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PRODUCT DATASHEET

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Product Data Sheet
PDS 102-201.A01
June, 2007

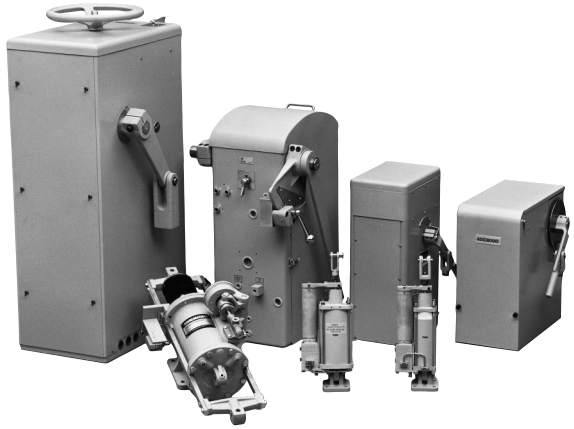
Rosemount Analytical Pneumatic Power Positioners

PRODUCT DESCRIPTION

Industry needs muscle to control process valves, dampers and feed mechanisms accurately and in response to a demand signal. Emerson's Rosemount Analytical pneumatic power positioners have been satisfying these exacting control requirements for many years in countless applications – from steel mills to refineries – where positioning speed and accuracy are taken for granted.

Rosemount Analytical power positioners are manufactured in cylinder sizes from 2-1/2 to 8 inches in diameter with strokes of 5 to 14 inches. They come in thrust and torque models for wall, swivel or floor mounting and with accessories such as limit switches, position transmitters, heated enclosures, air failure lock and characterized cams that provide an output motion that is a function of the input signal.

The miniature 2-1/2 x 5 positioner is so compact that 24 to 48 of these units are often used to control secondary air on one boiler.



FEATURES

- True Positioning Devices – All power positioners assume a definite position of the crosshead or operating lever for each demand signal variation through the action of an integral feedback mechanism.
- Mounting Variety – Models are available for convenient wall, swivel, or floor mounting. These positioners are often mounted directly on lever type valves by the valve manufacturer.
- Characterized Positioner – All positioners are equipped with a standard rotary cam or cam bar which produces a straight line relationship between input signal and output motion. Square or square root and blank cams are available.
- Air Lock – Designated models are equipped with an internal locking mechanism which stops and locks the positioner in the control position existing at the moment of air supply failure until air pressure is restored. System air locking schemes are also available.
- Fail Safe – Designated models can be equipped to drive the positioner to full open or full closed in case of air supply failure. NOTE: This feature should not be used with the air lock feature.
- Manual Operators – All torque type positioners are equipped with either a manual operating lever or a manual operating handwheel.
- Ambient Temperature – Positioners are generally suitable for operation from 0 to 140°F (-17,8 to 60°C) with a maximum rating of 300°F (149°C) for certain high temperature models.
- Dust Cover and Internal Heater – A dust cover is provided with or without heater and thermostat for certain torque type models.
- Limit Switches and Position Transmitters – Limit switches and position transmitters are available on designated models.
- Power Air Supply – Clean dry instrument air at 45 to 120 psig is required for cylinders of 8 inch diameter or less. For cylinders over 8 inches in diameter, the maximum air pressure for standard service is 100 psig and 250 psig for heavy duty service.

BENEFITS

- Accuracy
- Reliability
- Simple maintenance because of rugged frame construction
- Efficient torque and power at a minimum cost
- Fast response to small input signal changes due to high internal gain

OPERATION

Non-characterized (spring) feedback produces a straight line (1:1) relationship between the input signal and output response.

The linear shape produces a straight line (1:1) relationship between the input signal and output response.

Characterized (cam) feedback provides choice of linear/ square or square root characteristic for more versatility and better zeroing ability.

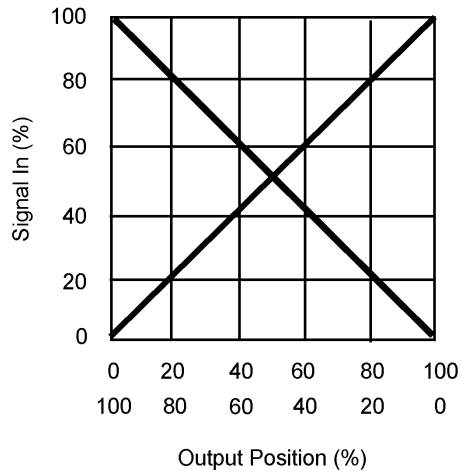
The square (x^2) shape will produce a small output change for large input changes during the lower portion of the signal range. When operating in the upper portion of the signal range, a small input change will be required to produce a large output change.

Conversely, the square-root ($\sqrt{x}$) shape will produce a relatively large output change for small input changes during approximately the first 10% of signal range. When operating in the upper portion of the signal range, a large input change will be required to produce a small output change.

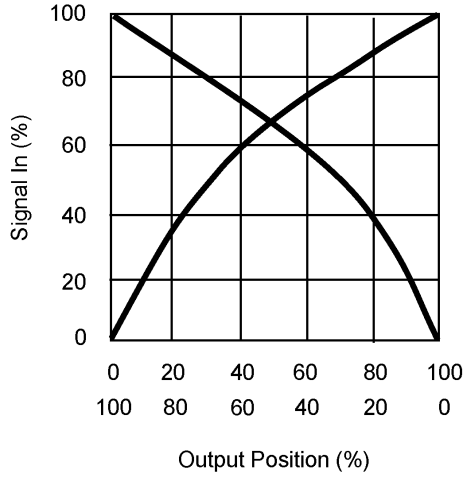
Note: Stall torques and thrusts are noted in the specifications. Rosemount Analytical recommends oversizing actuators by 40 percent above force required to ensure responsive operation.

