



**stainless steel
corrosion resistant positioner**

CRP/SS series

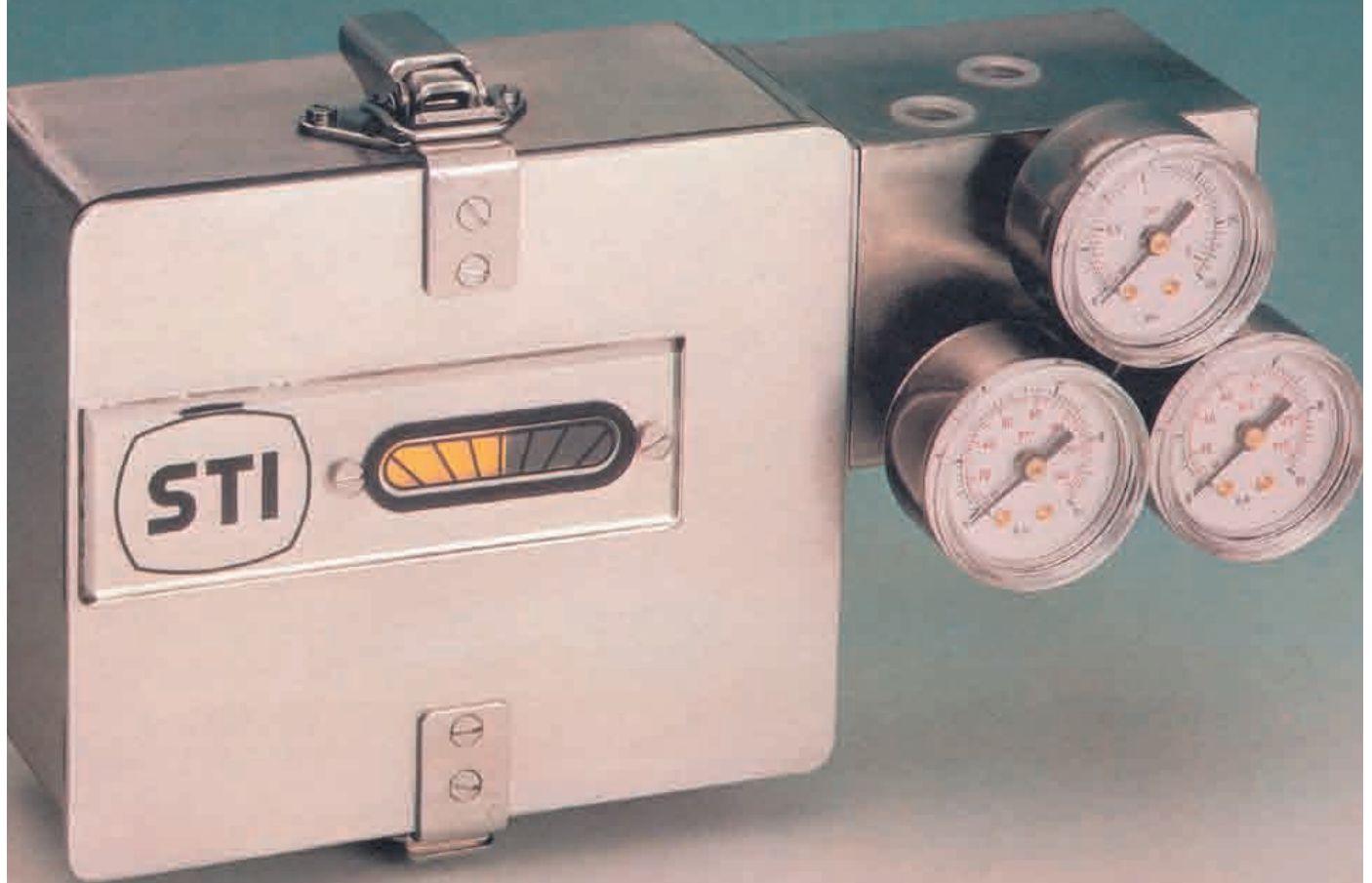


Fig. 1 **CRP/SS-pi**

**universal model for rotary and linear actuators
(single or double acting)**

Years of control experience have enabled STI to develop the **CRP/SS** a positioner with the features most desired by instrument engineers in the hostile environment found in today's chemical processing, pulp and paper, nuclear, marine and food industries.

