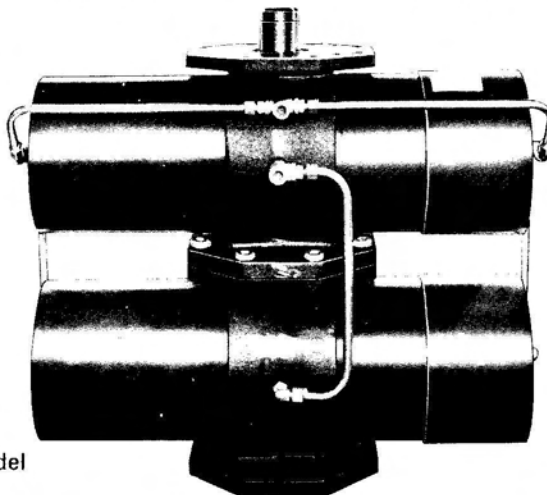


QUALITY CONTROLS, INC.

FAX 1-603-286-7648 1-603-286-3321

ROTARY PNEUMATIC/HYDRAULIC ACTUATOR Models R8400D* and R8400DFS*



R8400D
Double Acting Model

FEATURES AND SPECIFICATIONS

DOUBLE SCOTCH YOKE DRIVE ACTION

Double scotch yoke provides for single or double piston drive with maximum starting torque transmission to actuator drive shaft.

RETAINER KEY FASTENER

The end cap is fastened to the actuator body by a retainer key. A matched groove around the end cap and the actuator body accepts the retainer key which provides full 360° contact for positive lock. The same retainer key is used to replace the end cap with a spring capsule for conversion to Fail Safe actuation without removing the actuator from the line.

FAIL SAFE SPRING CAPSULE

The spring is factory assembled into a locked capsule for safe, simple installation and removal. Special O-ring seal prevents internal corrosion due to moisture and other contaminants. When ordered with a solenoid valve, actuator will be piped with a spring loaded check valve and breather cap for system exhaust.

DOUBLE MOUNTING PAD

Top and bottom pads are identical. Bottom pad provides for multi-position, rugged attachment to mounting bracket. Top pad provides versatile mounting of auxiliary items such as limit switches, positioners, etc.

STEM LOCATION IS CENTERBORE OF PISTON

Provides for unlimited mounting positions. Actuator can be installed parallel to pipe line or at 90° position.

MANUAL OVERRIDE

Actuator drive shaft extends from top of actuator providing for emergency manual operation.

WEATHER GUARD

Standard on fail safe models for protection against rain and snow entering the fail safe capsule.

OPTIONAL EQUIPMENT

SOLENOID VALVES - Mounted and Piped

Specify enclosure - NEMA I, III, IV, VII, etc.

AIR PILOT VALVES - Mounted and Piped

Air control in lieu of solenoids.

LIMIT SWITCHES - Mounted

For open/close position indication. Specify type - NEMA I, III, IV, VII, etc.

POSITIONER - Mounted and Piped

3 - 15 psi instrument air standard. If other signal range is required, please specify.

ADJUSTABLE TRAVEL STOPS

Mechanically limit travel of actuator.

SPECIAL COATING

For corrosion resistance. Specify requirements.

AIR PREPARATION ACCESSORIES

Furnished loose, but can be mounted and piped if specified.

AIR REGULATOR

Adjusts air pressure leading to actuator.

AIR FILTER

Assures clean air for actuator.

AIR LUBRICATOR

Provides oil mist for internal lubrication of actuator.

AIR SPEED CONTROL

Controls air to actuator to adjust speed of actuation.

DECLUTCHABLE GEARBOX FOR MANUAL OPERATION

HIGH TEMPERATURE PREPARATION

Special seals, heat shields, extended brackets, etc.

SYSTEM MODULES

Can be quoted upon receipt of complete specifications.

*Patented and patents applied for.



