

MECHANICAL WORM SCREW JACKS CHD ALUMINIUM SERIES



Made in Italy



CHIARAVALLI GROUP world:
much more than a collection of perfects mechanical components



The Manufacturer DISTRIBUTOR

35000 m² production plants in Italy

28000 m² logistics sites in Italy

10 production and commercial sites in Europe

Over 250 employees in Italy

ONE capillary network of distributors in the European Community



The Chiaravalli group is the technological partner that you should turn to knowing that reliability and respect are values commonly shared.

**YOUR IDEAS
ALWAYS
ON
THE MOVE**



INDUSTRIOUSNESS

TRADITION

SKILLS

EXPERTISE



THE CUSTOMER: ALWAYS AT THE CENTRE OF OUR ATTENTION.



The Chiaravalli group is a dynamic, modern company oriented in fulfilling customers needs and desires.

Human progress has always been based on mechanical application and discovery that stem from human intuition and genius.

Mechanics: the genetic heritage of Chiaravalli Group



The Chiaravalli Group, always aware of the needs of the market has found it necessary to provide its long-standing customers with complete, steady up-dated information about its products 24 hours a day 365 days in a year.

This attention comes from B2B, which is the direct consequence of our interest and dedication to our customers. It is an advanced system of research, purchasing and delivery of all Chiaravalli products. B2B Chiaravalli Group becomes a virtual extension of the customer's warehouse.

business₂business

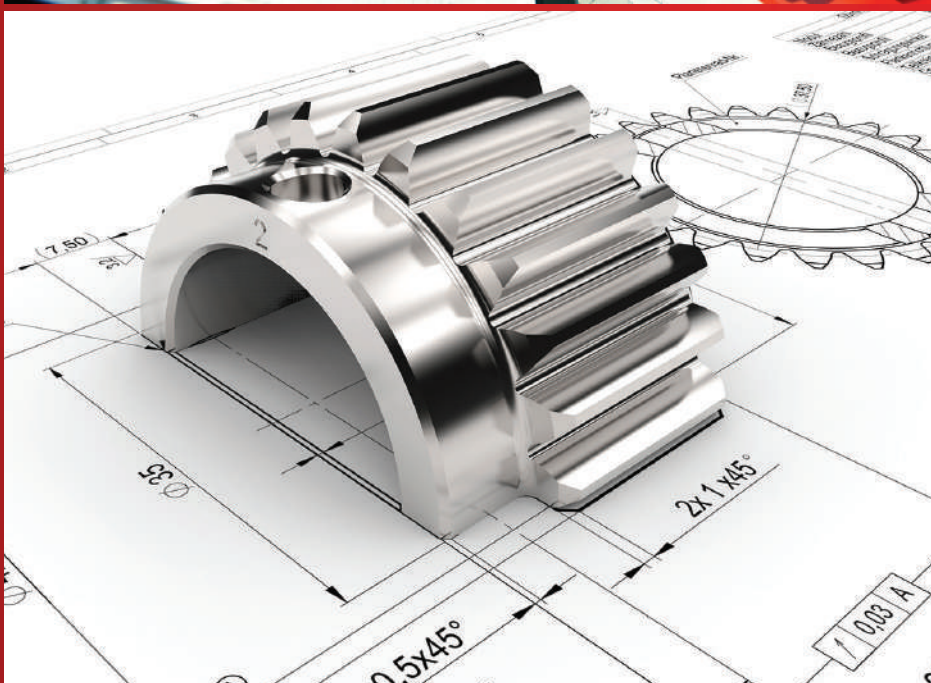
RESEARCH

our Group has always been engaged in constant research of brand new products, to be entered into our sales program, together with awareness of the potential benefits of manufacturing long-standing products using new modern materials.



DESIGN

our technical office designs with a CAD System the new products that will contribute to the expansion of the product range offered by Chiaravalli Group SpA, being able to rely on the expertise of highly experienced co-workers.



PROTOTYPING

we have at our disposal a wide range of CNC Machines, and make use of the most advanced CAM techniques, which enable us to produce Prototypes both for our range of products, and also for a large customer base, who rely on our Group with confidence.



PRODUCTION

taking advantage of our modern and large CNC tools fleet, we produce by means of CAD-CAM technology, high precision mechanical components.



QUALITY CERTIFICATION

all our production is controlled step by step during its production cycle. Various measuring rooms, equipped with modern three-dimensional measuring machines, allow a full certification of our products.



LOGISTICS

our logistics, with its excellent organization and interactive database, allows us to make daily shipments in over 52 countries.



SHIPPING SERVICES

we operate in over 52 countries with a large number of national and international forwarders. Our constantly updated information service allows us to track the transport of products to ensure a timely and accurate delivery.





WORM SCREW JACKS



The screw jack makes it possible to transform the rotary motion provided by an electric, pneumatic, or hydraulic motor or even a handwheel, into linear motion that allows push or pull vertical lifting and horizontal positioning.

Our range of **CHD SERIES SCREW JACKS** is designed and built to provide ease of use and high reliability, making them suitable for a broad range of applications.

They can be used individually or in configurations composed of multiple jacks connected together by means of bevel gearboxes, drive shafts and couplings allowing the creation of perfectly balanced lifting systems and drives even with unevenly distributed loads.

They can be used to lift, pull, move, or align any type of load with perfect synchronism, which is difficult to achieve with other types of actuators.

They can be applied either with vertical mountings facing up or down, or with horizontal mountings. Our standard range includes 6 sizes with load capacities from 2,5 to 100 kN.

There are two standard reduction ratios that vary according to the size and pitch of the trapezoidal screw so that the same travel speed can be guaranteed for all sizes.



Technical data from page 24 to page 47

NEW SERIES CHD

CHD 2,5 · CHD 5 · CHD 10 · CHD 25 · CHD 50 · CHD 100



Travelling Screw Jacks
with ball screw



Travelling Screw Jacks
with ACME screw

Rotating Screw Jacks
with ball screw



Rotating Screw Jacks
with ACME screw



CHD TR

CHD VRS



Characteristics CHD SERIES

Housing
Worm gear - worm wheel set
Bearings
Screw spindle
Nut
Seals
Jack lubrication
Jack gearbox lubrication
Screw spindle lubrication

page 10

INTRODUCTION

Choice of size and model
Load definition
Static loads
Dynamic loads
Pull loads
Push loads
Maximum permissible loads

page 11

Jack input torques
Maximum permissible input torque for individual jacks
Drive torque for a single jack
Maximum permissible torque on worm gears (through-torque)
Drive torque for lifting systems
Lifting speed
Stroke
Stroke monitoring

page 12

Temperature and service factor
Rotation and movement direction
Jack rotation directions
Multiple system rotation directions
Irreversibility / reversibility
Backlash and wear
Axial backlash
Nut wear

page 13

INSTALLATION

Calculation section
Sizing a single jack

page 14

Sizing a multi-jack system

page 15

Buckling load check

EULER I EULER II EULER III

pages 16/17



INDEX

ASSEMBLY DIAGRAMS

pages 18/20

JACK SELECTION GUIDE

Order code

page 21

Accessories for travelling screw jacks

page 22

Accessories for rotating screw jacks

page 23

CHD
2,5

Screw jack model TS
Screw jack model RS
Screw jack performance

pages 24/27

CHD
25

Screw jack model TS
Screw jack model RS
Screw jack performance

pages 36/39

CHD
5

Screw jack model TS
Screw jack model RS
Screw jack performance

pages 29/31

CHD
50

Screw jack model TS
Screw jack model RS
Screw jack performance

pages 40/43

CHD
10

Screw jack model TS
Screw jack model RS
Screw jack performance

pages 32/35

CHD
100

Screw jack model TS
Screw jack model RS
Screw jack performance

pages 44/47

Travelling version with ball screw

page 48

Rotating version with ball screw

page 49

Safety nut
Handwheel

page 50

Drive flange and shafts orientation
Oversized spindle CHD-R

page 51

ACCESSORIES

pages 52/53

PE Pivot bearing end - **FF** Fixing flanged - **FE** Fork end

page 54

RE Rod end - **AD** Antirotation device - **EP** Escape protection

page 55

FS Fastening strips - **PBP** Pivot bearing plate

page 56

MS Mechanical limit switches - **PLS** Proximity (inductive) sensors

page 57

MLS Magnetic limit switches

page 58

BLS Screw protection bellows

page 59

Drive flange - **TS** Transmission shafts

pages 60/61

Couplings

page 62

Application technical specs needed for the screw jack choice

pages 63



CHARACTERISTICS CHD SERIES

HOUSING

For 2.5, 5, 10 and 25 sizes CHD SERIES housings are made of aluminium alloy; for the 50 and 100 sizes the housings are made of cast iron.

