



HYDRAULIC ROTARY ACTUATORS

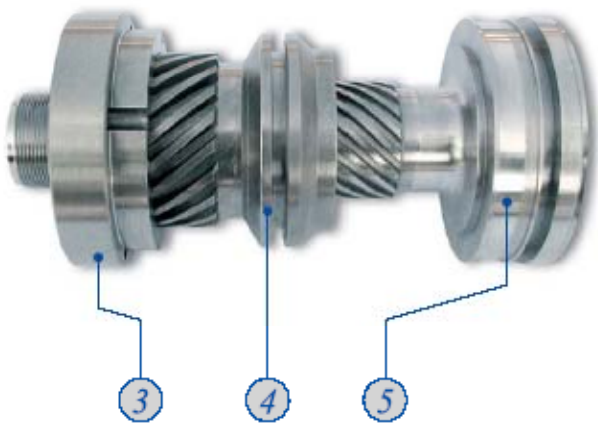


ARP SERIES.

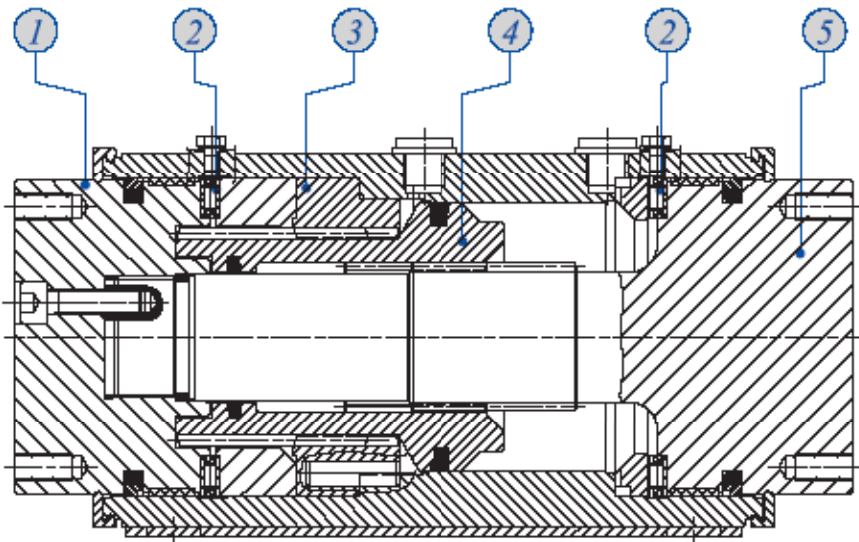
ROTARY ACTUATOR



ROTARY SET



1	Threaded End Flange
2	Thrust Ring
3	Spiral Gear Ring
4	Spiral Gear Piston
5	Splined Shaft



HYDRAULIC ROTARY ACTUATORS ARP SERIES

SPECIFICATIONS		Unit	ARP 25	ARP 40	ARP 80
<i>Moveco Code</i>			H 987/180SF01	H,989/180SF02	H,990/180SF01
<i>Rotation</i>			180°	180°	180°
<i>Weight</i>		Kg	14	18	33
<i>Displacement</i>		cm ³	124	212	417
<i>Maximum Pressure</i>		bar	210	210	210
<i>Test Pressure</i>		bar	320	320	320
<i>Maximum Thrust Capacity</i>		N	4000	6000	8000
<i>Maximum Radial Capacity</i>		N	12500	20000	30000
<i>Maximum Output Torque</i>		Nm	541	925	1744
<i>Maximum Moment Capacity</i>	<i>Straddle Mounting</i>	Nm	2500	4200	12000
	<i>Cantilever Mounting</i>	Nm	700	1300	3000
Flanged Overcenter Valve			On request	On request	On request
<i>Maximum Rated Flow</i>		l/min	25	25	25
<i>Maximum Setting</i>		bar	350	350	350
<i>Standard Setting</i>		bar	230	230	230
<i>Pilot Ratio</i>			4:1	4:1	4:1

AERIAL WORK PLATFORM APPLICATION

Articulated or telescopic platform with JIB

ARP series actuators provide the rotation of aerial platforms and manbaskets.