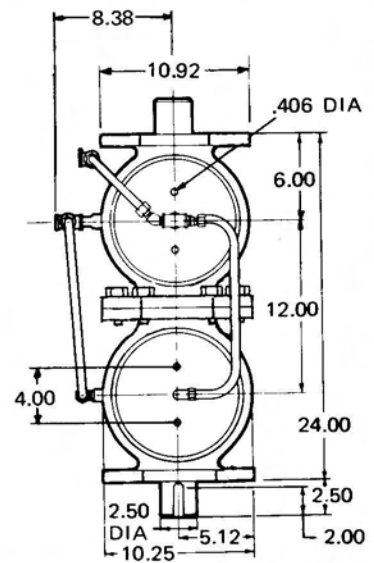
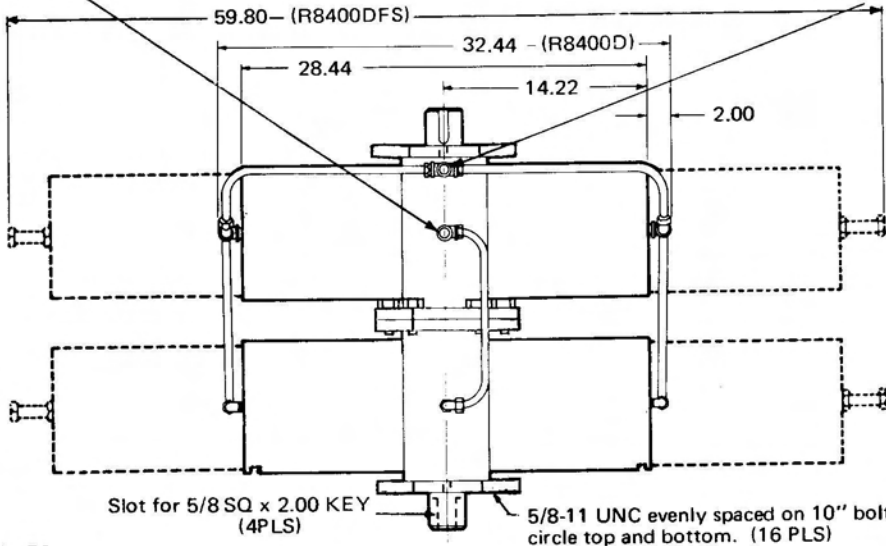
ROTARY PNEUMATIC/HYDRAULIC ACTUATOR

MODELS R8400D and R8400DFS

DIMENSIONS

3/8-18 NPT—Supply air to this port for outbound piston stroke.

3/8-18 NPT—Supply air to this port for inbound piston stroke—double acting actuators only.



NOTES:

1. Actuator shown with piston at end of inbound stroke.
2. Spring capsule not shown in end view.

TECHNICAL DATA

BORE	8.56 in.
STROKE	5.81 in.
NO. OF PISTONS	4
MAXIMUM WORKING PRESSURE	
Pneumatic	125 psi
Hydraulic	125 psi

CYLINDER VOLUME	
Double Acting	
inner	2160 Cu. In.
outer	1320 Cu. In.
Fail Safe	2160 Cu. In.
OUTPUT DRIVE TRAVEL	90°
WEIGHT	
Double Acting	640 Lbs.
Fail Safe	920 Lbs.

DOUBLE ACTING ACTUATOR[†] (R8400D) OUTPUT TORQUES

TORQUE lb-in.	OPERATING PRESSURE*					
	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	90 PSI
BREAK	43200	55000	66800	78400	90000	100000
RUNNING	21200	26900	32600	38300	44000	49700

[†]Maximum sizing pressure for double acting is 90 PSI.

FAIL SAFE ACTUATOR (R8400DFS) OUTPUT TORQUES

TORQUE lb-in.	OPERATING PRESSURE*				
	40 PSI	60 PSI	70 PSI	80 PSI	100 PSI
BREAK-AIR	23500	37000	41920	52400	66000
FINISH-AIR	12000	19100	22680	26600	33800
BREAK-SPRING	27800	43000	45600	57600	72400
FINISH-SPRING	13400	21200	23940	27600	35200

RECOMMENDED SPARE PARTS: One complete set of O-rings, and one set of retaining keys.