The aluminium alloy housings receive an anti-oxidant treatment, while cast iron housings have a specific paint finish.

Furthermore, aluminium housings can be supplied on request with different treatments such as: anodizing, phosphate-chromate conversion coating, and GHA Golden Hard Anodizing (patent no. EP1207220) which inhibits bacterial proliferation by means of silver ions, an excellent treatment for food, chemical, pharmaceutical industry applications and many others.

WORM GEAR - WORM WHEEL SET

The worm gear - worm wheel set is made respectively with the worm gear with involute profile in case-hardened and tempered steel and the worm wheel in G-CuSn12Ni2 bronze.

BEARINGS

Only primary brand bearings are used, to guarantee top quality and constant performance in all conditions of use.

For all sizes, thrust ball bearings are mounted on the worm wheel, while radial bearings are used on the worm gear in sizes 2.5, 5, 10 and 25 and taper roller bearings in sizes 50 and 100.

SCREW SPINDLE

Standard spindles are made of carbon steel with right hand, rolled thread. On request, we can supply spindles with multiple starts, with left hand screw, and in stainless steel.

NUT

Rotating nuts are made of bronze and, on request, can be supplied in special polymers that allow use of the system without lubrication.

SEALS

To guarantee hermetic sealing of the gearbox, radial seals are fitted both on the worm wheel and the work gear, with the exception of size 2.5, in which the seal on the worm gear is achieved with sealed bearings and O-rings. In flange spigots (where present) a static seal is provided by O-rings. Rings in VITON, SILICONE, and TEFLON are available for special situations. For these requirements, please contact our engineering-sales department.

JACK LUBRICATION

Lubrication is a fundamental requirement for proper functioning and long life of the jack. This is why the CHD SERIES has been designed for separate lubrication of gearbox and screw spindle, allowing the use of different and specific lubricants for each.

Special lubrication solutions can be provided on request for high temperatures, low temperatures and for the food industry.

JACK GEARBOX LUBRICATION

The gearbox is filled with high-quality synthetic liquid grease that guarantees lifetime lubrication under normal conditions.

An oil lubricated version is available on request.

SCREW SPINDLE LUBRICATION

The lubrication system on the travelling version allows lubrication of the spindle during operation, ensuring the distribution of grease over its entire length. For the rotary version, nuts can be supplied with a grease nipple on request.

WARNING! SPINDLE LUBRICATION MUST BE PROVIDED BY THE END USER.

The user must regularly inspect the spindle and lubricate in accordance with the duty cycle.

CHIARAVALLI GROUP SpA pre-lubricates spindles with specific grease. Grease type and quantity information can be found in the use and maintenance manual.



INTRODUCTION

CHOICE OF SIZE AND MODEL

The choice of model and dimensions must be made by the customer according to the application, as CHIARAVALLI GROUP SpA is unable to predict conditions of use, load types and magnitudes, the operating environment and all other conditions that affect the operation and lifetime of the jack.

We are happy to provide assistance on request, giving the necessary information for correct selection of the product.

LOAD DEFINITION

STATIC LOADS

By definition, all loads acting on the jack when all its components are at rest are static loads.

DYNAMIC LOADS

By definition, all loads acting on the jack while its components are moving are dynamic loads.

PULL LOADS

A pull or tension load is a load that acts on the spindle axis in the opposite direction to the jack housing. In this case the jack can work at the maximum permissible load.

PUSH LOADS

A push or compression load is a load that acts on the spindle axis in the direction of the jack housing. In this particular case the spindle may be subject to so-called "buckling load" so there is a limitation to the maximum permissible load on the jack (see jack calculations section page 16)

MAXIMUM PERMISSIBLE LOADS

The jacks are designed to withstand the nominal static load permitted in tension and compression. The permissible load depends on the type of jack mounting and the load direction.

A) Jack resting on level surface, spindle facing upwards and push load.

The maximum static load may be limited with respect to the nominal load, depending on the stroke of the jack. The length of the spindle must be checked at buckling load.

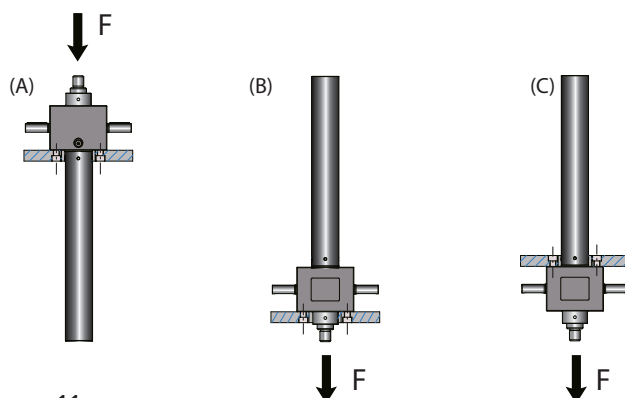
B) Jack resting on a flat surface, spindle facing downwards and pull load.

The jacks can withstand the maximum nominal static load.

C) Jack mounted under a flat surface, spindle facing downwards and pull load supported by the fixing screws.

The jacks can withstand the maximum nominal static load only if the fixing specifications are observed: screw length and tightening torque. (These values are given in the use and maintenance manual.)

This type of fixing should be avoided unless absolutely necessary. It is preferable to fix the jacks on top of a flat surface.





JACK INPUT TORQUE

MAXIMUM PERMISSIBLE INPUT TORQUE FOR INDIVIDUAL JACKS

For optimal life of the jack, the maximum input torque values shown in the "general technical data" table (pages 24/47) must not be exceeded.

DRIVE TORQUE FOR A SINGLE JACK

The drive torques required for load lifting by a single jack are given in the "performance tables" (pages 24/47).

If the load to be lifted is not shown in the tables, refer to the "calculation formulas" chapter (page 14).

MAXIMUM PERMISSIBLE TORQUE ON WORM GEARS (THROUGH-TORQUE)

In systems consisting of multiple jacks, driven by a single motor, the maximum permissible torque allowed on the worm gear of the individual jacks must be checked. The maximum permissible torque on the worm is significantly higher than the maximum torque allowed on the jack, as only the worm gear and not the worm wheel teeth is subjected to torsion.

The values are shown in the "general technical data" table (pages 24/47)

If the value is exceeded, select a larger size, change the mounting position or increase the speed, without prejudice to the prescriptions given in the previous paragraphs.

DRIVE TORQUE FOR LIFTING SYSTEMS

To calculate the drive torque required for a multi-jack system, it is not sufficient to sum the individual torque values of the various jacks: the efficiency of the entire system must be taken into account. To perform the calculation, refer to the "calculation formulas" chapter (page 14).

LIFTING SPEED

Lifting speeds are shown in the "performance tables" (pages 24/47).

To calculate the lifting speed with an rpm value other than that shown in the table, refer to the formula given in the "calculation formulas" chapter (page 14)

To increase the travel speed, screws with two starts can be used to double the linear speed of the jack. The use of these screws reduces the dynamic load, which is limited by the jack's maximum input torque.

These screws also make the jack reversible, which must be countered by installing a mechanical brake.

To reduce the travel speed, jack input speed must be decreased. This can be achieved using a motor with a greater number of poles, an inverter, or by interposing a gear reducer between the motor and the jack. In all cases, always pay attention to the maximum permissible input torque to the jack.

STROKE

During the design stage, pay attention to the screw jack maximum stroke and comply with the safety overrun distances.

Contact with mechanical limit stops that may damage internal components of the jack is not permitted.

STROKE MONITORING

Travelling versions can be equipped with control systems to prevent the jack from reaching stroke limit positions and thus come into contact with a mechanical limit stop.

Stroke control for the rotating version must be incorporated in the structure by the customer's engineering department.

For control system selection, refer to (pages 57/58)



GENERAL FEATURES

TEMPERATURE AND SERVICE FACTOR

In general, screw jacks are not suitable for continuous duty.

The performance data given in the tables are referred to a service factor of 20% in a 60 minute period at 20°C ambient temperature.

The working temperature range must not exceed -20° + 60°C (jack) and -20° + 80°C (spindle)

In limit conditions select a larger jack; consult our engineering-sales department for different service factors or temperatures.

