

FORCE **ACTUATORS PVT. LTD.**

Established in the year 2012

- ◆ A Joint venture of Hemco Products and Sun Polymers & Engineering Industries.
- ◆ Hemco Products - Established in 1987, Hemco is well known for its wide range of products & quality in Architectural Hardware Industry with sales in 50+ cities across India.
- ◆ Sun Polymer – Manufacturers of import substitute rubber products such as O-rings, Oil Seals, Mounts etc. to OEM clients - Siemens, Hindustan Motors, Jyoti Automation, etc.



“Wherever you go, go with all your heart.” - Confucius



COMPANY PROFILE

- Leading Manufacturer of manually operated Hydraulic Actuators – high end & precision products used in motion control systems.
- Import Substitute products.
- Indigenously designed, high quality products, comparable with international standards.
- Extensive in house 'Research and Development'
- Our products are tested on our in-house designed and manufactured testing jigs and endurance testing machines.
- We are an OEM supplier to leading manufacturers of Medical Furniture such as:

- ★ Patient Transporters
- ★ Hospital beds & Nursing beds
- ★ Stretcher & Patient Trolleys
- ★ Operating Tables
- ★ Dental Chairs
- ★ Home Care Beds
- ★ Instrument Tables
- ★ Physiotherapy Tables
- ★ Lifting Modules & Scissor Lift Tables & more..



VISION

“To be recognized as a quality supplier of hydraulic actuators globally and empower precision engineering”.

MISSION

Ensuring quality and timeliness at all levels of production.
Create value for all the company stakeholders.
Commitment to customer satisfaction.
Maintain global standards for products.
Promote Make-in-India.

Why Us?

Ability to Customize- We specialize in developing new designs and delivering the core needs of our customers.

Import Substitute Product- High quality products with greater precision which are used as import substitutes.

Process Control – Individual actuators are tested on in-house developed Testing machine.

Batch-wise Endurance Testing.



Products

FK5 Hydraulic Actuator

Features & Benefits:

Compact Self Contained Design
Smooth and Quite operation
Maintenance Free Design
Reduced cost of ownership
Easy and Fast installation
Single Lever comfortable Operation
High Operating Safety by Flow Control Valve &
Pressure Relief Valve Precise Plunger Guide
Independent of External Power Supply
Electroless Nickel Plated parts for durability and long life



Applications :

FK5 linear actuators are universally used as manually operated actuators for linear movements which include height adjustments in:

- Patient Transporters
- Hospital & Nursing beds
- Physiotherapy tables
- Dental Chairs
- Operating Tables
- Instrument Tables
- Home Care Beds
- Lifting Modules & Tables



Description:

The FK5 is reliable, maintenance free, self-contained hydraulic actuator built for long life. The Pump, Cylinder, Reservoir and Valves are combined into single compact unit and is easy to install. Each actuator has high safety against overload due to pressure-relief valve. Flow Control Valve ensures smooth and uniform descent. In principle only push forces can be generated.





Fixing And Installation:

- ◆ The FK5 actuators have 1 location hole of Ø12 mm in the plunger and Ø18 mm shaft for the connection of user's constructions.
- ◆ There are two different operating directions of the pump lever: clockwise and counterclockwise operation of the pump lever, depending on the user's construction.

Operation:

- ◆ The plunger rod is extended by reversible rotation of the Ø18 mm shaft by up to 36° by an operating lever at the operating shaft.
- ◆ The recommended lever length is approx. 300 mm.
- ◆ To retract the plunger rod, the operating shaft has to be turned to the opposite direction by up to 10°. The operating shaft returns automatically.

Specifications:

Stroke Length	: 80 to 400mm
Maximum Dynamic Push Force	: 10 KN at 270 bar
Descent Control	: Using Flow Control Valve
Pressure Relief Valve	: Installed
Single Acting Cylinder	
Optional:	Holes on the pedal shaft or gear coupling.