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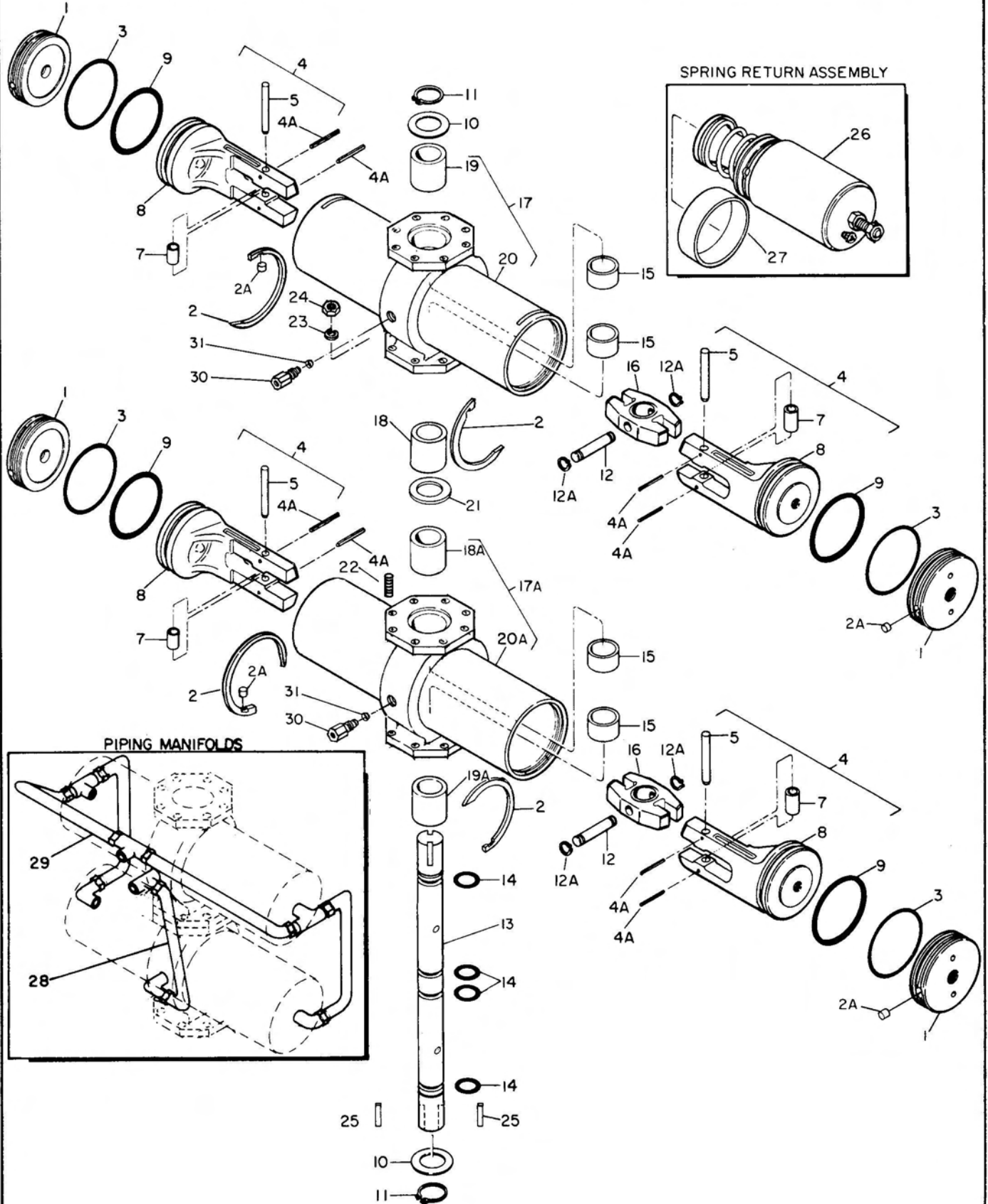
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QUALITY CONTROLS, INC.