ROTATION AND MOVEMENT DIRECTION

JACK ROTATION DIRECTIONS

Standard jacks are fitted with right-hand worm screws and right-hand spindles. The figure shows the rotation directions and the respective linear movements.

MULTIPLE SYSTEM ROTATION DIRECTIONS

When creating a multi-jack system, pay attention to the system's rotation direction. We recommend consulting our standard assembly diagrams. (pages 18/20) In the case of 3-way bevel gearboxes, the direction of rotation can be changed simply by rotating the gearbox.

IRREVERSIBILITY / REVERSIBILITY

In principle, jacks with single-start trapezoidal screws offer a high level of irreversibility. System inertia can vary depending on the application and can be eliminated by using a mechanical brake.

A brake is also recommended in applications characterised by shock loads or strong vibrations. Jacks with double-start trapezoidal spindles or ball screws are reversible and a mechanical brake is necessary.



BACKLASH AND WEAR

AXIAL BACKLASH

There is a certain amount of axial backlash between the screw spindle and the nut, as necessary for this type of coupling to function properly.

The axial backlash can only be detected in applications in which the load changes from compression to traction or vice versa.

NUT WEAR

Nut wear must be checked at regular intervals.

The maximum permissible wear between screw and nut is 25% of the pitch.

Type of Nut	Pitch [mm]	Maximum Permissible Wear [mm]
Tr16x4 Tr18x4 Tr20x4	4	1
Tr30x6	6	1.5
Tr40x7	7	1.75
Tr55x9	9	2.25



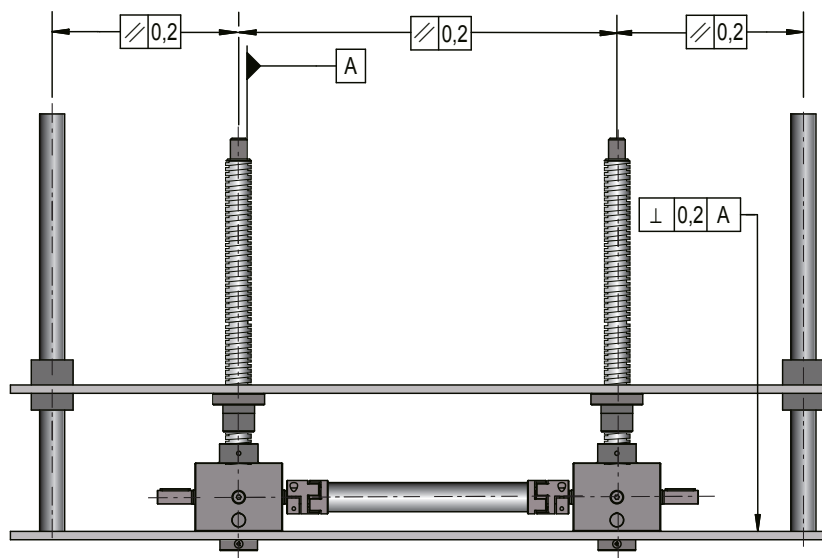
INSTALLATION

Choose the type of jack fixing in the design stage, to ensure it is subjected to exclusively axial loads.

Pay the utmost attention to parallelism and orthogonality of the system.

In multi-jack systems, parallelism must be guaranteed between one jack and the next. Parallelism errors can compromise correct operation of the system, causing overheating, premature wear or failure.

During commissioning of the jack or system, a series of checks must be carried out following the instructions in the use and maintenance manual.



CALCULATION SECTION

Before starting sizing procedures, carefully evaluate all the loads acting on the jack or the multi-jack system.

SIZING A SINGLE JACK

Calculation of torque needed to move the load:

$$M_t = \frac{F * p}{2000 * 3.14 * \eta_m * i} + M_l$$

Calculation of power needed to move the load:

$$P = \frac{M_t * n_1}{9550}$$

Travel speed calculation:

$$V = \frac{n_1 * p}{i * 60}$$



That reads as:

- F** = load [N]
- P** = load [kW]
- p** = leadscrew/ballscrew pitch [mm]
- η_m** = overall screwjack efficiency (see efficiency table, pages 24/47)
- i** = reduction ratio
- Mt** = motor torque on motorshaft [Nm]
- n1** = motorspeed [rpm]
- V** = linear speed [mm/s]
- MI** = Idling torque [N/mm] (see table, pages 24/47)

SIZING A MULTI-JACK SYSTEM

The torque required for a lifting system is the total of the individual jack torque values and is increased according to the friction losses of the transmission components such as couplings, connecting shafts, bevel gearboxes, etc.

Calculation of torque needed to move the load:

$$M_t = \left(\frac{n * F * p}{2000 * 3.14 * \eta_m * i * \eta_c} \right) + (MI * N)$$

Calculation of power needed to move the load:

$$P = \frac{M_t * n1}{9550}$$

That reads as:

- P** = power [kW]
- n** = number of screwjacks
- F** = load for single screwjacks [N]
- η_m** = overall screwjack efficiency
- η_c** = overall system efficiency

$$\frac{1}{1 - [(1-N) * 0,05]}$$

- N** = number of screwjacks and bevelgears

- i** = screwjack reduction ratio

- MI** = Idling torque (see table, pages 24/47)

For the configurations shown on pages 18-20 the efficiency (η_c) is shown next to each figure.

When using multiple jacks with a single motor, check the maximum permissible through-torque on the individual jacks (see pages 24/47).



GENERAL FEATURES

BUCKLING LOAD CHECK

When the jacks are subjected to a compression load - even occasionally, the screw must be verified at buckling load by referring to the Euler diagrams.

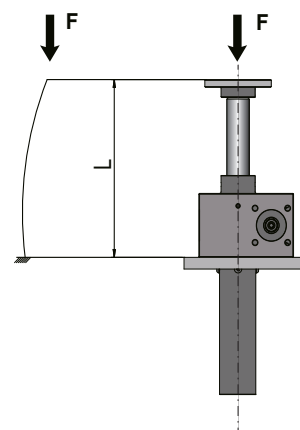
Find the reference diagram in accordance with the two constraints that support the jack. Once the type of fixing has been selected, find the maximum length of distance L on the graphs.

The graphs were plotted with a safety factor of 4.

EULERO I

Constraint types:

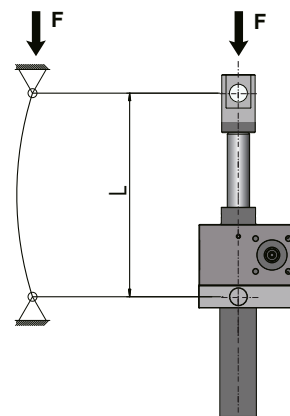
- **TRAVELLING VERSION**
Fixed housing
Unrestrained screw terminal.
- **ROTATING VERSION**
Fixed housing
Unrestrained nut.



EULERO II

Constraint types:

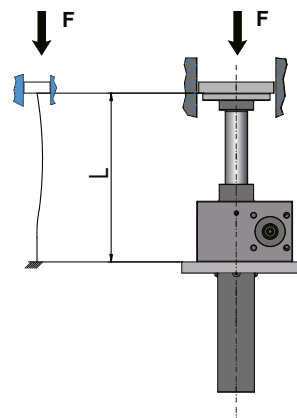
- **TRAVELLING VERSION**
Hinged jack and screw terminal.
- **ROTATING VERSION**
Hinged jack and nut.



EULERO III

Constraint types:

- **TRAVELLING VERSION**
Fixed jack housing
Guided screw terminal.
- **ROTATING VERSION**
Fixed jack housing
Guided nut.