Input-Output Characteristics

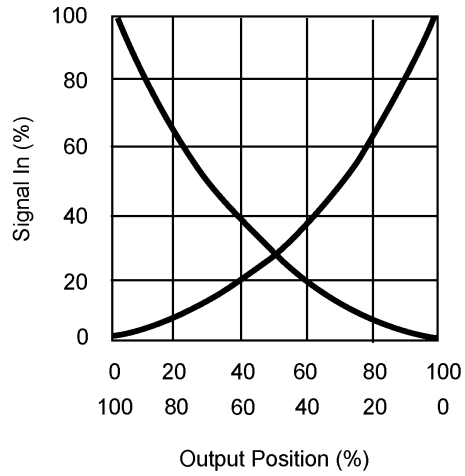
Linear (x)



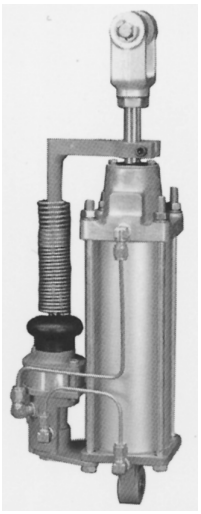
Square (x^2)



Square Root ($\sqrt{x}$)



2 1/2 X 5 THRUST TYPE SWIVEL MOUNTED SPECIFICATIONS [1]



Thrust Type Swivel Mounted Positioner

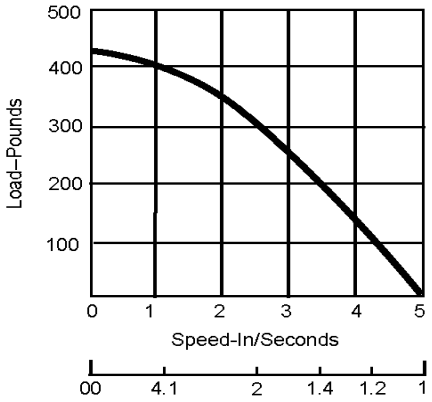
Accuracy:	± 1% of full scale
Temperature limits:	0° to 170°F (-17,8° to 77°C)
Full stroke time:	2 sec. or less
Hysteresis:	± 0.8% of full scale
Input signal range:	3-15, 3-27, 0-30, 0-60 psig (21-103, 21-186, 0-207, 0-414 kPa gauge), and 4-20 mA
Air supply	
Maximum:	120 psig (827 kPa gauge)
Minimum:	45 psig (310 kPa gauge)
Recommended:	100 psig (689 kPa gauge)
Thrust and load data	
Stall thrust:	500 lbs. (228 kg)
Maximum friction load:	125 lbs. (57 kg)
Maximum allowable weight load:	175 lbs. (79 kg)
Positioning accuracy with 3-27 psi control signal:	1%
Air consumption:	0.5 scfm free air
Air filter, style 4505C21G03:	sufficient capacity for 12 positioners [2]

OPTIONS

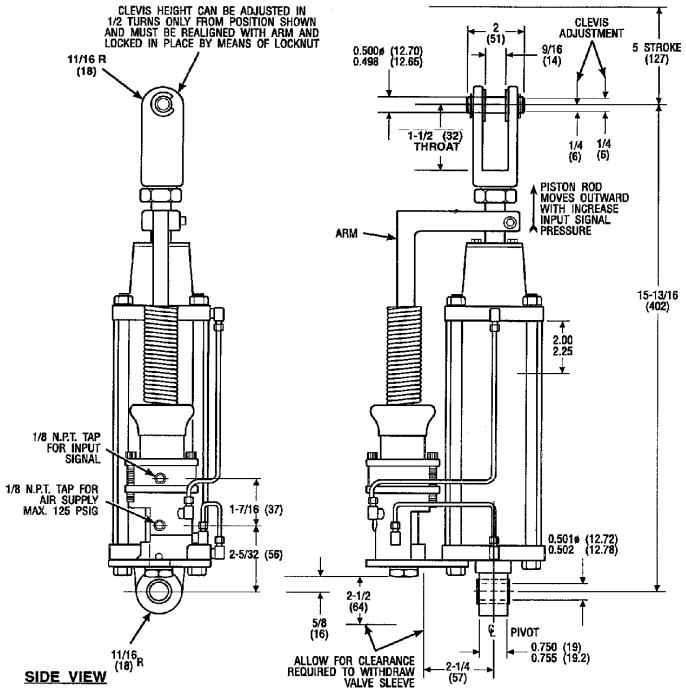
Fail safe (loss of power air)
I/P signal convertor
Dual limit switches
Pivot base
Anchor pivot pin for CE

ACCESSORIES

Clevis, clevis pin and retaining rings are included. An air filter regulator is required but is not included.



Speed-Thrust Curve



Drawings are for reference purposes only and Emerson does not warrant the accuracy of the dimensions herein.

[1] Specifications are subject to change without notification. Our policy is one of continuous improvement, and we reserve the right to change specifications.

[2] Two air filter regulators, Style 45D5C21G03, in parallel are required for 12 positioners.

2 1/2 X 5 THRUST TYPE SWIVEL MOUNTED ORDERING INFORMATION

Clevis, clevis pin and retaining rings are integral and are included. Instruction Manual IB 102-202N is included. Air filter 4505C21G03 should be ordered with positioner (see Accessory List below).

PP205	Pneumatic Power Positioner 2-1/2 x 5 Thrust Type	Shipping Weight: 9 lbs. (20 kg)

Code	Single Range/Electric Position Transmitter
1	3-15 PSI signal
3	3-27 PSI signal
5	0-30 PSI signal
7	On/off operation [1]

Code	Limit Switches
0	None
1	2 limit switches provided [2]

Code	I/P Transmitter for accepting 4-20 mA Control Signal
0	None
1	Provided (unmounted)

Code	Mounting
1	Standard swivel base
2	VeriTrim mounting

PP205	2	1	0	1	EXAMPLE

Consult factory for ordering information.