Features

- Housing in welded stainless steel sheet
- Cover in stainless steel sheet fixed by two quick fasteners
- Double acting or single acting in one unit
- Force balance feed-back principle
- Totally enclosed, protected from harsh environment
- Suitable for high vibration installations
- Unaffected by supply pressure variations (no need supply pressure regulation)
- Simple zero and span adjustment
- Three lobe cam with split range
- Highest reliability
- One single sensitive annular diaphragm on control signal (STI patent)
- High flow spool valve (standard)
- Easy maintenance

Performance benefits and technical specifications
as indicated on leaflet SSP1007

Two models are available

CRP/ss-bc: with blind cover

CRP/ss-pi: with position indicator

Materials

Housing	: Stainless steel Sheet
Manifold	: Stainless steel section
Spool valve	: Stainless steel (HP type)
Diaphragm	: Nitrile Rubber
Cover	: Stainless steel sheet
Cam	: Plastic composite
Lever	: Nickel plated Die-cast aluminium
Shaft	: Stainless steel
Shaft bushing	: Teflon
Fasteners and external parts	: Stainless steel

Many options

- All **CRP** series positioners are also available with special manifold with 1/2" NPTF connections (**CRP/2ss** model) to reduce stroke times on large capacity cylinders
- Pneumatic position transmitter (integral stainless steel model available)
- Electronic position transmitter (standard materials)
- E to P transducer (standard materials)
- Air-lock device
- Assorted cams
- Pressure gauges

Operation (Fig. 2)

The unit utilizes a force-balance principle providing accurate positioning of an actuator stem. The **CRP/ss** positioner consists of a diaphragm (1) exposed to the regulating signal pressure, of a feedback spring (2) and a double acting spool valve (3) connected to the diaphragm and feedback spring by the rod (5).

An increase in signal pressure on the diaphragm (1) stretches the feedback spring (2) and thus determines the displacement of the spool valve (3) and consequently of the piston in the 1/4 turn actuator (7).

The piston position is linked to the cam (8) and the hinged lever (6) transmitted onto the feedback spring (2) thus balancing the signal air pressure.

The actuator stem therefore will remain in a stable position only as long as the feedback spring's force is equal to the air signal force on the diaphragm.

The spool valve is then in a neutral position, and the final control element is in equilibrium with the input control signal.

The position of the actuator is therefore determined by the control signal and by the shape of the cam (8).

A decreasing signal reverses the above sequence.

Single Acting

The double acting **CRP/ss** positioner can easily be converted to single acting by plugging one of two output ports.

Reversal of action

Can be changed by simply turning the cam over and reversing actuator air connections.

Zero adjustment

Is carried out by setting of the zero setting screw (9) which determines the pre-loading of the feedback spring.

Range adjustment

It is carried out by different positioning of the feedback spring on the lever with runner (13). For large variations, turn the ring (12) in order to adjust the number of spring's turns.