One actuator mounted between the JIB boom and work platform rotates the manbasket.

A second actuator mounted between the JIB and main boom rotates the entire self-propelled aerial lift. Aerial work is improved.

BENEFIT

Articulation ability

Possibility to get over, under, around and up into obstacles, as aerial electric cables, aerial pipes and branches of trees and so on.

Easy to assembly

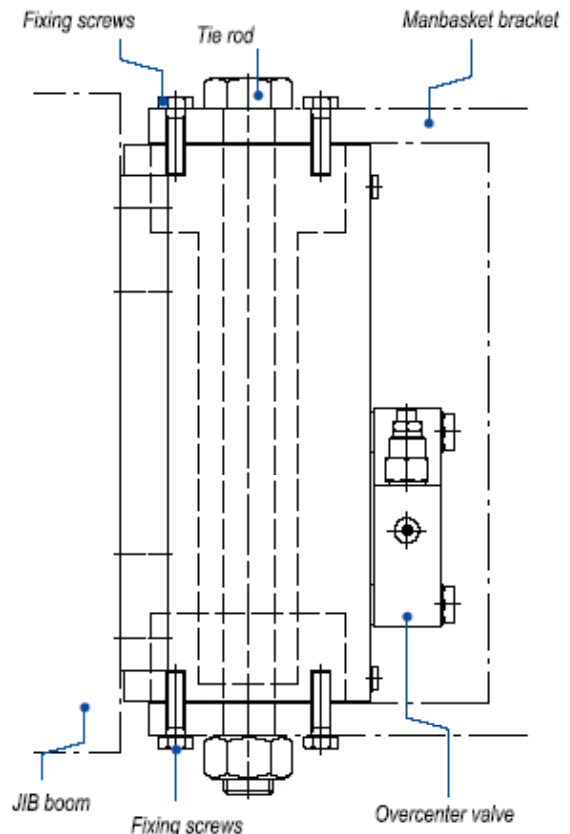
Actuators are an integral part of the structure and perform several functions as bearing support, rotation device and straddle mounting.

Safety

Integral overcenter valves, mounted directly to the actuators, eliminate the possibility of hydraulic hose failure between the actuator and valves.

SPECIFICATIONS

Angolo di rotazione Rotation	= fino a 360° = to 360°
Pressione massima Max Pressure	= 210 bar
Pressione di collaudo Test Pressure	= 320 bar
Pressione taratura valvola overcenter Overcenter Setting	= 230 bar
Carico radiale massimo Max Radial Capacity	= fino a 50,000 N = to 50.000 N
Carico assiale massimo Max Thrust Capacity	= fino a 50,000 N = to 50.000 N
Coppia massima a 210 bar Max Output Torque at 210 bar	= fino a 12,000 Nm = to 12.000 Nm
Momento ribaltante massimo Max Moment Capacity	= fino a 20,000 Nm = to 20.000 Nm
Materiale guarnizioni Seals	= PTFE, Poliuretano, Gomma Nitrilica = PTFE, Nitrile



INSTALLATION

The above drawing shows a straddle mounted installation. The actuator is located between the boom and the basket. It is integral part of the structure, working also as bearing support.

Manbasket

The upper bracket of the basket is connected to the drilled and tapped shaft flange.

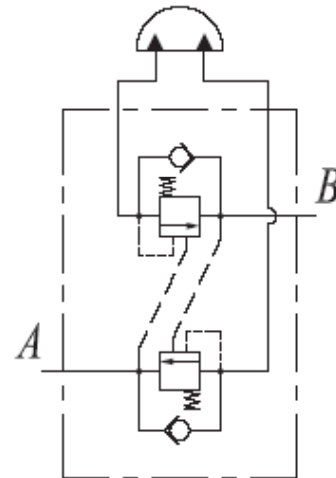
The lower bracket is secured to the opposite end of the shaft by a tie rod. The rod that is passed through the hollow shaft works as a second load blocking for additional safety.