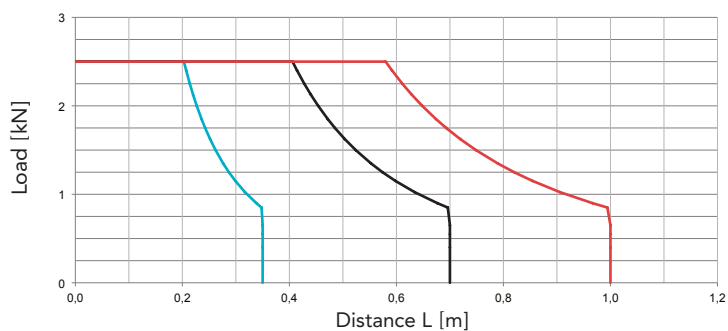




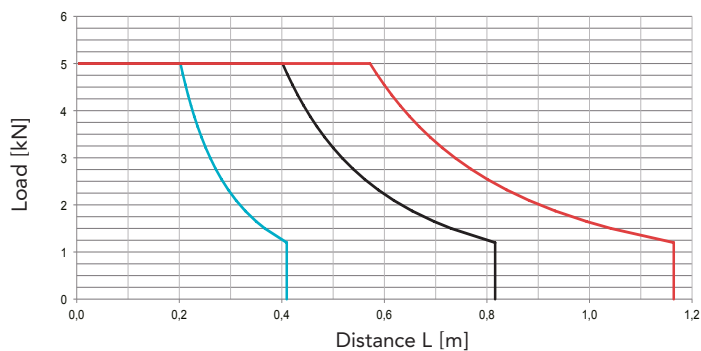
GENERAL FEATURES

Eulero I
Eulero II
Eulero III

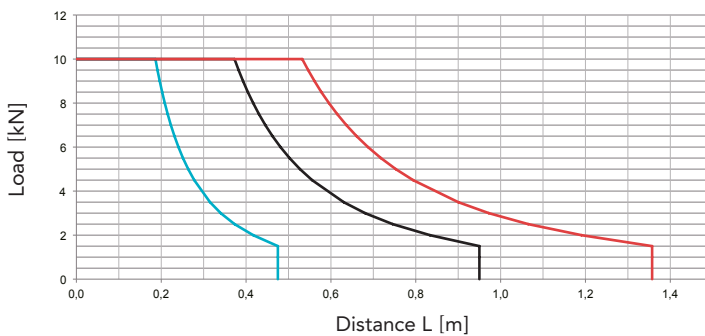
Tr 16x4



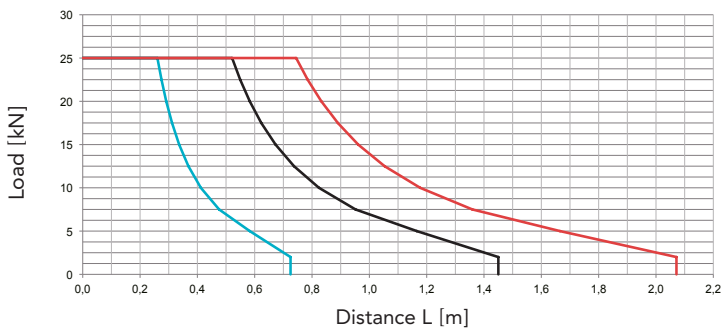
Tr 18x4



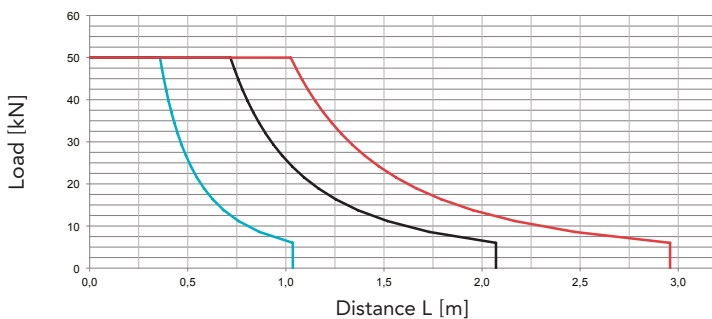
Tr 20x4



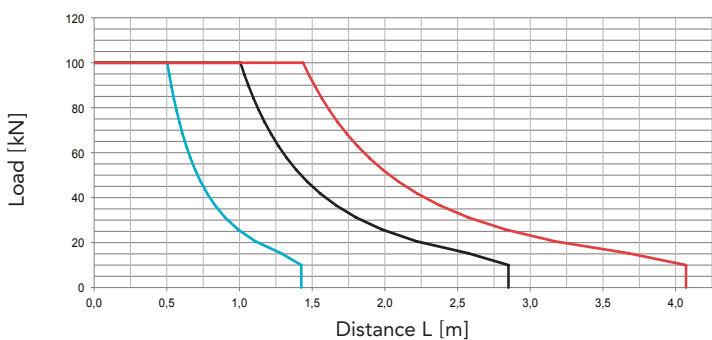
Tr 30x6



Tr 40x7



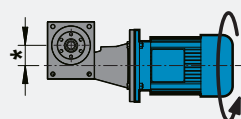
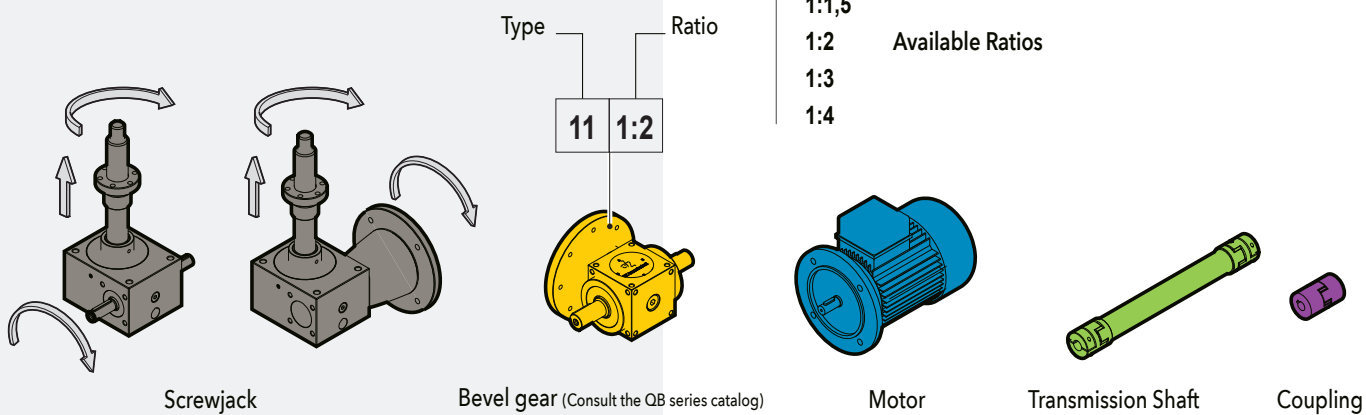
Tr 55x9



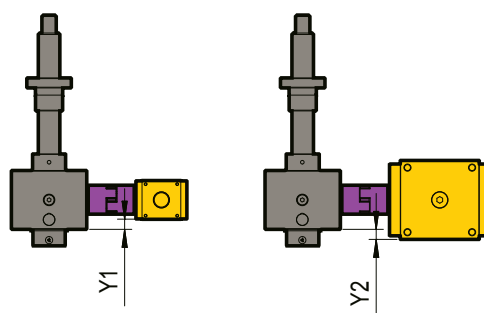


ASSEMBLY DIAGRAMS

LEGEND



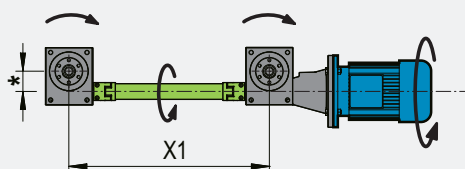
NOTE: The amount "*" varies according to the jack sizeetto



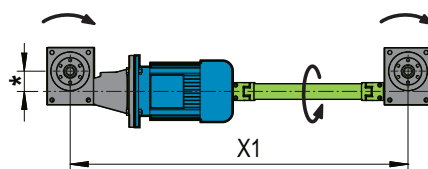
NOTE: The amounts Y1 and Y2 being the height of the jack and gear may have different measurements depending on the gear models used.