ACCESSORIES

Code	Description
4505C21G03	Air filter/regulator – recommended
371763	Pivot base and pin
271638	Anchor pivot pin for CE boilers (separated overfire air) [3]
3D37449G01	Fail-safe – 0% or 100% of travel initiated upon loss of power air, I/P included. 3-15 PSI control signals, only
3D39395G07	Maintenance tool kit
	Paint – Rosemount blue

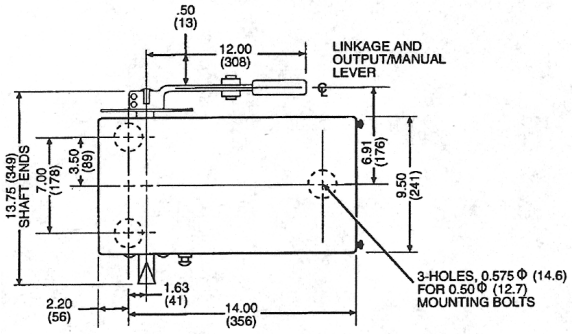
NOTES:
[1] Solenoid for on/off operation is dual coil 120 VAC.
[2] Limit switches are only adjustable 0-5% on closed end, and 95-100% on open end.
[3] For Trunnion mounted version, consult factory.

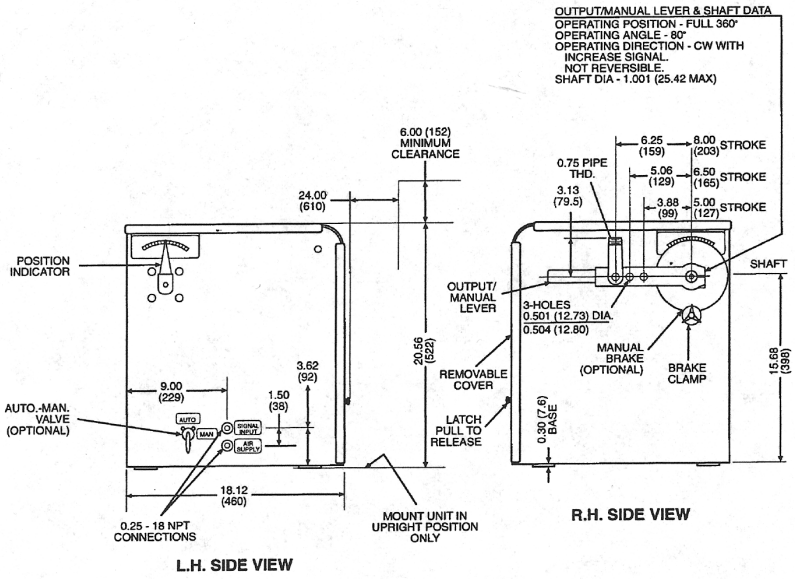
Rating for Limit Switches – SPDT

125 volts ac	15 amps
250 volts ac	15 amps
480 volts ac	15 amps
150 volts dc	0.5 amps
250 volts dc	0.25 amps

2 1/2 X 5; 4 X 5 ECONO TORQUE TYPE FLOOR MOUNTED SPECIFICATIONS [1]

This positioner was designed to accommodate low torque applications (below 90 ft.-lb.) (122 N.m) such as small packaged boilers, butterfly valves, jackshafts, fired heaters, etc. For applications requiring up to 180 foot pounds (244 N.m) a 4 x 5 cylinder is available.





Outline and Mounting Dimensions

Dimensions in inches with millimeters in parentheses

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OPTIONS

Characterized or non-characterized positioning
Manual brake
Supply air release
SPDT limit switches
Heater and thermostat
Electric position transmitter
Air lock
Fail safe
I/P signal convertor
Large cylinder for plant air supply below 100 psig (689 kPa)

ACCESSORIES

Air filter regulator is included
Clevis and pin are included

Repeatability:	1.0% of full stroke
Temperature limit:	40-170°F (4-77°C)
Full stroke time (unloaded):	2 seconds or less
Air supply	
Maximum:	120 psi (827 kPa)
Minimum:	45 psi (310 kPa)
Recommended:	100 psi (689 kPa)
Air consumption:	0.4 scfm (free air)
Torque load data based on recommended air supply	
Stall torque (2-1/2 x 5):	120 ft.-lbs. (162 N.m)
Stall torque (4x5):	240 ft.-lbs. (325 N.m)
Maximum friction load:	30 ft.-lbs. (41 N.m)
Maximum allowable weight load:	45 ft.-lbs. (61 N.m)
Input signal:	3-15, 3-27, 0-30 psi (21-103, 21-186, 0-207 kPa), and 4-20 mA
Output shaft angle:	80°
Unit weight:	60 lbs. (27 kg)

2 1/2 X 5; 4 X 5 ECONO TORQUE TYPE FLOOR MOUNTED ORDERING INFORMATION

• Select complete model number from model number matrix

Pneumatic Power Positioner Econo Torque Type	Shp. Wt. lbs./kgs.
	80/33

Includes air filter/regular style 4505C21G03 and Clevis, style 174469

Code	Positioner Type	
1	Non-characterized	
2	Characterized	

Code	Positioner Size	
1	2.5 x 5 cylinder	
2	4 x 5 cylinder [1]	

Code	Signal Range	
1	3 – 15 psig (21–103 kPa)	4/1,8
2	3 – 27 psig (21–186 kPa)	4/1,8
3	0 – 30 psig (0 – 207 kPa)	4/1,8
4	4 – 20 mA (I/P mounted and piped)	9/4,1

Code	Manual and Lock Operation	
0	None	
1	Manual operator	
2	Manual operator and manual lock	
3	Manual operator, manual lock and soft air lock [2]	
4	Manual operator, manual lock and fail safe [3]	10/4,5

Code	Limit Switches (SPDT) [4]	
1	None	
2	Two switches	4/1,8
4	Two switches and electric position transmitter (EPT) [5]	8/3,6

Code	Heater and Thermostat	
0	None	
1	150 watt (AC) heater	

PP075T	1	2	3	1	2	1	EXAMPLE	80/33

Consult factory for ordering information.

