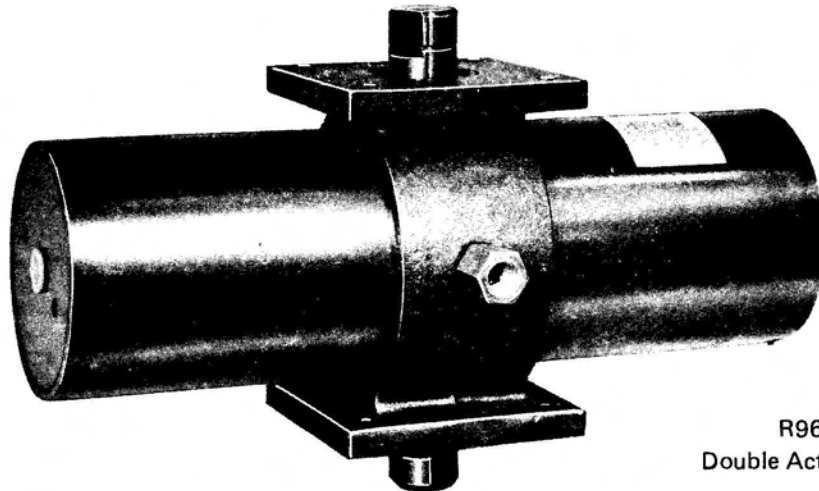




QUALITY CONTROLS, INC.

ROTARY PNEUMATIC/HYDRAULIC ACTUATOR
Models R960C* and R960CFS*



R960C
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

Square 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.

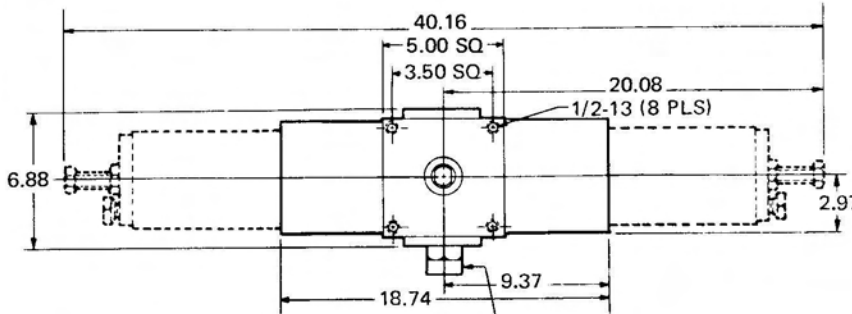
*Patented and patents applied for.

ROTARY PNEUMATIC/HYDRAULIC ACTUATOR

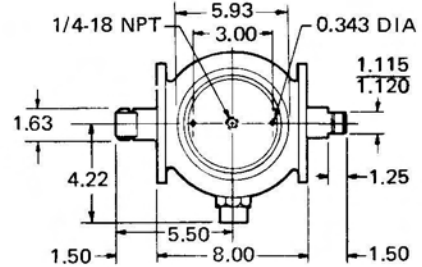
MODELS R960C and R960CFS

DIMENSIONS

For double acting actuators manifold air to both ends for inbound piston stroke.



1/4-18 NPT
Supply air to this
port for outbound
piston stroke.



Note 1: Actuator shown with piston at end of inbound stroke.
Note 2: End view shows end cap dimensions.

TECHNICAL DATA

BORE	5.28 In.	CYLINDER VOLUME	
		Double Acting	
STROKE	3.58 In.	inner	268 Cu. In.
		outer	156 Cu. In.
NO. OF PISTONS	2	Fail Safe	268 Cu. In.
MAXIMUM WORKING PRESSURE		OUTPUT DRIVE TRAVEL	90°
Pneumatic	125 psi	WEIGHT	
Hydraulic	125 psi	Double Acting	89 Lbs.
		Fail Safe	154 Lbs.

