

PNEUMATIC & HYDRAULIC QUARTER TURN ACTUATORS

“QTP & QTH” SERIES

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"QTP & QTH" SERIES

Introduction

"QTP" Teco actuators are designed to operate quarter turn valves as ball or butterfly valves. Executions in double effect or single effect are available for modulating or ON-OFF services. All actuators are designed according Directive 2014/68/EU Pressure Equipment and ISO 9001

Technical description

PNEUMATIC OPERATING RANGE

- Pneumatic operating range up to **12 barg (175 psig)**.
- Standard operating temperature range: **-20°C / +100°C**. Special low temperature execution up to **-60°C**.
- Actuator torque output up to **300.000 Nm**.
- Supply medium: Instrument air, nitrogen, sweet gas.



HYDRAULIC OPERATING RANGE

- Hydraulic operating range up to **210 barg (3100 psig)**.
- Standard operating temperature range: **-20°C / +100°C**. Special low temperature execution up to **-60°C**.
- Actuator thrust up to **300.000 Nm**.
- Supply medium: Hydraulic oil mineral based.

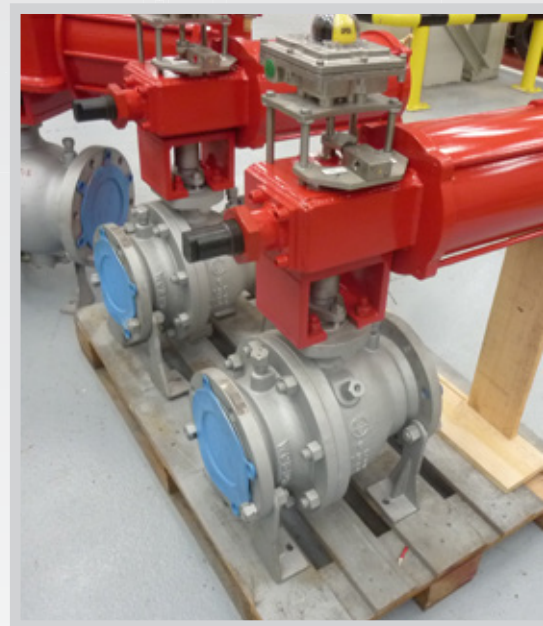


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Technical description

KEY DESIGN FEATURES

- Actuator construction in carbon steel.
- Scotch yoke mechanism for any quarter turn application.
- Carbon steel piston with dynamic floating seals, to reduce friction and avoids Stick-slip effect, even after prolonged periods without operating.
- 17-4 PH actuator shaft.
- Bronze sliding blocks to provide minimum friction.
- Cylinder tube internally electro less hard chromium plated (1x30μ thickness).
- End stroke stops in both senses for angular stroke adjustment.
- TECO actuators are designed and manufactured according to PED (2014/68/EU) Directive.
- 3.1 Certificate according EN10204 supplied for all pressure containing parts.

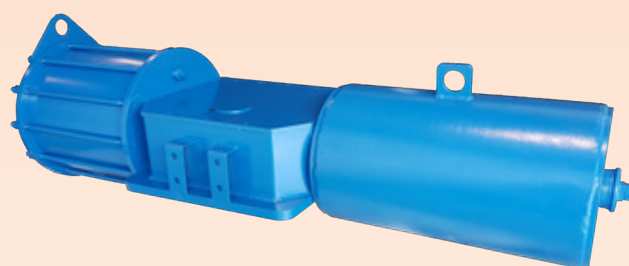




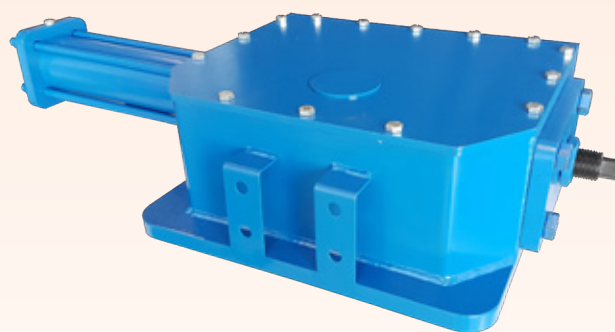
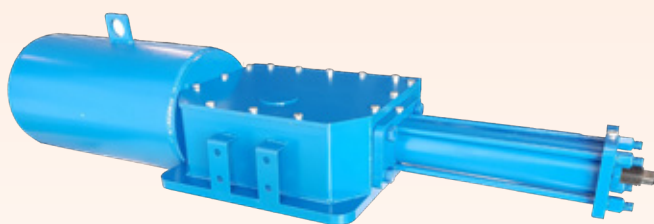
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Construction