2.1 - 2.2 - 2.3 - 2.4

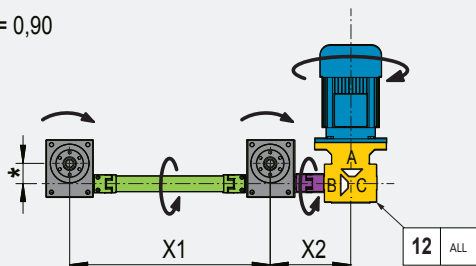
2.1 $\eta_c = 0,95$



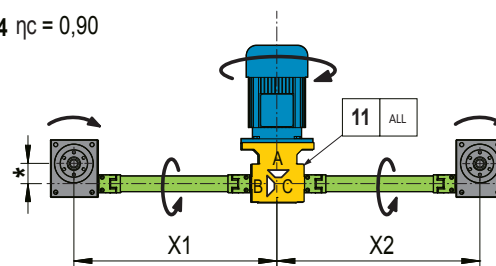
2.2 $\eta_c = 0,95$



2.3 $\eta_c = 0,90$



2.4 $\eta_c = 0,90$

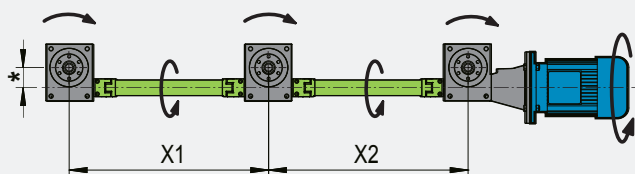




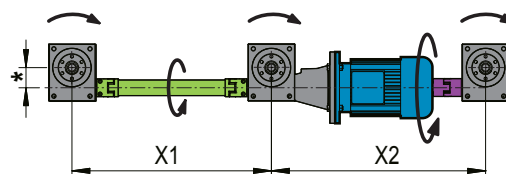
ASSEMBLY DIAGRAMS

3.1 - 3.2 - 3.3 - 3.4 - 3.5 - 3.6 - 3.7

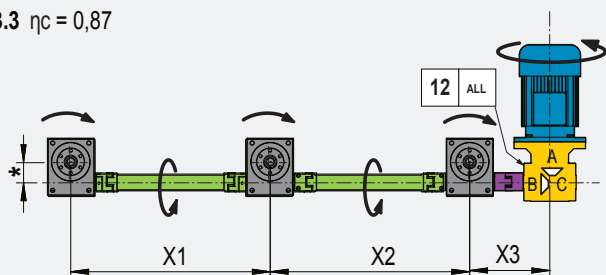
3.1 $\eta_c = 0,90$



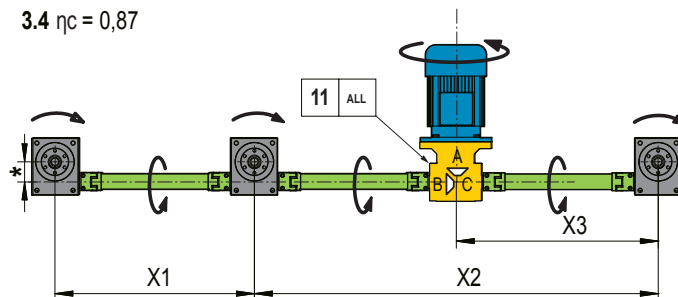
3.2 $\eta_c = 0,90$



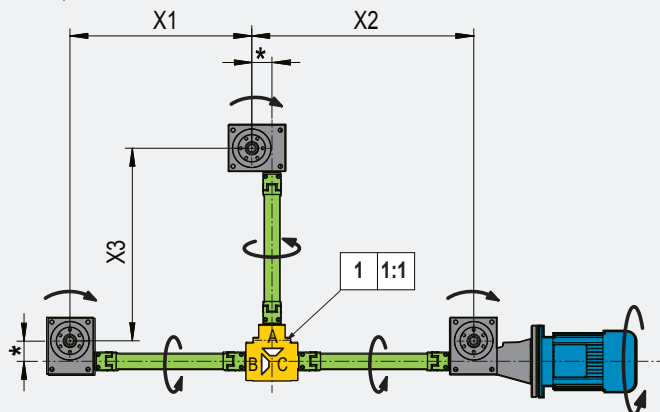
3.3 $\eta_c = 0,87$



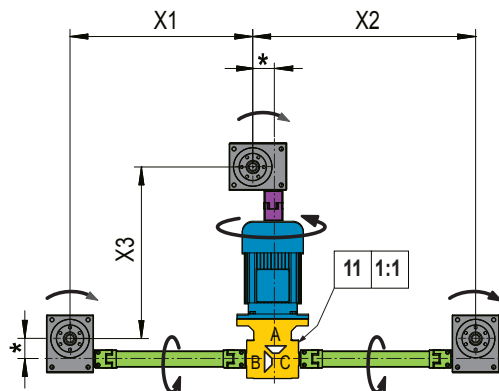
3.4 $\eta_c = 0,87$



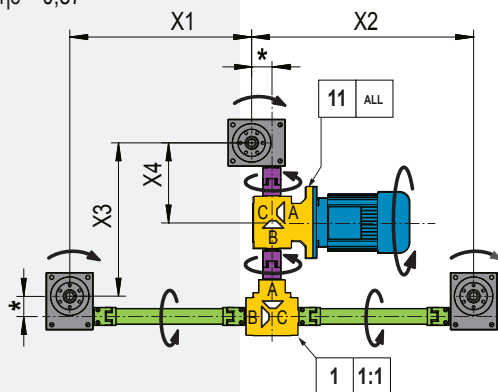
3.5 $\eta_c = 0,87$



3.6 $\eta_c = 0,87$



3.7 $\eta_c = 0,87$

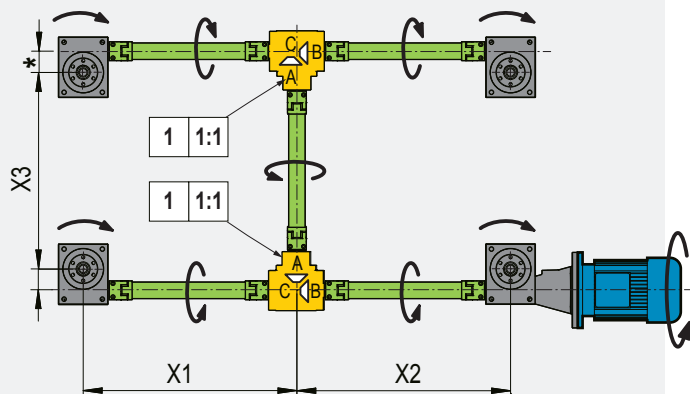