[1] Recommended to provide 180 foot pounds (244 N m) torque if plant air supply is 100 psig (689 kPa) or 90 foot pounds (122 N m) with 50 psig (345 kPa) air supply.

[2] Soft air lock is accomplished by trapping air in the cylinder – it is not a mechanical lock.

[3] Assembled to fail open (piston extended 100%) on loss of power air supply.

[4] SPDT wwitch ratings 15 Amps, 125, 250, or 480 VAC; 10 Amps, 125 VAC, "L" (Tungsten Lamp) 1 HP, 125 VAC; 2 HP, 250 VAC 1/2 amp, 125 VDC, 1/4 amp, 250 VDC.

[5] Two wire (24 VDC) 4 – 20 mA transmitter, not for intrinsically safe applications.

4 X 5 THRUST TYPE SWIVEL MOUNTED SPECIFICATIONS [1]

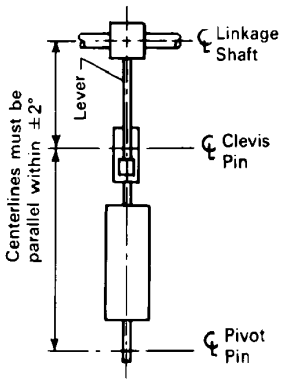
Thrust Type Swivel Mounted Positioner

OPTIONS

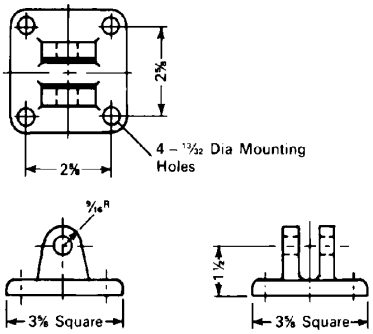
Fail safe (loss of power air)
I/P signal convertor

ACCESSORIES

Clevis, clevis pin and retaining rings are included.
An air filter is required but not included.



Alignment



Pivot Base

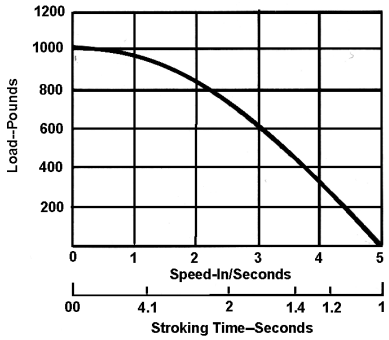
Accuracy:	±1% of full scale
Temperature limits:	0-170°F (-17, 8-77°C)
Full stroke time:	2 sec or less
Air supply	
Maximum:	125 psig (862 kPa)
Minimum:	45 psig (310 kPa)
Recommended:	100 psig (689 kPa)
Built-in lock:	Prevents shipping damage
Thrust and load data	
Stall thrust:	1200 lbs. (545 kg)
Maximum friction load:	300 lbs. (136 kg)
Maximum allowable weight load:	400 lbs. (136 kg)
Input signal range:	See table
Air consumption:	0.5 scfm free air

An anchor pivot pin is not available as for the 2-1/2 x 5 Swivel Type Positioner

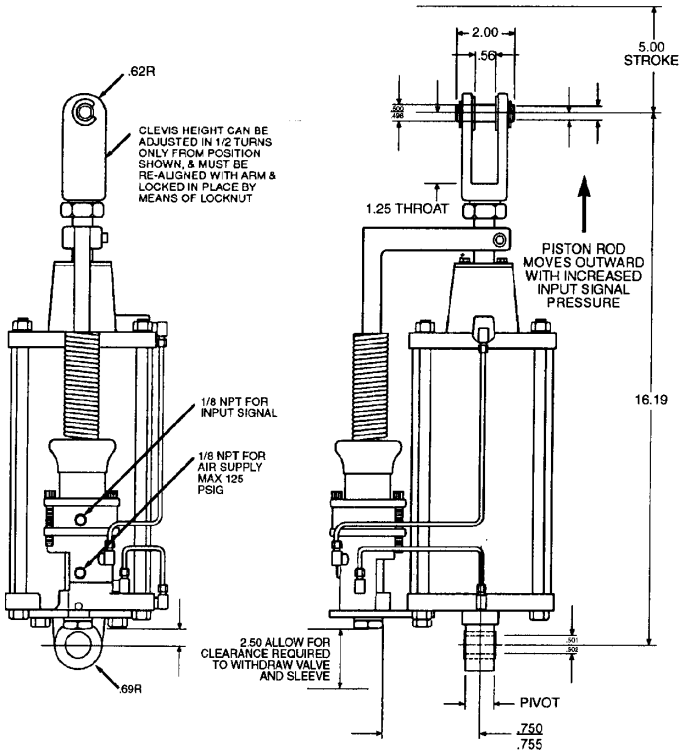
Two air filters/regulators, Style 45D5C21G03, in parallel are required for 12 positioners.

To Order, Specify:

1. Style number.
2. Pivot base and pin, if required.



Speed-Thrust Curve



Typical 4 x 5 Thrust Type Mounted Positioner, Style 477739-X.
Refer to individual outline drawings.

Positioner

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4 X 5 THRUST TYPE SWIVEL MOUNTED ORDERING INFORMATION

Clevis, clevis pin and retaining rings are integral and are included. Air filter/reg. 4505C21G03 should be ordered with positioner (See Accessory List below).