Boom assembly or JIB

The boom assembly is bolted directly to the housing mounting flange.

INTEGRAL OVERCENTER VALVE

Two overcenter cartridges fitted in aluminium body.
 The valve block is bolted on the actuator housing.
 The overcenter valve provides controlled and smooth rotation.
 The valve is set at 230 bar at the factory and cannot be adjusted.



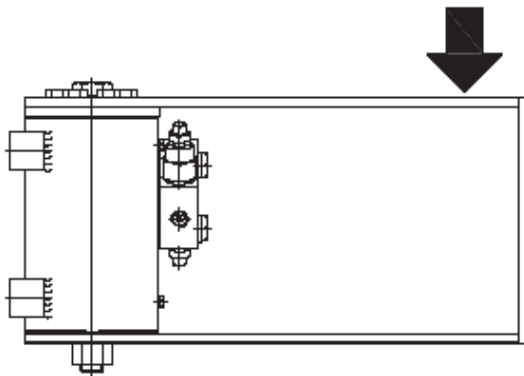
CLEVIS MOUNTING

Clevis mounting according Custom specification is available.
 Clevis is welded on actuator's body and is integral part of the machine.

STRADDLE AND CANTILEVER MOUNTING

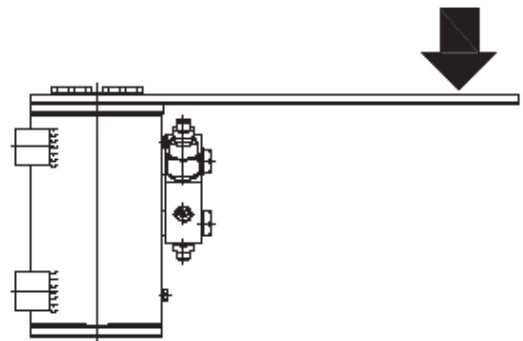
Straddle Mounting

The load is supported at both end of the shaft.
 The upper part of the bracket is bolted to the flange, and the lower part is secured by a tie rod passed through the shaft bore.
 Straddle mouning is recommended for aerial platforms.



Cantilever Mounting

The load is supported at one end of the shaft.
 Cantilever mounting is never recommended for aerial work platform.