DOUBLE ACTING ACTUATOR (R960C) OUTPUT TORQUES

TORQUE lb-in.	OPERATING PRESSURE*								
	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	90 PSI	100 PSI	110 PSI	120 PSI
BREAK	4810	6185	7560	8960	10360	11595	12830	14167	15504
RUNNING	2420	3085	3750	4410	5070	5678	6285	6929	7573

FAIL SAFE ACTUATOR (R960CFS) OUTPUT TORQUES

TORQUE lb-in.	OPERATING PRESSURE*				
	40 PSI	60 PSI	70 PSI	80 PSI	100 PSI
BREAK-AIR	2650	4160	5000	5700	7640
FINISH-AIR	1360	2120	2520	3110	3950
BREAK-SPRING	3000	4860	5220	6500	8150
FINISH-SPRING	1410	2300	2590	3060	3820

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



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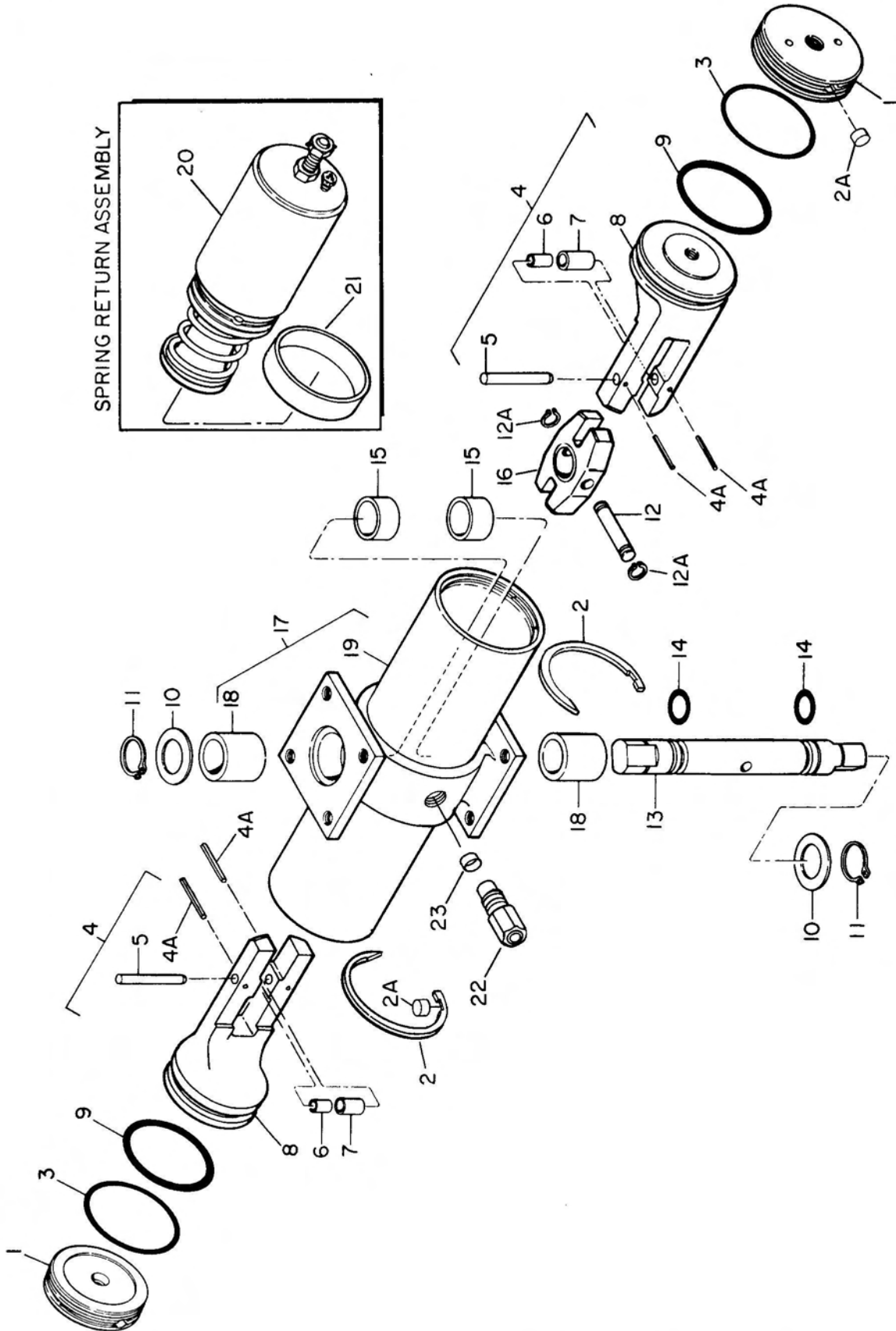
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Quality Controls, Inc.