Material:

Lower Body	: Aluminum
Operating Shaft	: Steel, corrosion resistant
Plunger Rod	: Steel, Hard Chrome plated
Finish	: Electroless Nickel Plated

Important Notes:

- FK5 actuators are resistant to corrosion & rust.
- To retract the plunger, a push load of at least 20Kg or 200N is required.
- The actuator has a high safety against overload. In the case of overload, it is not possible to continue to extend the plunger even after pumping the actuator, but descent is possible.
- The operator has to make sure that the actuator is not overloaded.



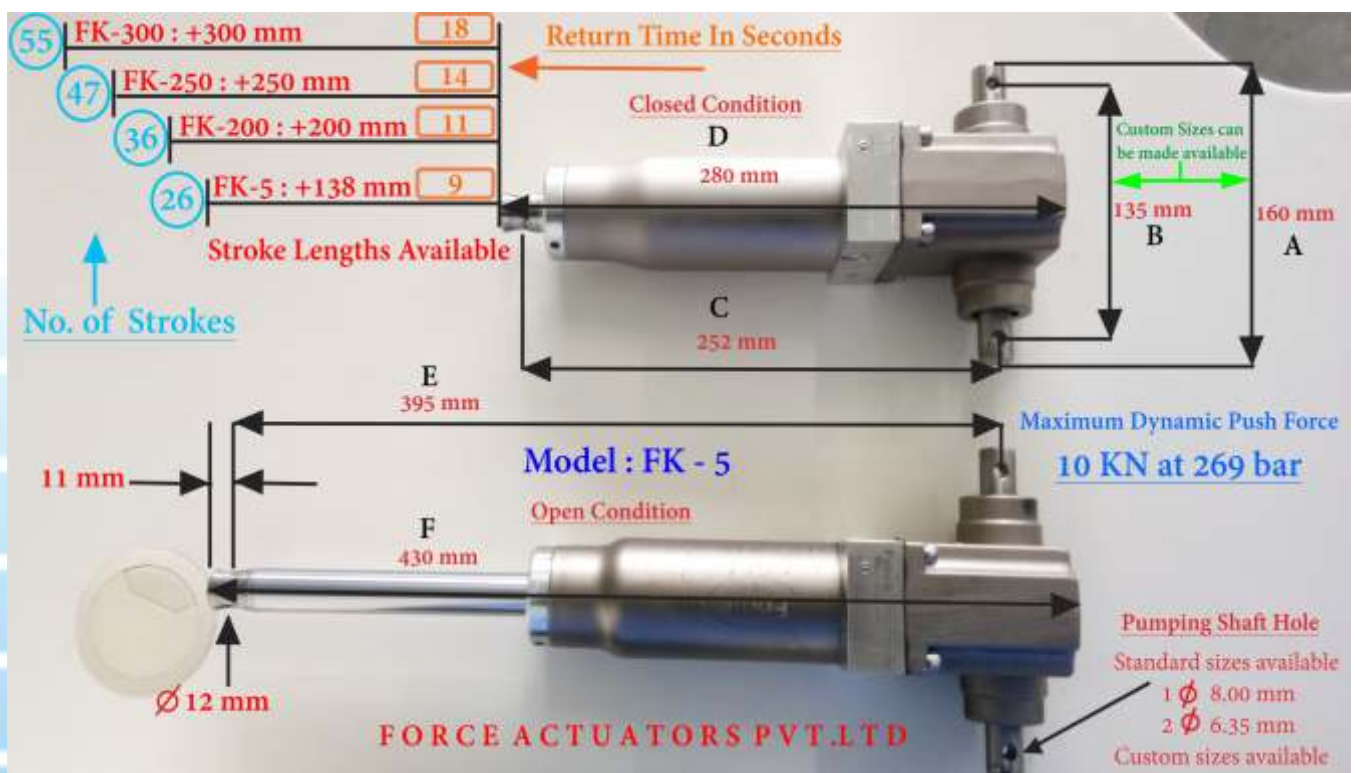
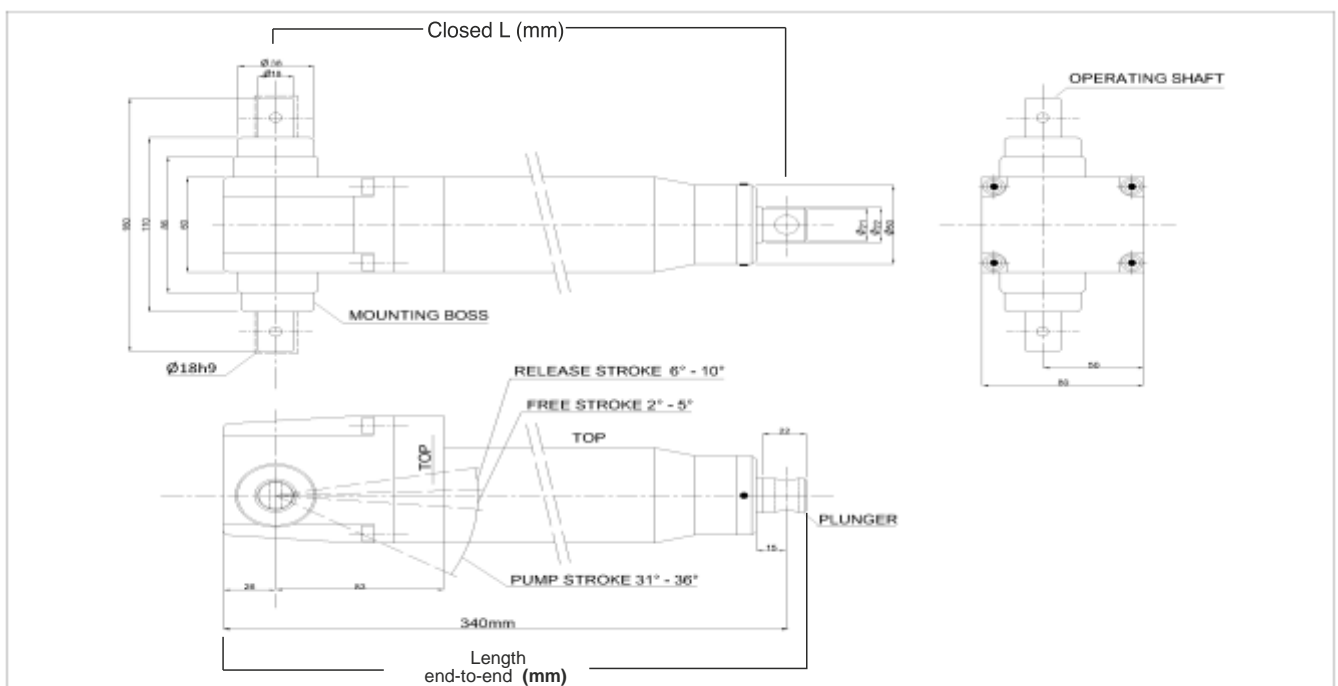