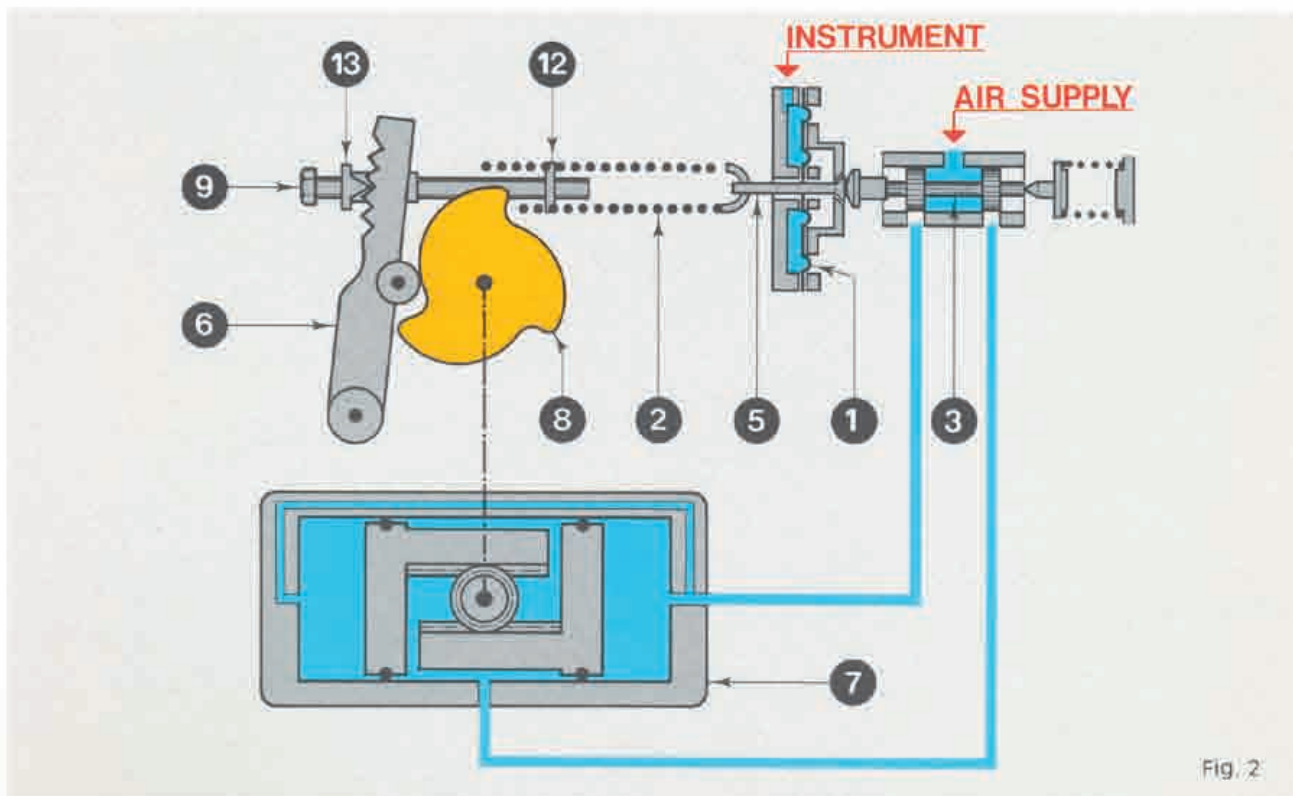
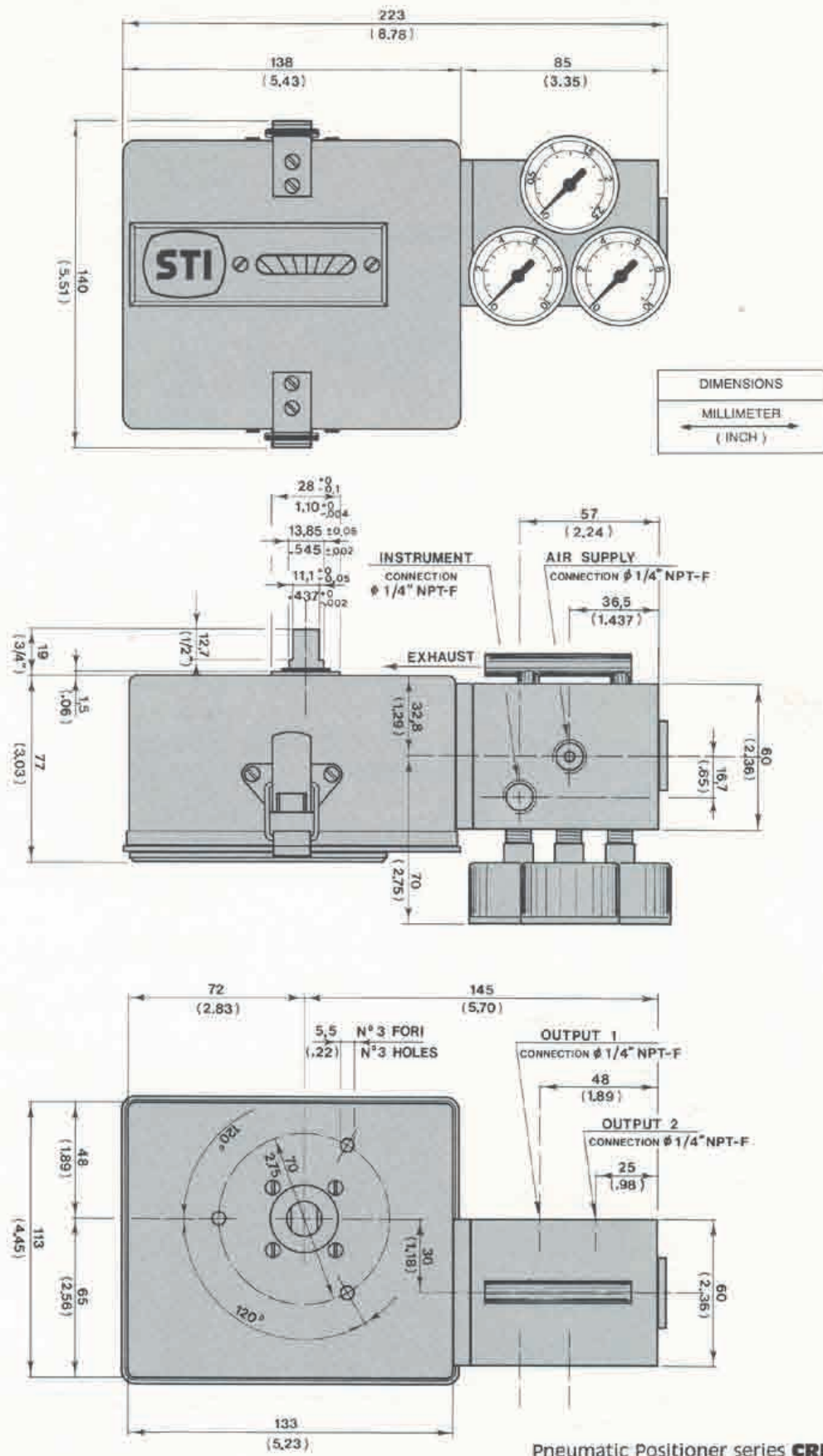


Fig. 2

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Current drawings supplied on request.



Weight (approx)
3,5 Kg: (7,7 lb)

Pneumatic Positioner series **CRP/ss-pi**



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