Code	Signal Range psig N.m	Current	Ship Weight lbs./kgs.
3D39491G01	0 – 30/0-207		30/13,6
3D39491G02	3 – 15/21-103		30/13,6
3D39491G03	3 – 27/21-186		30/13,6
3D39491G02	(requires I/P parts, see note [1] below)	4 – 20	30/13,6

Accessories

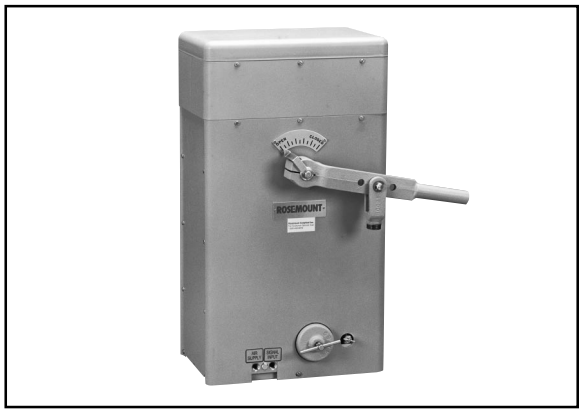
Code		Ship Weight lbs./kgs.
371763	Pivot base and pin	3/1,4
3D37449G01	Fail-safe [2]	15/6,8
4505C21G03	Air filter	1/0,5

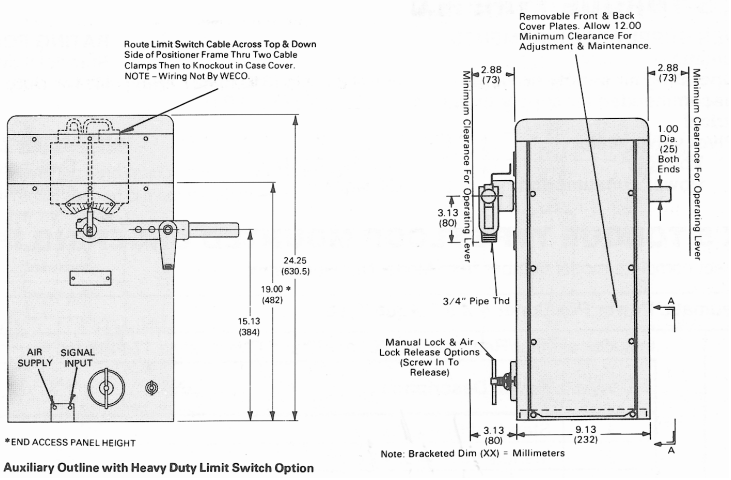
Consult factory for ordering information.

[1] Order Parts 9885A31H01, 275431-007, 4505C21G01 (these parts remote mounted)

[2] Actuated on loss of power air only

4 X 5 TORQUE TYPE FLOOR MOUNTED SPECIFICATIONS [1]





Auxiliary Outline with Heavy Duty Limit Switch Option

The Rosemount Analytical 4 x 5 Torque Type Power Positioner accepts standard pneumatic signal ranges and produces a 0 to 80° proportional shaft rotation. The options available include analog position transmission and/or contact closure for remote use, and position lock up on power air supply failure.

OPTIONS

Heater and thermostat
Air lock and positive mechanical lock
Manual lock
Limit switches – standard or heavy duty
Minimum stop
Fail safe
I/P signal convertor

ACCESSORIES

Filter regulator is included
Clevis and pin are included

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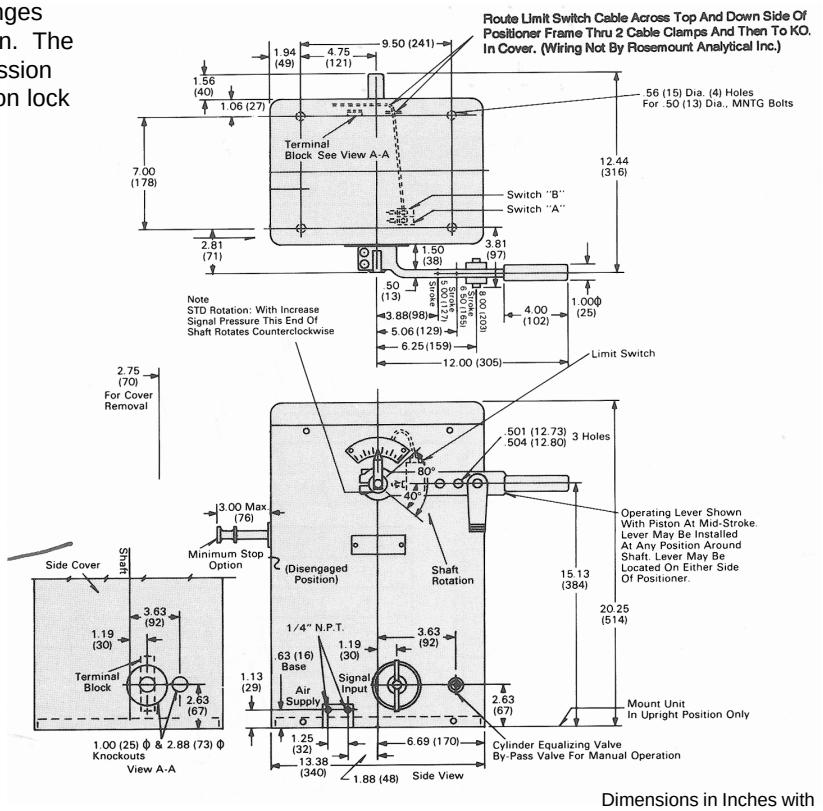


General Outline Drawing

Dimensions in Inches with millimeters in parentheses

SPECIFICATIONS

SIGNAL REQUIREMENTS

Inputs

Direct:	3-15/0-30 psig (21-103/0-207 kPa) and 4-20 mA signal
Inverse:	15-3/30-0 psig (103-21/207-0 kPa)

PERFORMANCE

Repeatability:	1-0% of full stroke
No load full stroke time:	3 sec.
Full stroke time with 240 ft.-lbs. (325 N.m) torque:	6 sec.
Stall torque:	400 ft.-lbs. (542 N.m) with 100 psig (689 kPa) air supply
Maximum friction load:	50% of control torque
Maximum weight load:	140 ft.-lbs. (189 N·m)
Maximum allowable cylinder air pressure:	120 psig (827 kPa)
Power air consumption:	0.5 scfm
Stroke length:	5 in. (127 mm) (80° rotation)