Standard Models:

Stroke Length (mm)	Closed L (mm)	Length end-to-end (mm)	Piston Hole Diameter (mm)	Weight (Kg)	Open L (mm)	Total Length end-to-end (mm)
138	252	288	Ø12	3.50	390	426
200	314	350	Ø12	4.06	514	550
250	364	400	Ø12	4.48	614	650
300	414	450	Ø12	5.20	714	750

Available on Request:

Gear Coupling on Operating Shaft.Length 47mm(instead of standard 22mm) of Ø21mm of Plunger head





Model No. FK5 -XXX-X-XX-XXX-XX-X

Stroke Length

138 = 138mm

200 = 200mm

250 = 250mm

300 = 300mm

Operating Shaft Hole Alignment

H - Perpendicular to Plunger

V - Parallel to Plunger

G - Gear Coupling

Operating Shaft Hole Size

01 - Ø6.35mm

02 - Ø8mm

00 - Incase of Gear Coupling

Operating Shaft Hole Centre to Centre Distance [C.D.]

130 - 130mm

138 - 138mm

140 - 140mm

Plunger Head

22 - 22mm

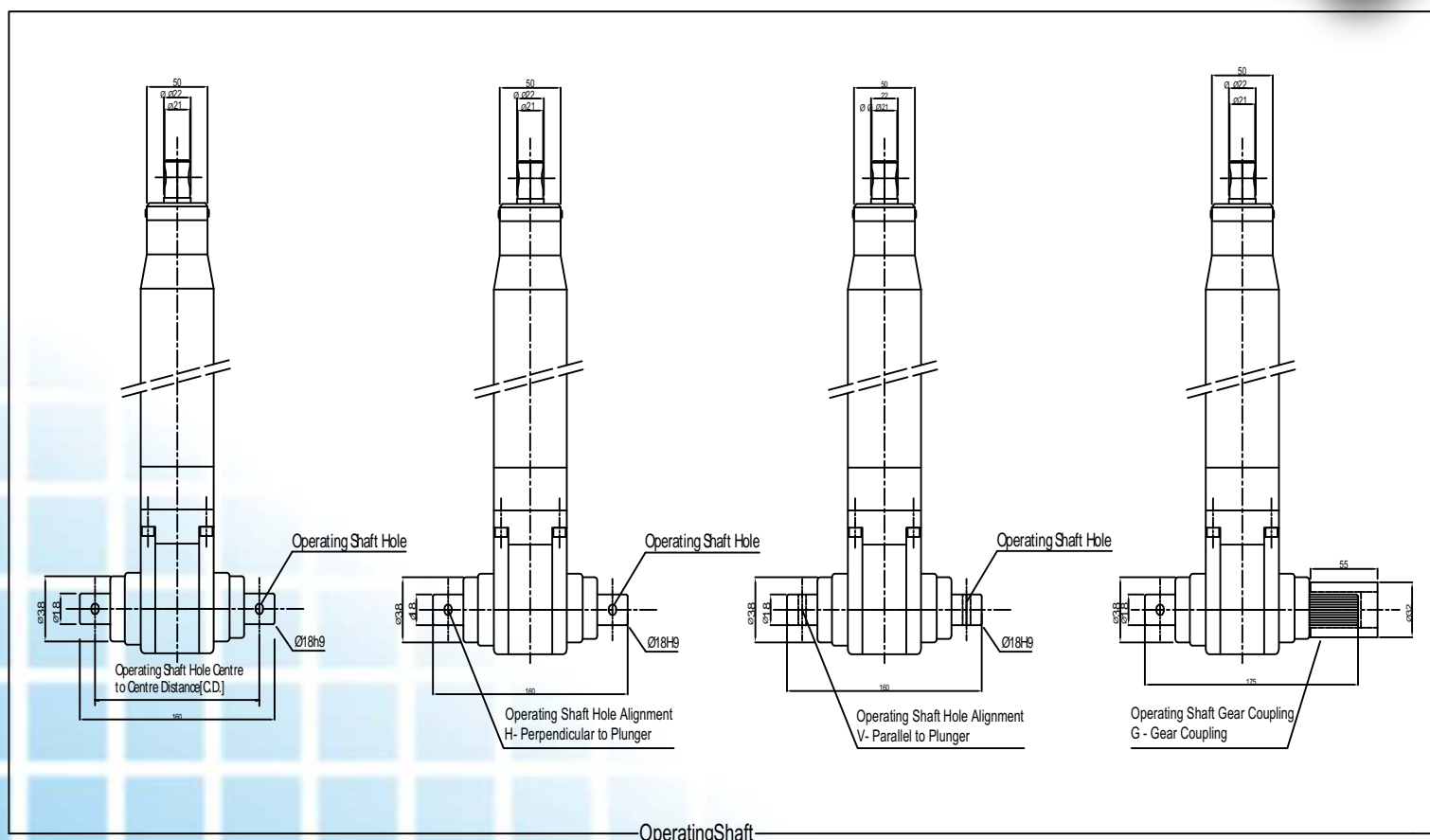
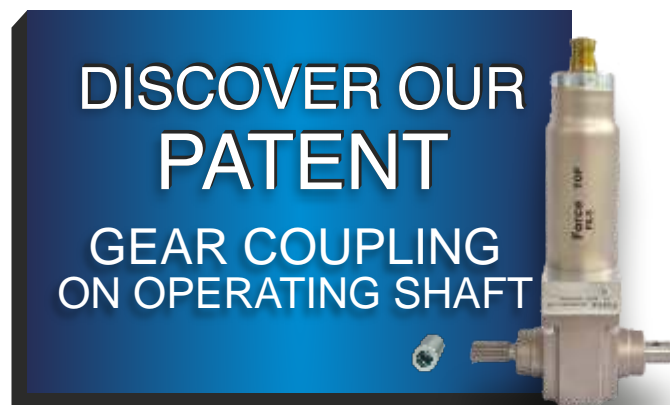
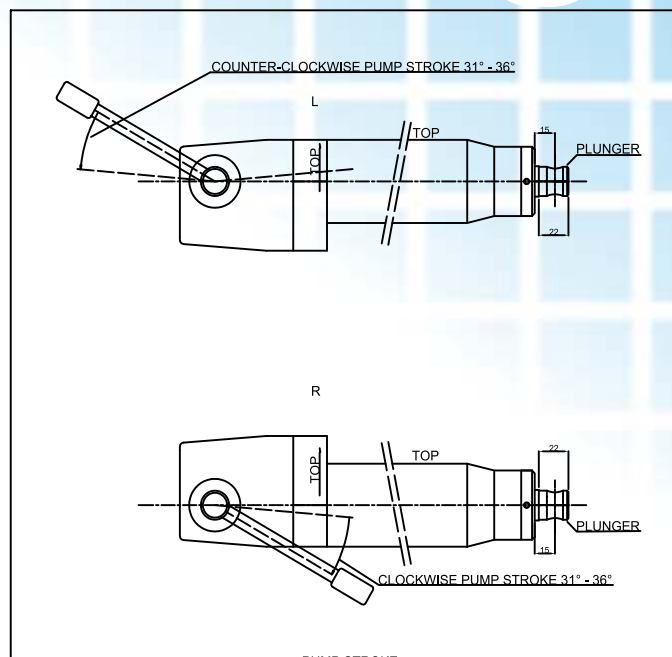
47 - 47mm