ARP 25

Rotation

Standard 180° (Degrees)
A richiesta - Special 90° - 270° - 360°

Weight

14 Kg

Displacement

124 cm³

Max Pressure

210 bar

Test Pressure

320 bar

Maximum Thrust Capacity

4.000 N

Maximum Radial Capacity

12.500 N

Maximum Output Torque at 210 bar

541 Nm

Maximum Moment Capacity Straddle Mounting

2.500 Nm

Maximum Moment Capacity Cantilever Mounting

700 Nm

Overcenter Setting

230 bar

Seals

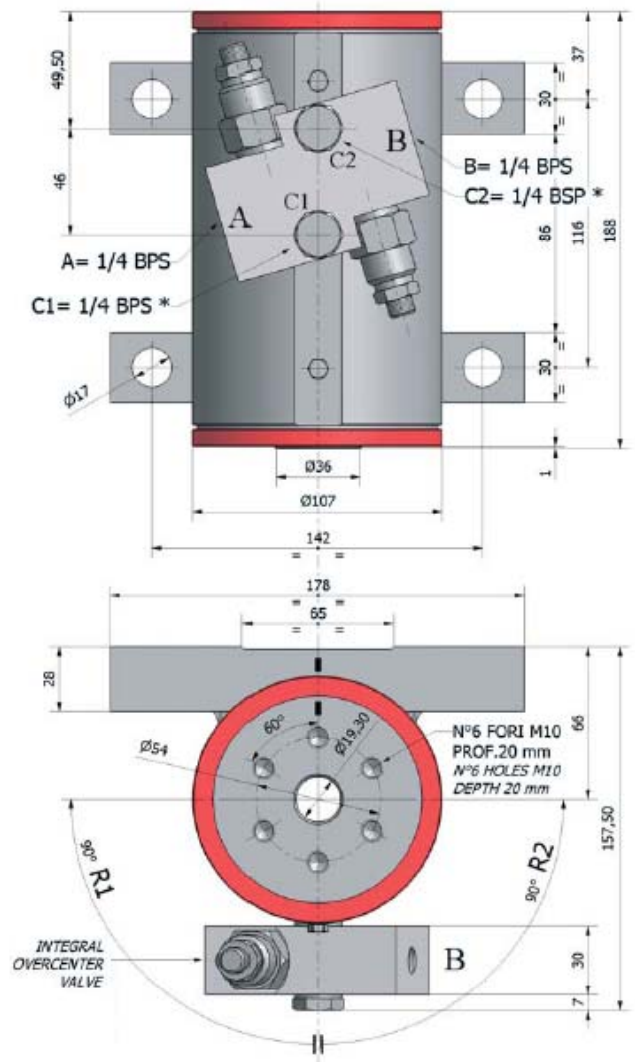
PTFE - Poliuretano - Gomma Nitrilica
PTFE - Poliuretano - Nitrile

Working Temperature

da -20°C a +80°C
-20°C to +80°C

Notes

Actuators are shipped at mid rotation as shown in the body.



Dimensions are referred to 180° rotation

* Ports for version without integral overcenter valve

P in A / C1 = Rotation R1

P in B / C2 = Rotation R2

DESCRIPTION

Operating concept of **ARP Series**, actuators designed and manufactured by **Moveco**, is very simple: linear piston motion is converted into shaft rotation. The outside diameter of piston carries a set of splines which engages matching splines in the housing. The inside diameter of piston engages matching helical spline machined on the shaft.



“Linear piston motion is converted into shaft rotation”

PRINCIPAL FEATURES

Compact configuration

Short piston stroke due to high helix angles of gearing provides a compact configuration of the actuator.

Heavy load bearing capacity

ARP series incorporates integral roller bearings that carry essential thrust, radial and moment load without the need of additional external thrust-bearings.

Zero leakage

PTFE, Nitrile seals are selected for rugged and shock resistance. Each actuator is individually tested for leakage prior to shipment.

Shaft machined in one piece and with through bore, when required

The shaft is machined from alloy steel. The bore can be used to well fasten critical load with a second load path, or can be used as a passage for piston rods, hydraulic hoses or electrical wiring.

Direct mounting of loads

Mounting flange with a drilled and tapped bolt circle is integral with the shaft. This configuration eliminates the clearance of keyed or splined connections.

In the opposite shaft flange a second bolt circle is machined.

Customized models

Having in stock the basic elements, as shaft, housing, annular piston, thrust ring, is possible to meet the requirements of the Client, for example: special rotation, cushioning, special shaft and housing configuration, external positioning of rotation.