PHYSICAL CHARACTERISTICS

Weight:	80 lbs. (36 kg), typical
Air supply and signal air input fittings:	1/4 inch NPT female connections
Electrical connections:	16 gauge pigtail leads

ENVIRONMENTAL REQUIREMENTS

Ambient temperature	
Without heater:	+40°F to + 140°F (4,44°C to 60°C)
With heater:	-10°F to + 140°F (-23,3°C to 60°C)
Relative humidity:	operable up to 100% RH

4 X 5 TORQUE TYPE FLOOR MOUNTED SPECIFICATIONS (continued)

POWER SUPPLY REQUIREMENTS

Pneumatic

Operating air supply pressure: 45 to 120 psig (310 to 827 kPa)

Recommended air supply pressure: 100 psig (689 kPa)

Electrical

Pivot valve heater

Voltage: 117 VAC, 60 Hz

Power consumption: 150 watts

RATING FOR LIMIT SWITCHES

Standard switch SPDT 125 volts AC: 15 amps

Heavy-duty switch SPDT 120 volts AC: 20 amps

24 VDC power supply required for position transmitter.
Switches suitable for 100% adjustment.
Field wiring direct to switches (not by Emerson).

4 X 5 TORQUE TYPE FLOOR MOUNTED ORDERING INFORMATION

• Select complete model number from Model Number Matrix

Pneumatic Power Positioner 4 x 5 Torque Type	Ship Weight lbs./kgs.
Includes air filter/regular style 4505C21G03 and Clevis, style 174469	95/43

Code	Frame Description	
1	Standard/brass conns	
2	Manual lock/brass conns	8/3,6
3	Air lock/brass conns	12/5,5
4	Standard/stainless steel conns	
5	Manual lock/stainless steel conns	8/3,6
6	Air lock/stainless steel conns	12/5,5

Code	Signal Range	
1	3 – 15 psig (21-103 kPa)	
2	0 – 30 psig (0-207 kPa)	
3	4 – 20 mA (I/P mounted and piped)	4/1,8

Code	Cam Selection	
1	Linear standard rotation	
2	Linear rev. rotation	
3	Square root standard rotation – direct system	
4	Square root rev. rotation – direct system	
5	Square root standard rotation – inverse system	
6	Square root rev. rotation – inverse system	

Code	Limit Switch	
0	None	
2	Standard limit switch 2 – SPDT [1]	2/0,9
3	H. D. limit switch 2 – 2 DPDT	6/2,7
4	Standard limit switch and EPT	6/2,7
5	H. D. limit switch and EPT	10/4,5

Code	Heater	
0	None	
1	117 VAC, 150 watt heater	2/0,9

Code	Minimum Limit Stop	
0	None	
1	Limit stop feature	

PP405TR	1	2	2	1	1	1	EXAMPLE	95/43

Consult factory for ordering information.

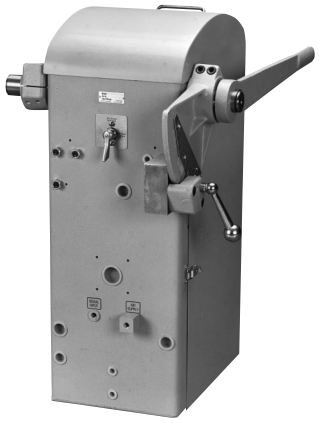
Accessories

Code	
3D37097	On-Off

[1] SPDT Switch Ratings
15 Amps, 125, 250 or 480 VAC;
10 Amps, 125 VAC "L" (Tungsten Lamp)
1 Hp, 125 VAC; 2 Hp, 250 VAC
1/2 Amp, 125 VDC, 1/4 Amp, 250 VDC

[2] Two wire (24 VDC) 4 – 20 mA transmitter mounted under power positioner cover, not for intrinsically safe applications.

6 X 10 TORQUE TYPE FLOOR MOUNTED SPECIFICATIONS [1]



6 x 10 Floor Mounted Positioner

Repeatability:	1% of full stroke or better
Temperature limits:	0-140°F (-17,8 -60°C), 160°(71°C) with increased maintenance
Full stroke time (unloaded):	5 sec or less
Input signal ranges:	3-15, 0-30 psig (21-103, 0-207 kPa), and 4-20 mA
Air supply:	
Maximum:	120 psig (827 kPa)
Minimum:	45 psig (310 kPa)
Recommended:	100 psig (689 kPa)
Air consumption:	1 scfm free air
10-inch stroke:	(80° rotation)
Torque and load data	
Stall torque:	1800 ft.-lbs. (2441 N.m)
Maximum friction load:	450 ft.-lbs. (610 N.m)
Minimum allowable weight load:	600 ft.-lbs. (814 N.m)
Physical Characteristics	
Weight:	275 lbs. (125 kg), typical
Air supply and signal Air input fittings:	1/4 inch NPT female connections
Electrical connections:	16 gauge pigtail leads

Limit Switches

Limit switches are of the single pole, double throw, non-explosion proof. Ratings are 125 VAC–15 amperes, 125 VDC – 0.5 ampere.

Cam Bar

The standard cam bar produces a straight line relationship. Shaping the cam bar in the field produces other relationships.

Standard rotation (as supplied) – lever moves counterclockwise with increased loading pressure.

Reverse rotation – lever moves clockwise with increased loading pressure when valve block and angling bar are reversed.

Operating lever shown with piston at midstroke position. Lever may be installed at 7-1/2 inch (191 mm) ncrements on a 2 inch (51 mm) dia. 48 tooth shaft from position shown.

To Order, Specify:

1. Positioner style number.
2. Accessory style number.
3. Desired input signal [3-15, 0-30 psig (21-103, 0-207 kPa)] or 4-20 mA.