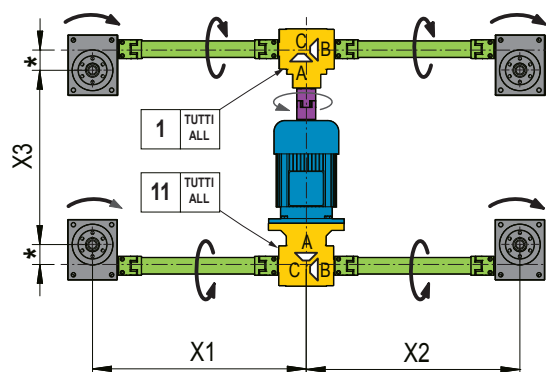
ASSEMBLY DIAGRAMS

4.1 - 4.2 - 4.3

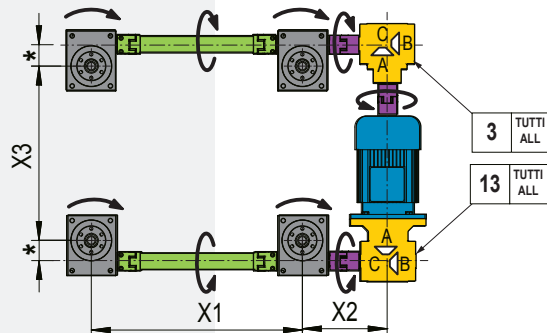
4.1 $\eta_c = 0,80$



4.2 $\eta_c = 0,80$

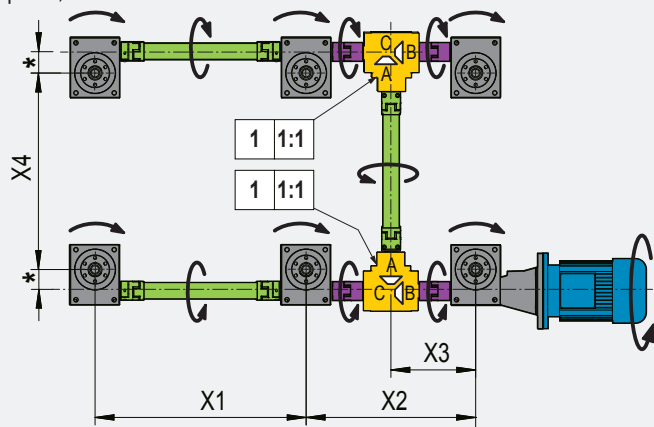


4.3 $\eta_c = 0,80$

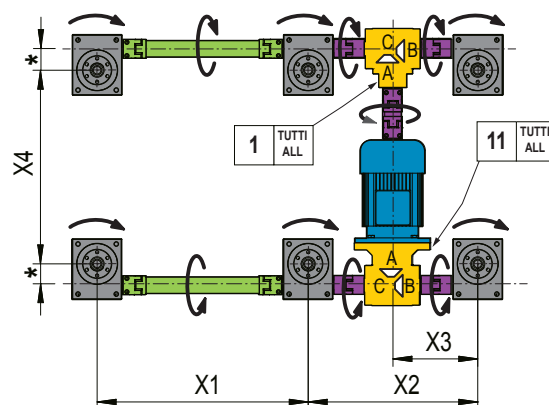


6.1 - 6.2 - 6.3

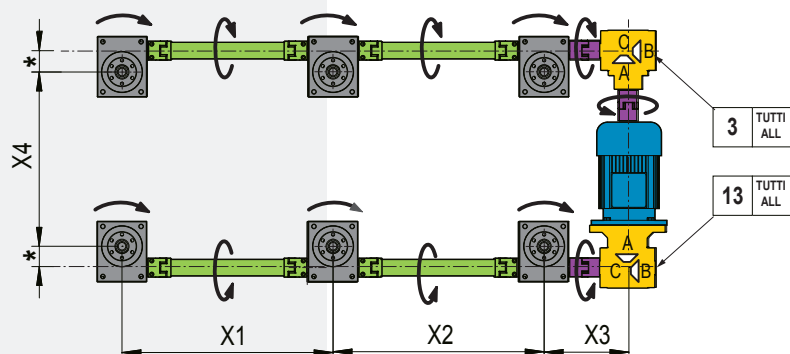
6.1 $\eta_c = 0,74$



6.2 $\eta_c = 0,74$



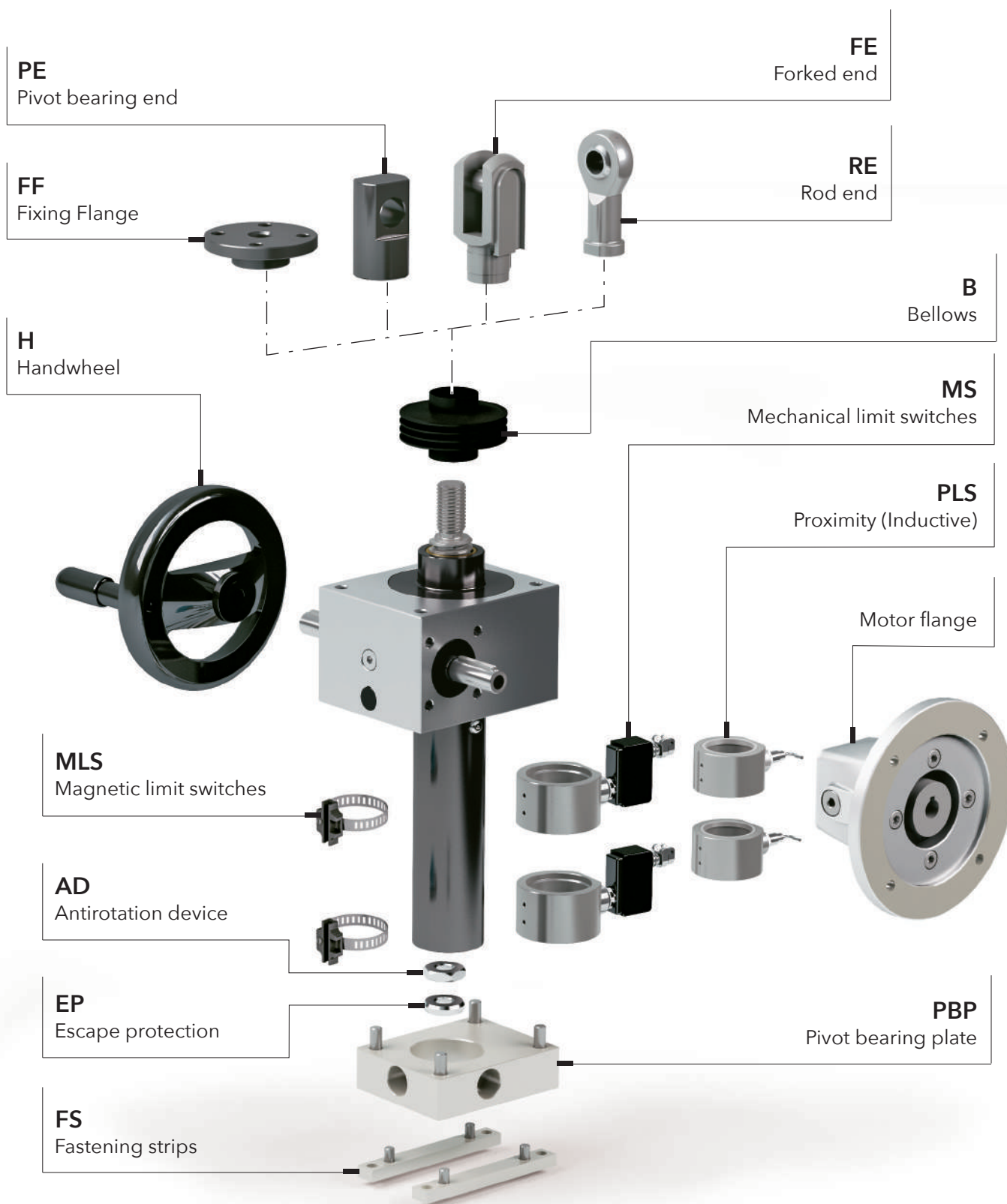
6.3 $\eta_c = 0,74$



21

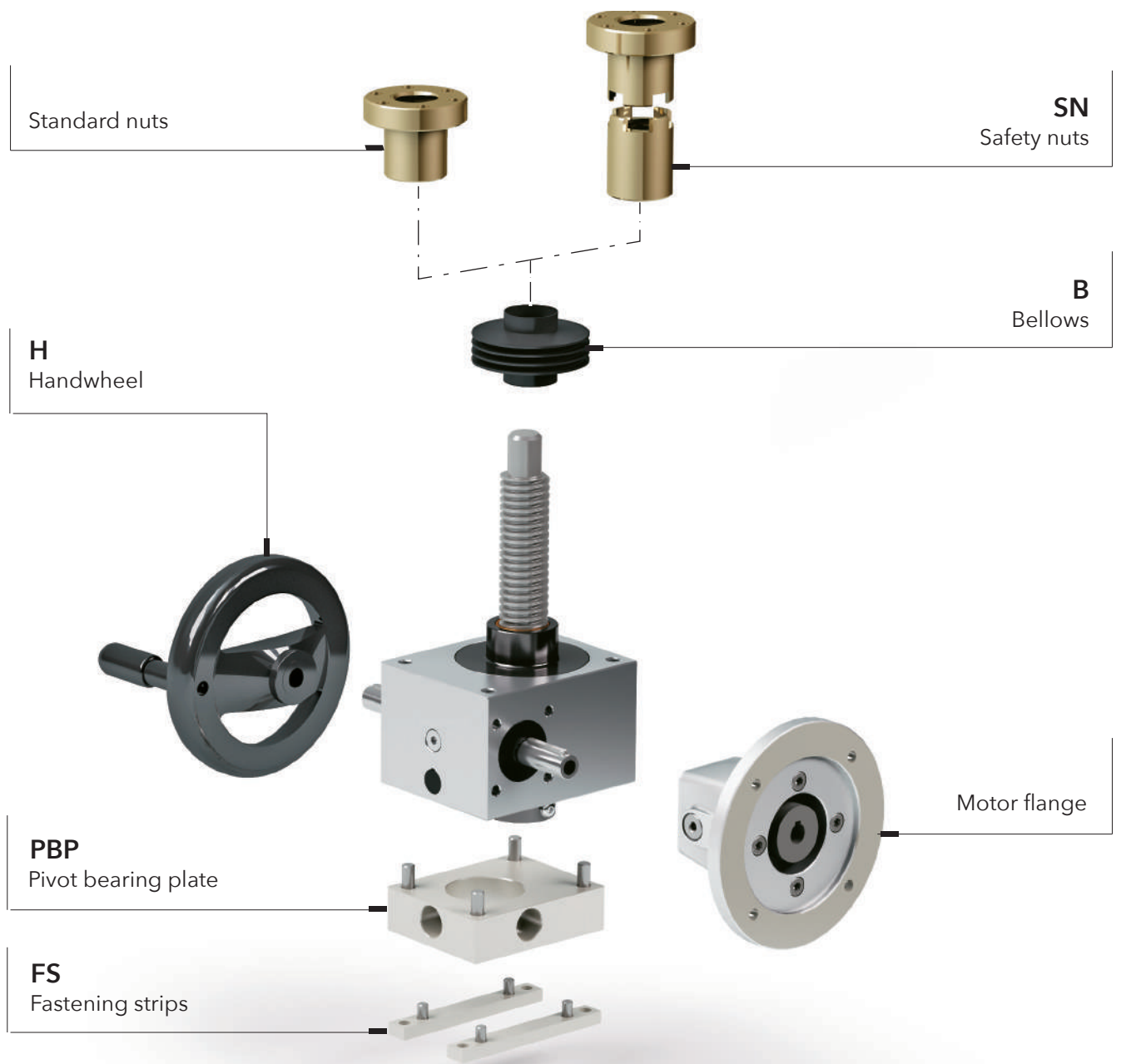


TRAVELLING SCREW JACKS





ROTATING SCREW JACKS



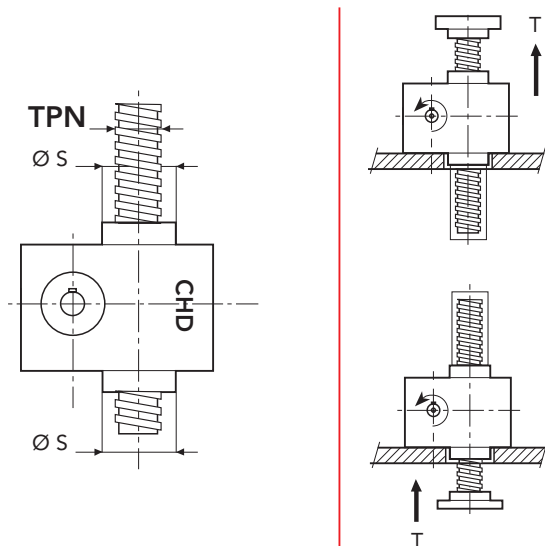
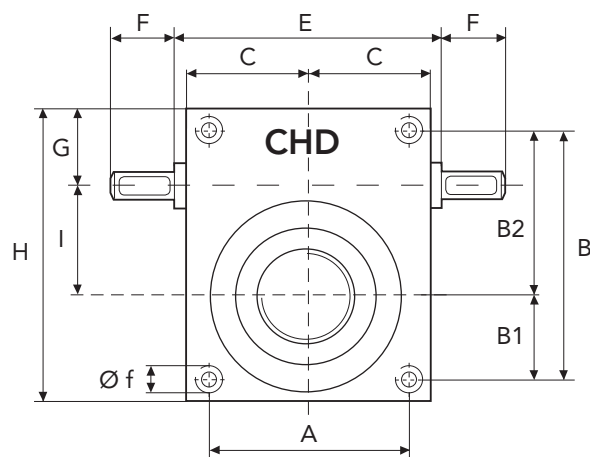
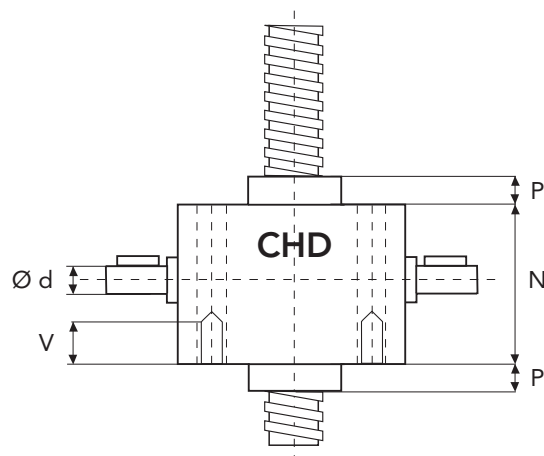


SERIES CHD 2,5 TS

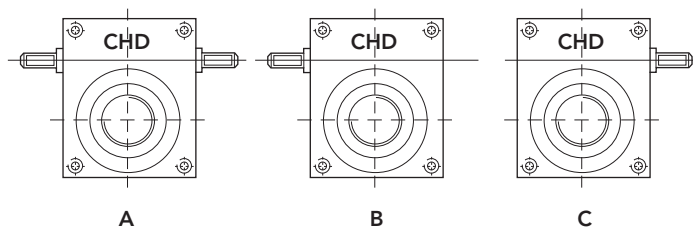
TRANSLATING SCREW

SERIES CHD 2,5 TS