QUALITY CONTROLS, INC. PNEUMATIC ACTUATOR MODEL R8400D and R8400DFS

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PARTS LIST

MODEL R8400D and R8400DFS

INDEX NO.	PART NUMBER	DESCRIPTION	QTY	U/O CODE
REF.	R8400D	ACTUATOR, Pneumatic, rotary	REF.	A
REF.	R8400DFS	ACTUATOR, Pneumatic, rotary (Fail Safe).	REF.	B
1	460-1016	. . . . . CAP, End (see note 1)	4	
2	460-2904	. . . . . KEY, Retaining (AP)	4	
2A	400-2901	. . . . . SLUG, Key retainer	4	
3	952-0172-410	. . . . . O-RING, End cap (see note 2)	4	
4	4600-3201	. . . . . PISTON AND ROLLER ASSEMBLY	4	
4A	443-2250-11P	. . . . . PIN, Spring	2	
5	460-2502	. . . . . PIN, Straight, headless	1	
7	460-2203	. . . . . BEARING, Sleeve	1	
8	460-3210	. . . . . PISTON	1	
9	952-0445-1A0	. . . . . O-RING, Piston (see note 2)	4	
10	974-3101-000	. . . . . WASHER, Thrust	2	
11	959-3001-000	. . . . . RING, Retaining (AP)	2	
12	460-2503	. . . . . PIN, Straight, headless	2	
12A	959-2601-000	. . . . . RING, Retaining (AP)	4	
13	462-2101	. . . . . SHAFT, Output	1	
14	952-0228-430	. . . . . O-RING, Output shaft	4	
15	460-2202	. . . . . BEARING, Sleeve	4	
16	460-4102	. . . . . YOKE	2	
17	4622-3303	. . . . . CYLINDER BODY & STEM BEARING ASSEMBLY	2	
18	462-2201	. . . . . BEARING, Sleeve, Center	1	
19	462-2202	. . . . . BEARING, Sleeve, outside	1	
20	462-3302	. . . . . CYLINDER, Body	1	
17A	4622-3304	. . . . . CYLINDER BODY & STEM BEARING ASSEMBLY	2	
18A	462-2201	. . . . . BEARING, Sleeve, center	1	
19A	462-2202	. . . . . BEARING, Sleeve, outside	1	
20A	460-3323	. . . . . CYLINDER, Body	1	
21	462-2501	. . . . . LOCATOR, Ring	1	
22	231-3304-03	. . . . . STUD (AP)	8	
23	935-2504-11P	. . . . . LOCKWASHER (AP)	8	
24	919-2502-02P	. . . . . HEX NUT (AP)	8	
25	945-2501-110	. . . . . KEY, Stem coupling	2	
26	4600-7501	. . . . . SPRING RETURN ASSEMBLY (40 psi) (See Warning Note)	4	B
26	4600-7502	. . . . . SPRING RETURN ASSEMBLY (60 psi) (See Warning Note)	4	B
26	4600-7509	. . . . . SPRING RETURN ASSEMBLY (70 psi) (See Warning Note)	4	B
26	4600-7503	. . . . . SPRING RETURN ASSEMBLY (80 psi) (See Warning Note)	4	B
26	4600-7504	. . . . . SPRING RETURN ASSEMBLY (100 psi) (See Warning Note)	4	B
27	400-1405-004	. . . . . WEATHER GUARD	4	B
28	4624-6701	. . . . . PIPING MANIFOLD (center)	1	
29	4624-6702	. . . . . PIPING MANIFOLD (end)	1	A
30	460-5701	. . . . . AIR FITTING	2	
31	971-2312-000	. . . . . FLARE GASKET	2	

WARNING

The spring is factory assembled into a locked capsule. This provides for simple and safe removal of the spring return assembly during maintenance. Do not attempt to disassemble the spring return assembly. This unit is spring loaded under high spring pressure.

Note 1. Not used on Model R8400DFS

Note 2. Optional O-rings
 952-0172-430 - VITON O-RING, End cap
 952-0445-430 - VITON O-RING, Piston

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(AP) - Attaching Parts

U/O - "Used on" code

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