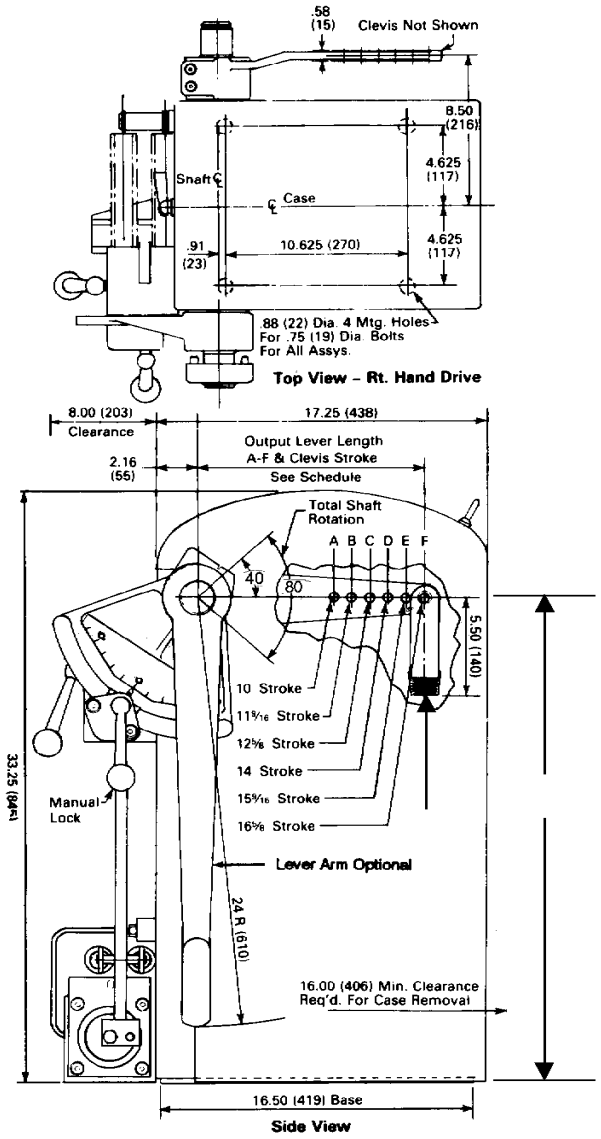
OPTIONS

Manual operator
Air lock
I/P convertor
Dual limit switches
Heater
Minimum limit stop

ACCESSORIES

Air filter is included
Clevis and pin are included

Dimensions in Inches with millimeters in parentheses



Drawings are for reference purposes only and Emerson does not warrant the accuracy of the dimensions herein.

[1] Specifications are subject to change without notification. Our policy is one of continuous improvement, and we reserve the right to change specifications.

6 X 10 TORQUE TYPE FLOOR MOUNTED ORDERING INFORMATION

• Select complete model number from Model Number Matrix

Pneumatic Power Positioner 6 x 10 Torque Type	Ship Wt. lbs./kgs. 300/136

Includes air filter style 372538-002 and clevis, style 174468-001

Code	Frame Description	
1	Standard/brass conns	
2	Manual lock/brass conns	8/3,6
3	Manual and air lock/brass conns	12/5,5
4	Standard/stainless steel conns	
5	Manual lock/stainless steel conns	8/3,6
6	Manual and air lock/stainless steel conns	12/5,5

Code	Drive Shaft Assembly	
1	Right hand drive	
2	Left hand drive	

Code	Signal Range	
1	3 – 15 psig (21-103 kPa)	
2	0 – 30 psig (0-207 kPa)	
3	4 – 20 mA (I/P mounted and piped)	4/1,8

Code	Limit Switch (Selection Based on Type)	
0	None	
1	[6] Two standard [1]	2/0,9
2	[6] Two standard [2]	2/0,9
3	[6] Two standard [3]	2/0,9
4	Two heavy duty [1]	6/2,7
5	Two heavy duty [2]	6/2,7
6	Two heavy duty [3]	6/2,7

Code	Heater	
0	None	
1	117 VAC, 150 watt heater	2/0,9

Code	Miscellaneous Accessories (Selection based on type)	
0	None	
5	Minimum limit stop	

PP610TR	1	2	3	0	0	1	EXAMPLE	300/136

Consult factory for ordering information.

Limit switches, EPT and manual limit stop dependent on type codes 1, 2, 3, 4 and 5 as below:

[1] For type codes 11, 12, 21, 31, 41, 42, 51 and 61
[2] For type codes 22 and 52
[3] For type codes 32 and 62
[4] For type codes 21, 31, 51 and 61
[5] For type codes 11, 12, 22, 32, 41, 42, 52 and 62
[6] SPDT switch ratings
15 amps, 125, 250 or 480 VAC;
10 amps, 125 VAC "L" (tungsten lamp)
1 Hp, 125 VAC; 2 Hp, 250 VAC
1/2 amp, 125 VDC, 1/4 Amp, 250 VDC

8 X 14 TORQUE FLOOR MOUNTED SPECIFICATIONS [1]

8 x 14 Floor Mounted Positioner

Repeatability:	1% of full stroke or better
Temperature limits:	0-140°F (-17,8 -60°C), 160°F (71°C) with increased maintenance
Full stroke time (unloaded):	2.5 sec
Air supply:	
Maximum:	120 psig (827 kPa)
Minimum:	45 psig (20 kPa)
Recommended:	100 psig (689 kPa)
Air consumption:	2 scfm steady state
8-inch stroke:	(80° rotation)
Input signal ranges:	3-15, 0-30 psig (21-103, 0-207 kPa), and 4-20 mA
Torque and load data	
Stall torque:	4600 ft.-lbs. (6238 N.m)
Maximum friction load:	1100 ft.-lbs. (1492 N.m)
Maximum allowable weight load:	1600 ft.-lbs. (2170 N.m)
Maximum load capability of the manual operator:	45 psi (310 kPa) differential across the piston

Cam Shape
The standard cam produces a straight line relationship. Shaping the cam in the field produces other relationships.