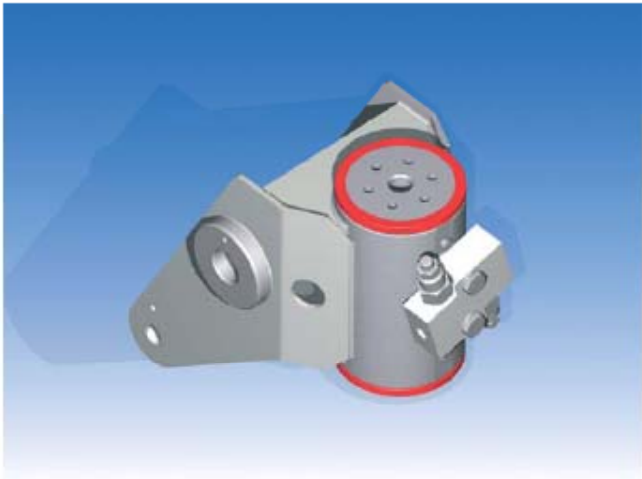
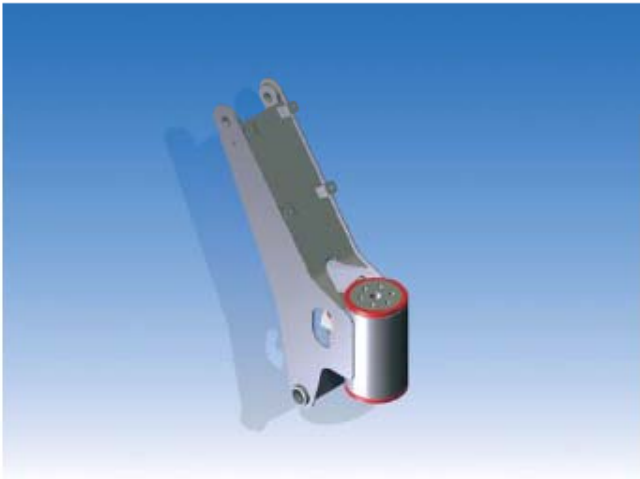
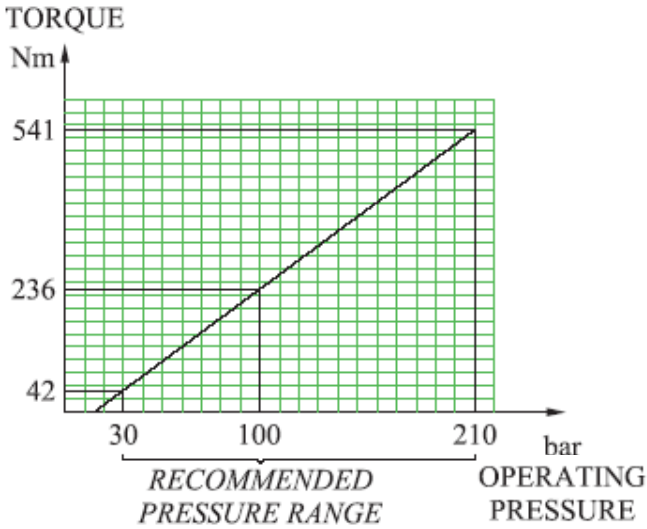
Special painting and materials are available for corrosive applications.

OUTPUT TORQUE VERSUS PRESSURE

Torque output is a linear function of system pressure.

SOME EXAMPLES OF CUSTOM ENGINEERING

Having standard basic components the actuators can be customised to meet the demanding applications.



ORDERING INFORMATION

1	2	3	4
ARP	25	180	H.987/ ...