PNEUMATIC ACTUATOR

MODEL R960C and R960CFS



PARTS LIST

MODEL R960C and R960CFS

INDEX NO.	PART NUMBER	DESCRIPTION	QTY	U/O CODE
REF.	R960C	ACTUATOR, Pneumatic, rotary	REF.	A
REF.	R960CFS	ACTUATOR, Pneumatic, rotary (Fail Safe).	REF.	B
1	450-1027	. . . . . CAP, End (see note 1)	2	
2	450-2906	. . . . . KEY, Retaining (AP)	2	
2A	400-2901	. . . . . SLUG, Key retainer	2	
3	952-0159-410	. . . . . O-RING, End cap (see note 2)	2	
4	4500-3201	. . . . . PISTON AND ROLLER ASSEMBLY	2	
4A	943-2121-11P	. . . . . PIN, Spring	2	
5	450-2501	. . . . . PIN, Straight, headless	1	
6	450-2401	. . . . . SPACER, Sleeve	1	
7	450-2203	. . . . . BEARING, Sleeve	1	
8	450-3203	. . . . . PISTON	1	
9	952-0427-1A0	. . . . . O-RING, Piston (see note 2)	2	
10	450-2204	. . . . . WASHER, Thrust	2	
11	959-2902-000	. . . . . RING, Retaining (AP)	2	
12	450-2507	. . . . . PIN, Straight, headless	1	
12A	959-2401-000	. . . . . RING, Retaining (AP)	2	
13	450-2101	. . . . . SHAFT, Output	1	
14	952-0220-430	. . . . . O-RING, Output shaft	2	
15	450-2202	. . . . . BEARING, Sleeve	2	
16	450-4102	. . . . . YOKE	1	
17	4502-3303	. . . . . CYLINDER BODY & STEM BEARING ASSEMBLY	1	
18	450-2201	. . . . . BEARING, Sleeve	2	
19	450-3328	. . . . . CYLINDER, Body	1	
20	4500-7501	. . . . . SPRING RETURN ASSEMBLY (40 psi) (See Warning Note)	2	B
20	4500-7502	. . . . . SPRING RETURN ASSEMBLY (60 psi) (See Warning Note)	2	B
20	4500-7509	. . . . . SPRING RETURN ASSEMBLY (70 psi) (See Warning Note)	2	B
20	4500-7503	. . . . . SPRING RETURN ASSEMBLY (80 psi) (See Warning Note)	2	B
20	4500-7504	. . . . . SPRING RETURN ASSEMBLY (100 psi) (See Warning Note)	2	B
21	400-1405-003	. . . . . WEATHER GUARD	2	B
22	971-2250-02P	. . . . . AIR FITTING	1	
23	971-2312-000	. . . . . FLARE GASKET	1	

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 R960CFS

Note 2. Optional O-rings
 952-0159-430 - VITON O-RING, End cap
 952-0427-430 - VITON O-RING, Piston

(AP) - Attaching Parts

U/O - "Used on" code

Quality Controls, Inc.

(603) 286-3321