power consumption during operation can be much lower depending on application
- 4) Time for driven actuator to open or close (grippers or clamps), extend or retract (linear cylinders), rotate (rotaries), or escape component (escapements)

ERDP PRESSURE VS. DRIVEN VOLUME

DRIVEN VOLUME = Actuator volume (one direction) + air line volume (one direction) + additional volumes
(example: valving placed between ERDP54 and multiple driven actuators)



DIMENSIONS