TT - Taper with M8 tapping

Pump Stroke

R - Clockwise Pump Stroke

L - Counter-Clockwise Pump Stroke





ST330 Stretcher Actuator

Features & Benefits:

- ◆ Compact Self Contained Design
- ◆ Smooth and Quite operation
- ◆ Maintenance Free Design
- ◆ Reduced cost of ownership
- ◆ Easy and Fast installation
- ◆ Single Lever comfortable Operation
- ◆ Precise Plunger Guide
- ◆ Independent of External Power Supply
- ◆ Electroless Nickel Plated parts for durability and long life
- ◆ High Operating Safety by Flow Control Valve & Pressure Relief Valve
- ◆ Enhanced Operation
 - Pressure Relief Valve during pumping
 - Smooth descent regulated by Flow Control Valve
 - Fast Descent
 - Robust integrated guidance



Applications:

These Stretcher actuators are universally used as manually operated hydraulic actuators for height adjustment in:

■ Stretcher



■ Patient Trolleys



Description:

The Stretcher Actuator is a reliable, maintenance free, self-contained hydraulic actuator built for long life. The Pump, Cylinder, Guidance, Reservoir and Valves are combined into single compact unit and are easy to install. Each actuator has high safety against overload due to pressure-relief valve. Flow Control Valve ensures smooth and uniform descent.