1	Series
2	Model
3	Rotation
4	Moveco Code



ARP 40

Rotation

Standard 180° (Degrees)
A richiesta - Special 90° - 270° - 360°

Weight

18 Kg

Displacement

212 cm³

Max Pressure

210 bar

Test Pressure

320 bar

Maximum Thrust Capacity

6.000 N

Maximum Radial Capacity

20.000 N

Maximum Output Torque at 210 bar

925 Nm

Maximum Moment Capacity Straddle Mounting

4.200 Nm

Maximum Moment Capacity Cantilever Mounting

1.300 Nm

Overcenter Setting

230 bar

Seals

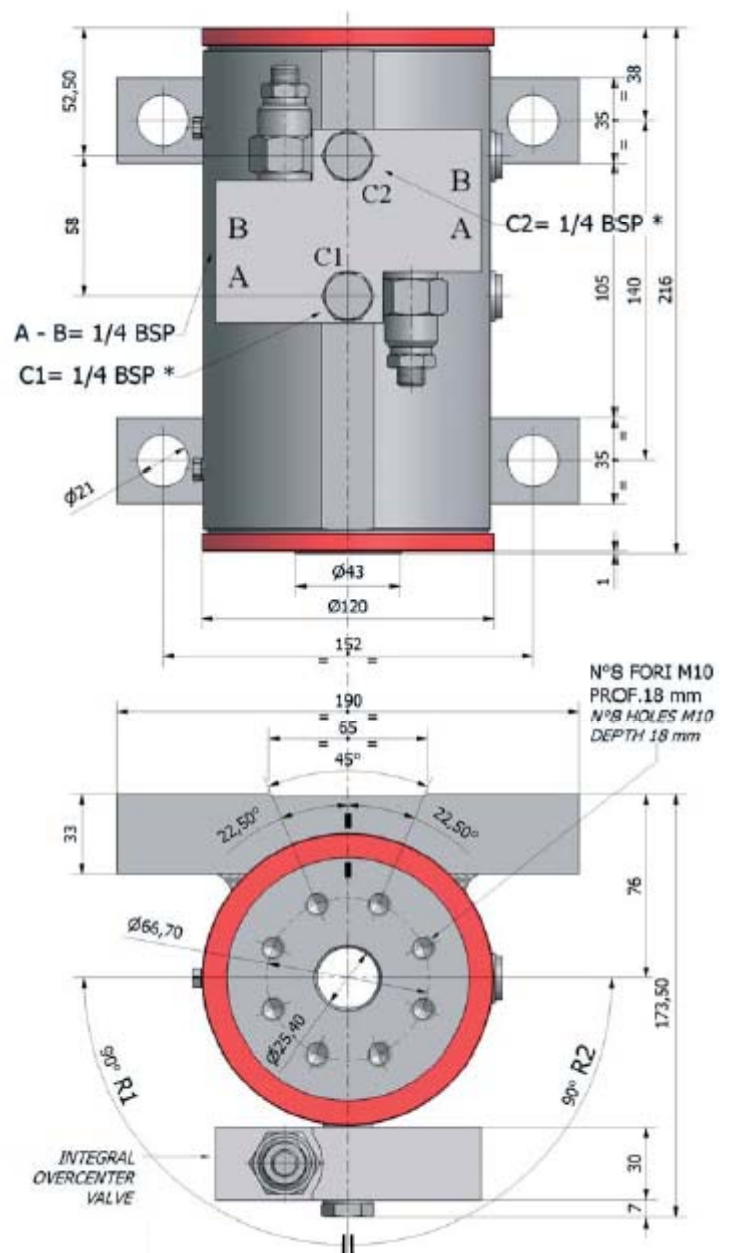
PTFE - Poliuretano - Gomma Nitrilica
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Working Temperature