SCREW JACK MODEL		CHD 2,5
LOAD	daN (Kg)	250
TPN SCREW	DIAMETER mm PITCH mm	16x4
GEAR RATIOS	NORMAL SPEED SLOW SPEED	1/4 1/16
STROKE FOR INPUT REV.	NORMAL SPEED SLOW SPEED	1 0,25
EFFICIENCY	NORMAL SPEED SLOW SPEED	36% 30%
JACK WEIGHT (Kg)		1
SCREW WEIGHT TPN X 100 mm (Kg)		0,25
CASE MATERIAL		ALUMINIUM
GREASE QTY (Kg)		0,02
GREASE TYPE	AGIP GR MU EP2	
OPERATING TEMPERATURE	-5 ° C +80 ° C	



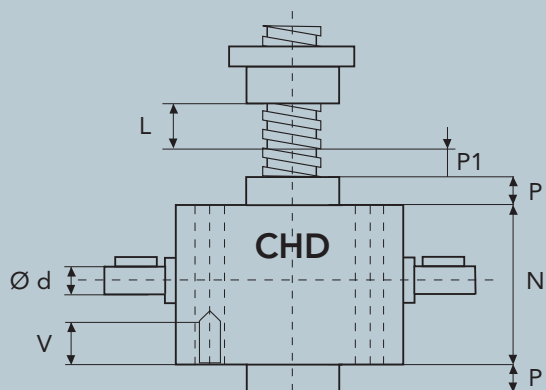
	A	B	B1	B2	C	E	F	G	H
CHD2,5	38	48	16	32	25	52	20	18	60
	I	N	P	P1	V	Ø d	Ø f	Ø s	TPN
CHD2,5	20	50	12	10	12	9	M6	26	16X4



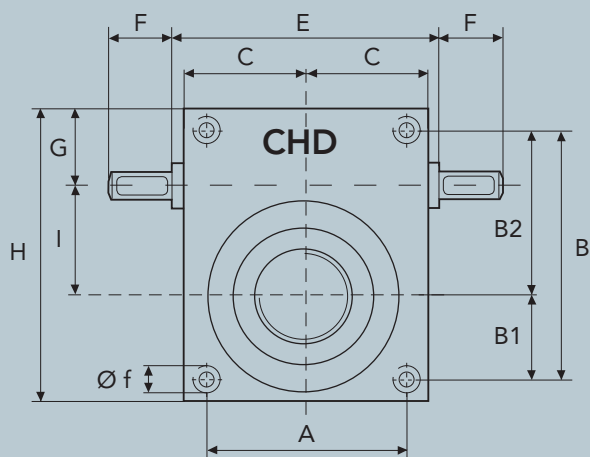


SERIES CHD 2,5 RS

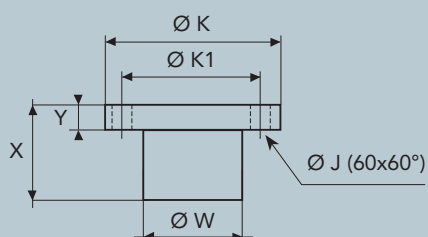
ROTATING SCREW



L = CORSA

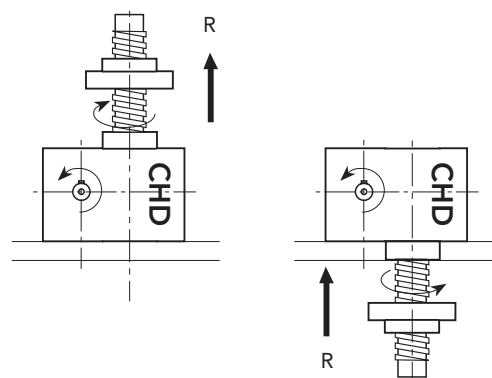
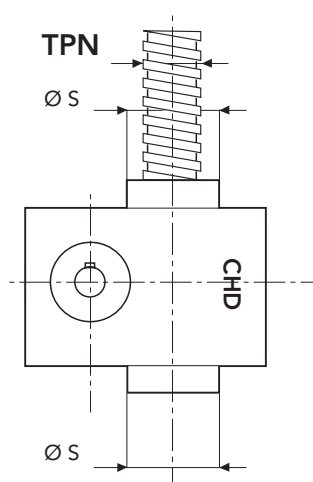