QTP Series Quarter Turn Pneumatic Actuators

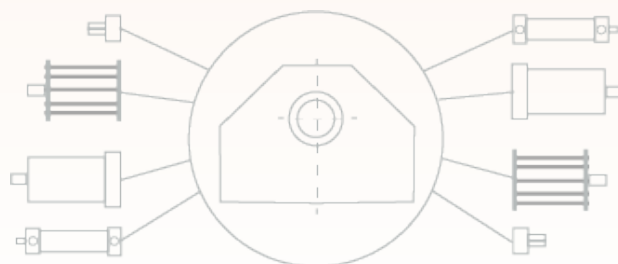


QTH Series Quarter Turn Hydraulic Actuators



Modular construction

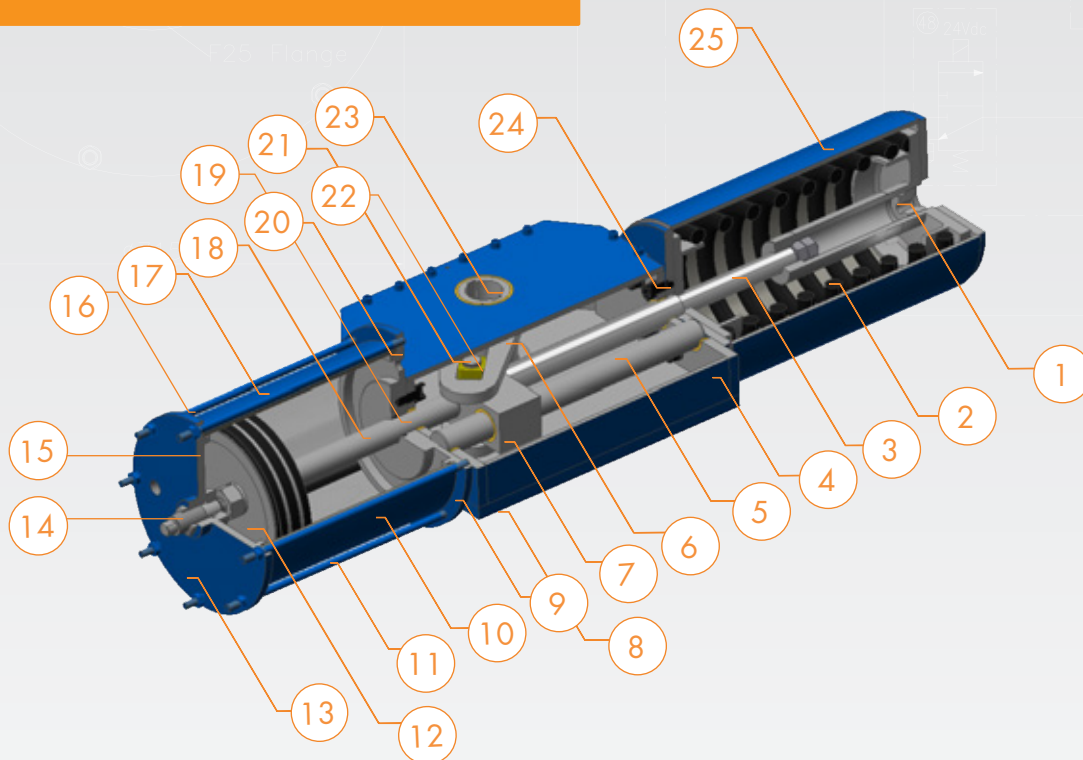
Teco Scotch Yoke actuators have a modular construction with a common central body in several sizes. Either pneumatic or hydraulic actuator can be attached and also spring cartridge.





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QTP Series Quarter Turn Pneumatic