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Notes

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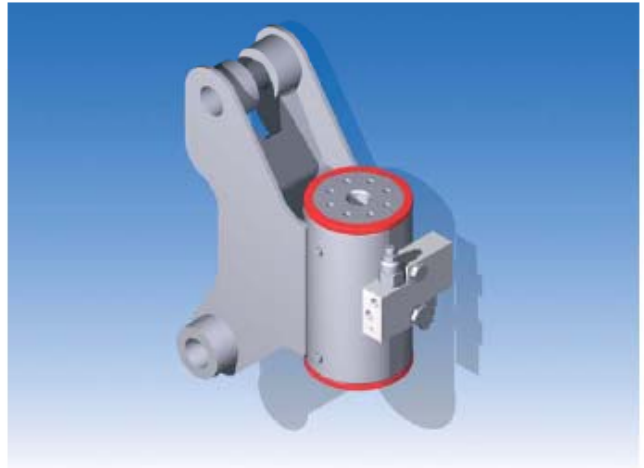
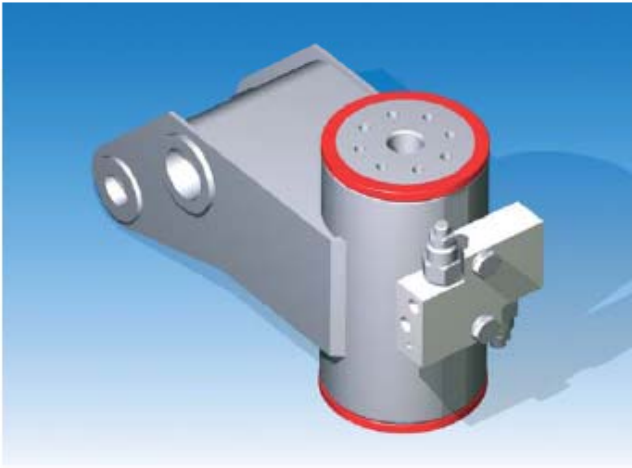
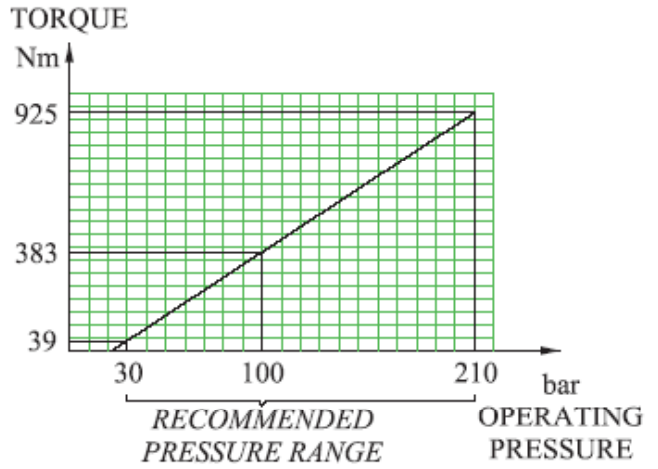


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ARP	40	180	H.989/ ...

1	Series
2	Model
3	Rotation
4	Moveco Code

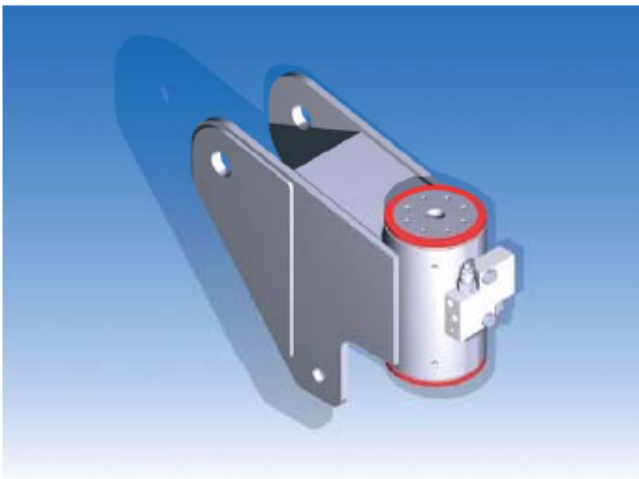
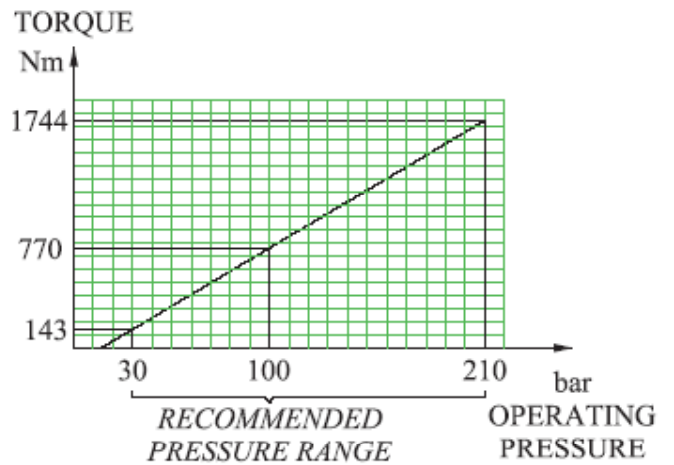


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1	Series
2	Model
3	Rotation
4	Moveco Code