Limit Switches
Limit ratings listed under 4 x 5 Torque Type Floor Mounted Type Positioner on page 6 "Limit Switches" and "Current Rating" also apply to this positioner.

To Order, Specify:
1. Positioner style number (add a -1 if potentiometer and limit switch are required).
2. Accessory style number.
3. Desired input signal

OPTIONS

Manual operator
Air lock
Dust cover
Heater
I/P convertor
Position transmitter
Fail safe
Dual limit switches
Dual heavy-duty limit switches
Potentiometer (retransmitting slideware)
Master/slave positioner

ACCESSORIES

Air filter is included
Clevis and pin are included

Limit Switches (SPDT) and Potentiometer Accessory (add 15 lbs.)

For styles 452593, 443700, and 457031:
473662-001 ... 1 AC Switch

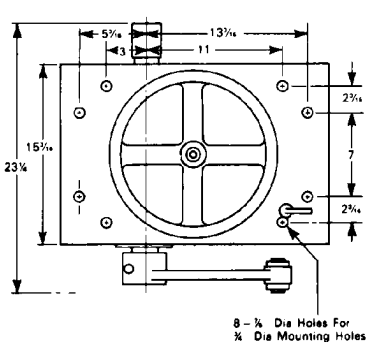
473662-002 ... 2 AC Switches
473662-003 ... Pot only
473662-004 ... 1 AC Switch and 1 Pot

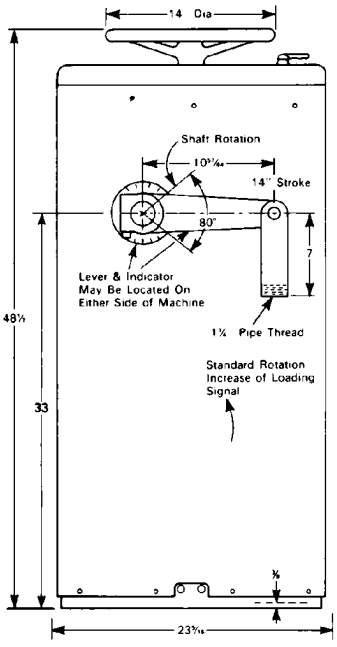
473662-005 ... 2 AC Switches and 1 Pot
473662-006 ... 1 DC Switch

473662-007 ... 2 DC Switches
473662-008 ... 1 DC Switch and 1 Pot
473662-009 ... 2 DC Switches and 1 Pot

For styles 450890, 452167, and 457696:
473662-010 ... 1 AC Switch
473662-011 ... 2 AC Switches
473662-012 ... Pot only
473662-012 ... Pot only
473662-013 ... 1 AC Switch and 1 Pot
473662-014 ... 2 AC Switches and 1 Pot
473662-015 ... 1 DC Switch
473662-016 ... 2 DC Switches
473662-017 ... 1 DC Switch and 1 Pot
473662-018 ... 2 DC Switches and 1 Pot

Dimensions in Inches





Typical 8 X 14 torque type floor mounted positioner with dust cover, styles 452167, 457696, 443700 and 457031. Refer to individual outline drawings.

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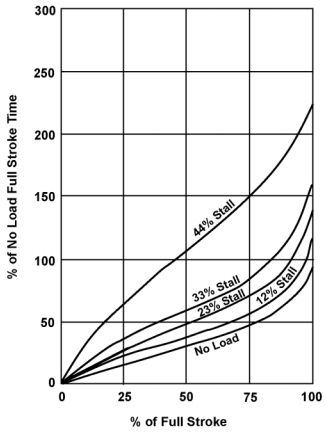
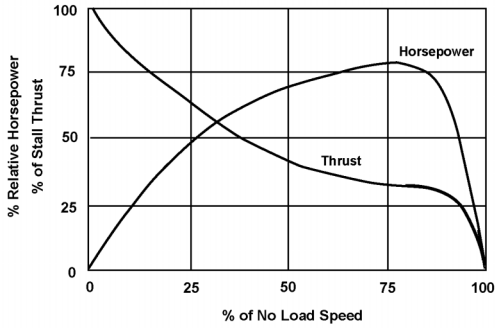


Set of Characteristic Curves for a Typical Air-operated Power Cylinder (Piston displacement and time are plotted for suddenly applied full-range positioning inputs to the cylinder. The linear sections of the curves correspond to steady speed).



A typical cylinder-thrust vs. speed characteristic. The curve of relative horsepower output is also shown.

8 X 14 TORQUE TYPE FLOOR MOUNTED ORDERING INFORMATION

Includes air filter style 372538-2 and clevis, style 274472

Code	Manual Operator	Dust Cover	Air Lock	Heater andThermostat		Shp. Wt. lbs./kgs
452167		x				550/250
457696		x		x		560/254
452593	x		x			580/263
443700	x	x	x			600/272
457031	x	x	x	x		610/277

Accessories

Code	Description	
7362C69G03	Limit switches [2] DPDT – NEMA 4, 13, factory wired to terminal box	5/2,3

I/P 4 – 20 mA Input

Code	Description	
9885A31H01	Current/pneumatic converter	
275431-007	Pressure gage	
4505C21G01	Filter regulator	

Fail-Safe Option [4]

Code	Description	
SKI - 63580	[2] Check valves [2], diaphr. valves [1] 2.2 ft. tank [1], pressure switch [1] Solenoid valve, mounted and piped	50/22,7

Master Slave Positioners

Code	Description	
6630D09G01	Master – manual oper., dust cover air lock, heater	620/281
6630D08G01	Slave – manual oper., dust cover air lock, heater	550/250

Consult factory for ordering information.

To Order, Specify:

[1] Desired input signal [3 –15, 0 – 30 psig (21-103, 0-207 kPa), or 4 – 20 mA – see accessories].

[2] If 4 – 20 mA input is required, also order I/P from accessories.

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