

# BALL SCREW JACKS

*High Performance*



**SJ BS Series**



**HS Series**



**MA BS Series**

High performance **ball screw jacks**, from Servomech are high efficiency products designed and produced for high linear speed, continuous duty cycle and less energy consumption.

The right product to cover a wide range of needs and higher performance cost-effectively.

*Technology and innovative solutions  
for higher efficiency and performance*

# Servomech Ball Screw Jacks

## High Performance



The new range of Servomech ball screw jacks exceeds the application limits of traditional acme screw jacks. High linear speeds, operations up to continuous duty cycle, no wear of the nut, zero axial clearance, exact estimation of expected lifetime, halving of energy consumption and installed power.

Servomech screw jacks are able to work under either push or pull load, in different mounting positions (vertically upward / downward or horizontally).

**SERVOMECH** high performance ball screw jacks consist of 3 main series:

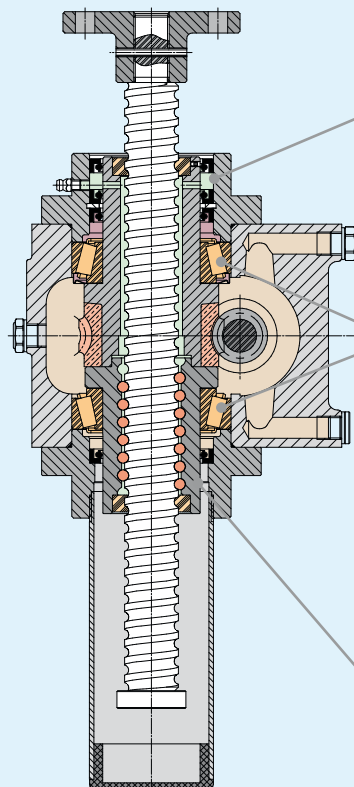
**MA BS Series, SJ Series, HS Series.**

## Industrial Patent by Servomech

All the parts have been specifically designed for a completely integrated structure between the gear parts and the ball screw. That allows higher performances in terms of:

- **Efficiency**
- **Load capacity**
- **Service life**
- **Stiffness**

The native integration of all the components together with the innovative Servomech production technology leads to a significant weight reduction by removing all the unnecessary material with a great benefit for the costs.



### **Re-lubrication system**

of the ball nut with lubricant reserve chamber for easier maintenance efforts and longer service life.

### **Tapered roller bearings**

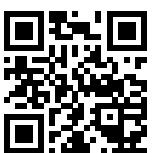
tapered roller bearings back-to-back mounted. High rigidity and best alignment of the ball screw and nut system.

### **Safety nut**

to prevent the accidental fall of the load in case of working nut failure. Integrated inside the system, available for push and pull load.

### **Ball nut**

with axial recirculation of the balls for higher load capacity.





## **SJ BS Series**

### Compact design screw jacks

Recommended for intermittent duty cycle (up to 70%)  
Long life **synthetic grease lubricated** worm gear  
High precision worm gearbox, Z1 involute profile, reduced angular backlash  
Monobloc gearbox housing, robust and compact shape  
Input speed up to **1.500 rpm**  
Ball screw drive, travelling nut (Model B)

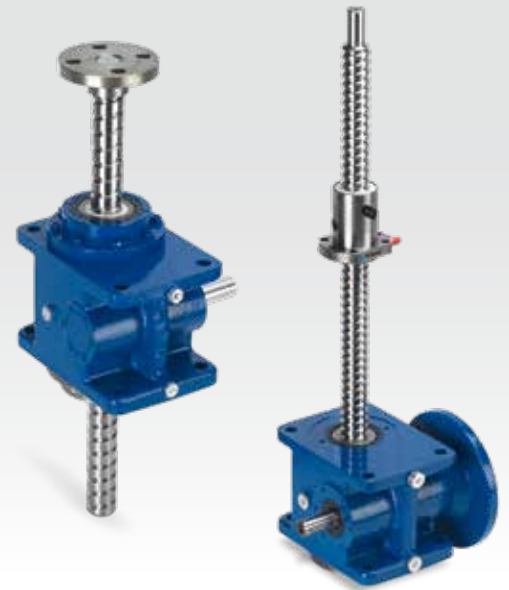
**11 sizes standard available**  
Load capacity from 5 kN to **800 kN**  
Ball screw from **Ø 16 mm to Ø 140 mm**

## **MA BS Series**

### High efficiency screw jacks

Recommended for continuous operation, duty cycle up to 100%  
Long life **synthetic oil lubricated** worm gear  
High precision worm gearbox, Z1 involute profile, reduced angular backlash  
Gearbox housing shape for a better heat dissipation  
Input speed up to **3.000 rpm**  
Ball screw drive, travelling screw (Model A)  
and travelling nut (Model B)

**8 sizes standard available**  
Load capacity from 5 kN to **350 kN**  
Ball screw from **Ø 16 mm to Ø 120 mm**



## **HS Series**

### High speed screw jacks

Recommended for continuous operation, duty cycle up to 100%  
Long life **synthetic oil lubricated** bevel gear  
Bevel gear, GLEASON spiral toothing system, high efficiency and low noise functioning  
Angular backlash on output shaft max 10' (available on request reduced backlash)  
Cubic design housing, compact and robust  
Input speed up to **3.000 rpm**  
Ball screw drive, travelling nut (Model B)

**6 sizes standard available**  
Load capacity from 10 kN to **200 kN**  
Ball screw from **Ø 25 mm to Ø 80 mm**

# Main features

High performance ball screw jacks from **SERVOMECH** consist of 3 main series:

**MA BS Series, SJ Series, HS Series.**

Each family is designed and developed to represent a series of sizes with an adequate reciprocal gauge, to allow an easier selection of the most suitable size in terms of performances and costs for each application.

MA BS Series	SJ BS Series	HS Series
High efficiency screw jacks Recommended for continuous operation (duty cycle up to 100%) Ratio from 1:4 to 1:32 Input speed up to 3.000 rpm	Compact design screw jacks Recommended for intermittent operation (duty cycle up to 70%) Ratio from 1:4 to 1:36 Input speed up to 1.500 rpm	High speed screw jacks Recommended for continuous operation (duty cycle up to 100%) Ratio from 1:1 to 1:4 Input speed up to 3.000 rpm
8 standard sizes Load capacity from 5 kN to 350 kN	11 standard sizes Load capacity from 5 kN to 800 kN	6 standard sizes Load capacity from 10 kN to 200 kN
Model A: travelling ball screw Model B: travelling ball nut	Model B: travelling ball nut	Model B: travelling ball nut
Ball screw drive from Ø 16 mm to Ø 120 mm	Ball screw drive from Ø 16 mm to Ø 140 mm	Ball screw drive from Ø 25 mm to Ø 80 mm

## Quality, Technology and Innovation. Our commitment.



Servomech produce **a wide range of electromechanical linear actuators and screw jacks**, ball screw and nuts, electromechanical servo actuators, completely manufactured inside the Servomech factory in Bologna - ITALY.

**High technology and accuracy in manufacturing**, inspections and controls during the entire production process for a constant quality over the time.

Technical support in product selection; on request, **custom-based product** execution to meet your specific application requirements.

**Ball screw and nuts** made by Servomech. Available on request:

- Ball screws with ISO IT3 or IT5 accuracy grade, according to application requirements
- Ball nuts zero backlash or preloaded

For more information, please contact our sales/technical support at [sales@servomech.com](mailto:sales@servomech.com) or visit our web site [www.servomech.com](http://www.servomech.com)



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