The Stretcher Actuator with its integrated guidance can handle high side loads due to which no additional support mechanisms are needed in the design of stretcher and patient trolley. Thus, lowering manufacturing costs. In principle only push forces can be generated.

Material:

Lower Body	: Aluminum
Spring Loaded Piston Rod	: Steel, Hard Chrome plated
Plunger Rod	: Steel, Hard Chrome plated
Reservoir Finish	: Electroless Nickel Plated
Descent Activation Pin	: Brass



Fixing and installation:

- ◆ ST330 stretcher actuators have 1 location hole of M10 x 1.5mm pitch & 25mm deep in the plunger for the connection to user's constructions.
- ◆ 4 holes of Ø6.8mm are provided in manifold for connection to user's constructions.
- ◆ 1 clamp is provided.

Operation:

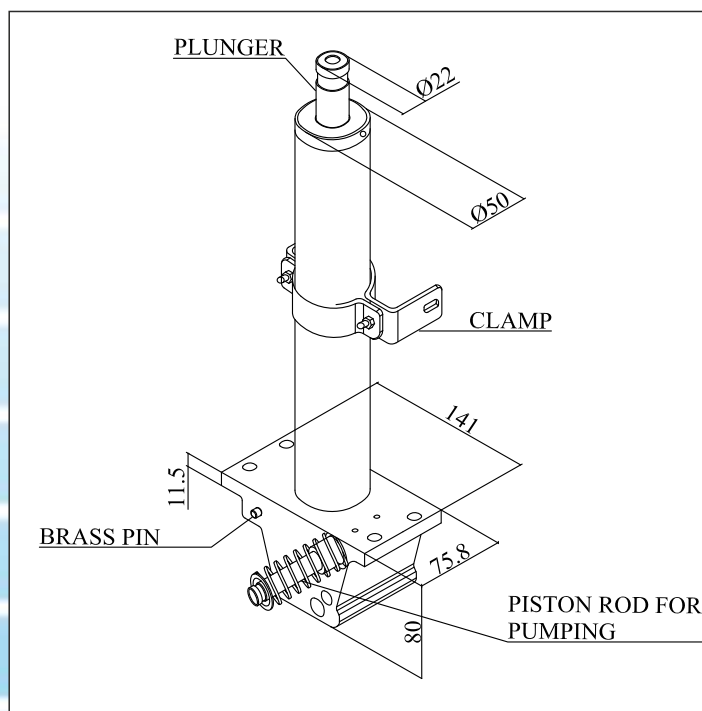
- ◆ The plunger rod is extended by pumping the spring loaded piston-rod by up to 40mm by an operating lever. The piston-rod returns automatically.
- ◆ To retract the plunger rod, the return valve needs to be activated by pushing the brass pin by an operating lever by up to 3.5mm.

Specifications:

Stroke Lengths	: 270mm	320mm
Closed Length between mounting points	: 299mm	349mm
Maximum Dynamic Push force	: 4.5 KN	4.5 KN
Maximum Static Load	: 8 KN	8KN
Maximum Pump Stroke Length till Extended Length	: 18	21
Maximum Static Torque on Plunger	: 290Nm	290Nm
Descent Time	: 3-5 secs	4-8 secs
Weight	: 4Kg	4.5Kg
Single Acting Cylinder		

Important Notes:

- All our stretcher actuators are resistant to corrosion & rust.
- The actuator has a high safety against overload. In the case of overload, it is not possible continue to extend the plunger even after pumping the actuator, but descent is possible.
- The operator has to make sure that the actuator is not overloaded.



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