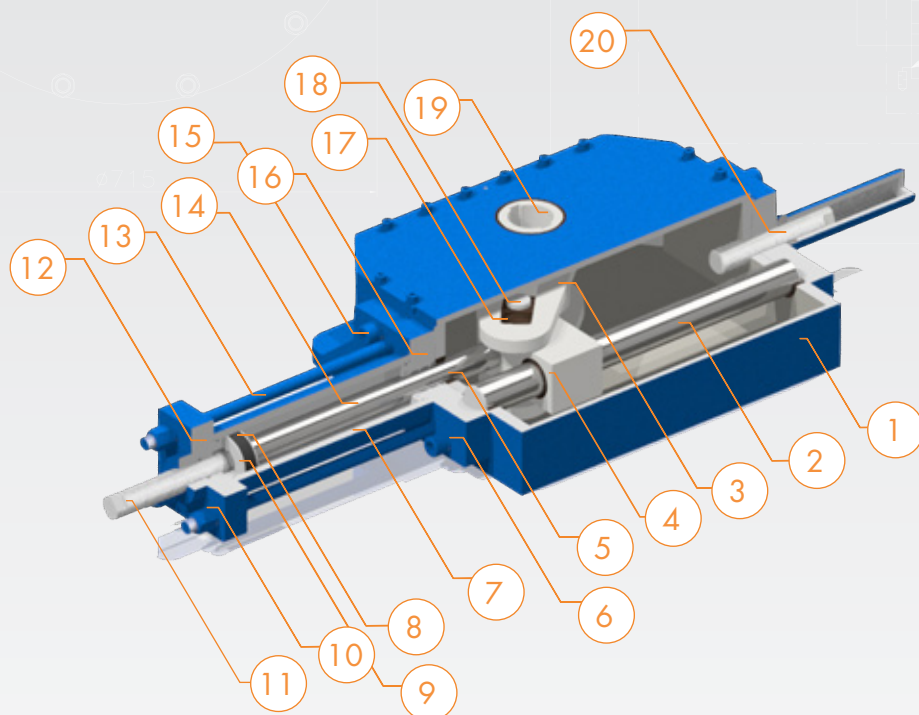
ITEM	DESCRIPTION	MATERIAL
1	Stop screw	Alloy steel
2	Spring	Alloy steel
3	Connecting rod	Chromium plated alloy Steel
4	Centrebody	Carbon Steel
5	Thrust bar	Chromium plated alloy Steel
6	Yoke	Carbon Steel
7	Guide block	Carbon steel
8	Rod bushing	Bronze
9	Head flange	Carbon Steel
10	Cylinder	Chromium plated carbon Steel
11	Piston seal	NBR
12	Piston	Carbon Steel
13	End flange	Carbon Steel

ITEM	DESCRIPTION	MATERIAL
14	Stop screw	Alloy Steel
15	O-Ring	NBR
16	Tie Rod	Alloy Steel
17	Guide ring	PTFE
18	Piston Rod	Chromium plated alloy Steel
19	Shaft seal	NBR
20	O-Ring	NBR
21	Yoke pin	Alloy steel
22	Sliding block	Bronze
23	Yoke bushing	Bronze
24	Rod bushing	Bronze
25	Spring cartridge	Carbon Steel



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QTH Series Quarter Turn Hydraulic Actuators



ITEM	MATERIAL	MATERIAL
1	Centre body	Carbon Steel
2	Thrust bar	Chromium plated alloy Steel
3	Yoke	Carbon Steel
4	Guide block	Carbon steel
5	Rod guide ring	PTFE
6	Head flange	Carbon steel
7	Cylinder	Chromium plated carbon Steel
8	Piston seal	NBR
9	Piston	Carbon Steel
10	End flange	Carbon Steel

ITEM	MATERIAL	MATERIAL
11	Stop screw	Alloy Steel
12	O-Ring	NBR
13	Tie Rod	Alloy steel
14	Piston Rod	Chromium plated alloy Steel
15	O-Ring	NBR
16	Shaft seal	NBR
17	Sliding block	Bronze
18	Yoke pin	Alloy steel
19	Yoke bushing	Bronze
20	Stop screw	Alloy Steel



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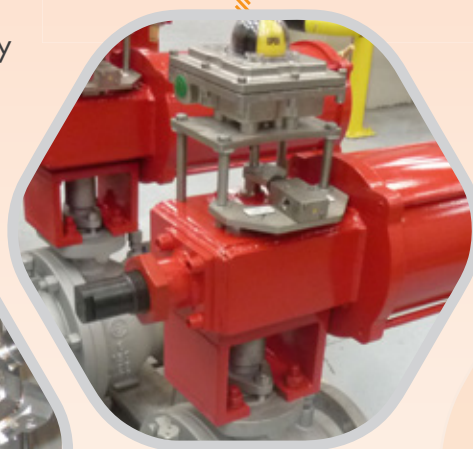
Options

Manual Override

Hand wheel operation is available for all ACN actuator models.

As option, hydraulic manual override can be provided to operate valve.

Hydraulic manual override is directly mounted on actuator and includes hand pump, directional valve, relief and check valve and oil tank.



Control System

TECO actuators can be equipped with a huge range of control system according client requirements for ON-OFF or modulating applications. Control system available in control cabinet or stainless steel plates.

Special Executions

On request, Teco actuators can be manufactured in an extensive range of special executions, as:

1. Completely construction in **Stainless steel**.
2. **Limit switch** box and **partial stroke** option.
3. **Remote Hydraulic Power Unit** for hydraulic actuators available on demand.



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Quarter turn actuator denomination

QT"X"

"X"E

FA"X"

("X")

"X"

/

"ø"

/

"MM"

QTP: Pneumatic Actuator
QTH: Hydraulic Actuator

SE: Single Effect
DE: Double effect

FAC: Fail to close
FAA: Fail to open

Spring configuration

Body size

Piston diameter

MM: With hand wheel operation
-- : Without hand wheel operation