BRONZE NUT



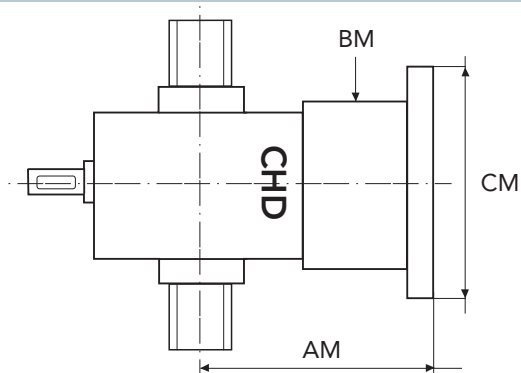
	X	Y	Ø W	Ø K	Ø K1	Ø J
CHD2,5	44	12	28	48	38	6

CONFIGURATION

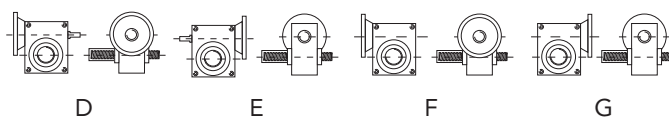


SERIES CHD 2,5 RS

PAM DIMENSIONS FOR BELL AND COUPLING



MOTOR	FLANGE TYPE	CM	AM	BM
GR. 56	B5	120	85	50
	B14	80		
GR. 63	B5	140	85	50
	B14	90		





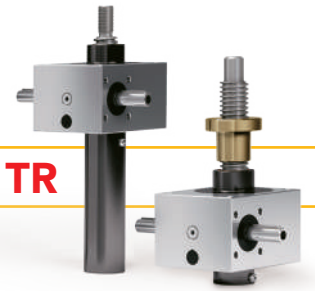
SCREW JACK PERFORMANCE CHD 2,5

CHD TR SERIES

SCREW JACKS WITH
TRAPEZOIDAL SCREWS

CHD 2,5 TR

16 x 4



Load [kN]		2,5		2		1,5		1		0,5	
nn1 rpm	speed										
		Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
1500	25,0	0,19	1,2	0,14	0,9	0,1	0,74	0,1	0,52	0,1	0,3
1000	16,7	0,13	1,2	0,1	0,9	0,1	0,74	0,1	0,52	0,1	0,3
750	12,5	0,1	1,2	0,1	0,9	0,1	0,74	0,1	0,52	0,1	0,3
500	8,3	0,1	1,2	0,1	0,9	0,1	0,74	0,1	0,52	0,1	0,3
300	5,0	0,1	1,2	0,1	0,9	0,1	0,74	0,1	0,52	0,1	0,3
100	1,7	0,1	1,2	0,1	0,9	0,1	0,74	0,1	0,52	0,1	0,3
50	0,8	0,1	1,2	0,1	0,9	0,1	0,74	0,1	0,52	0,1	0,3
1500	6,3	0,1	0,4	0,1	0,3	0,1	0,25	0,1	0,2	0,1	0,12
1000	4,2	0,1	0,4	0,1	0,3	0,1	0,25	0,1	0,2	0,1	0,12
750	3,1	0,1	0,4	0,1	0,3	0,1	0,25	0,1	0,2	0,1	0,12
500	2,1	0,1	0,4	0,1	0,3	0,1	0,25	0,1	0,2	0,1	0,12
300	1,3	0,1	0,4	0,1	0,3	0,1	0,25	0,1	0,2	0,1	0,12
100	0,4	0,1	0,4	0,1	0,3	0,1	0,25	0,1	0,2	0,1	0,12
50	0,2	0,1	0,4	0,1	0,3	0,1	0,25	0,1	0,2	0,1	0,12

CHD VRS SERIES

ONLY ROTATING SCREW

see dimensions pages 48/49

CHD 2,5 VRS

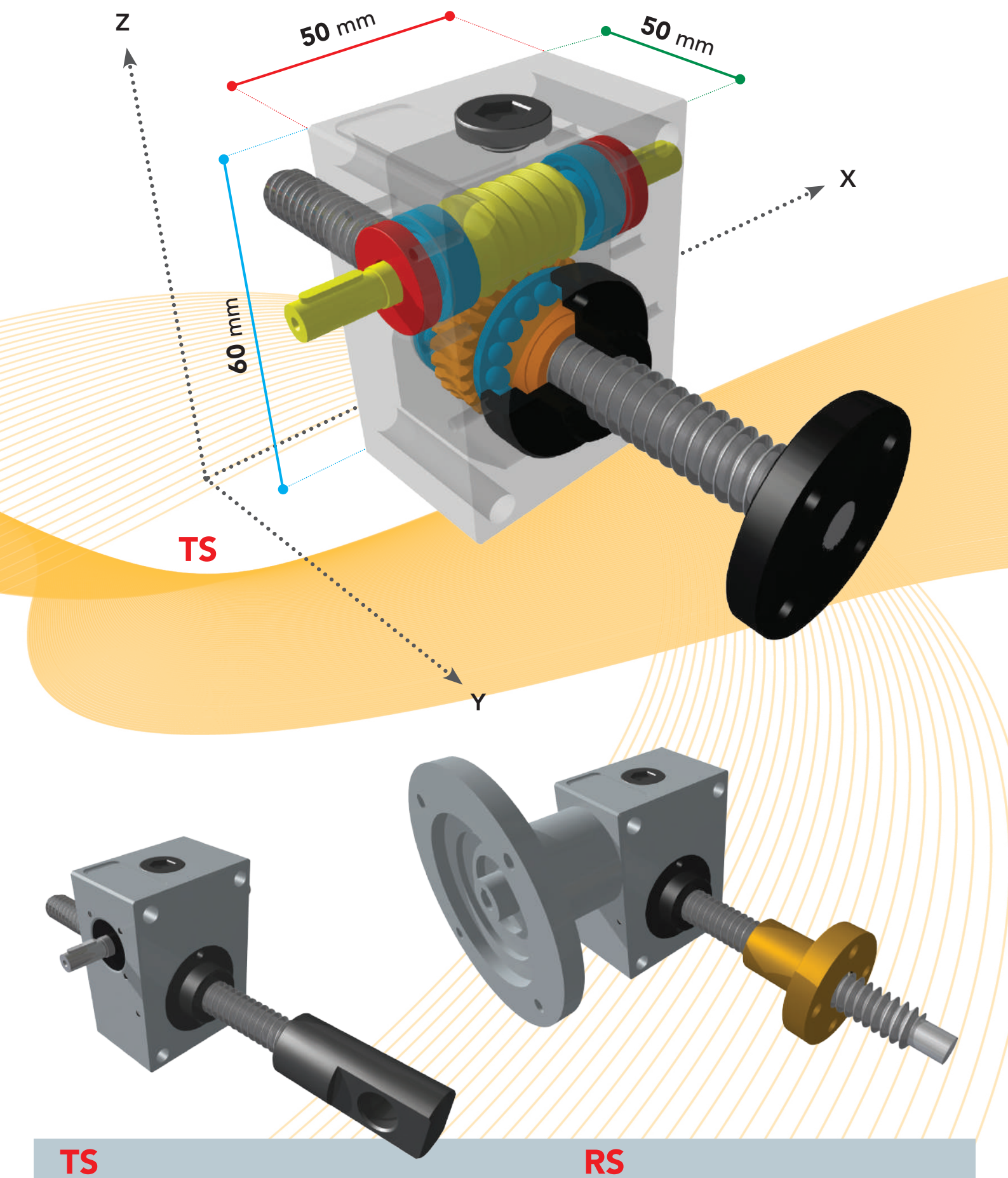
16 x 5



Load [kN]		2,5		2		1,5		1		0,5	
nn1 rpm	speed										
		Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
1500	31,3	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,3	0,1	0,2
1000	20,8	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,3	0,1	0,2
750	15,6	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,3	0,1	0,2
500	10,4	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,3	0,1	0,2
300	6,3	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,3	0,1	0,2
100	2,1	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,3	0,1	0,2
50	1,0	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,3	0,1	0,2
1500	7,8	0,1	0,3	0,1	0,2	0,1	0,16	0,1	0,13	0,1	0,1
1000	5,2	0,1	0,3	0,1	0,2	0,1	0,16	0,1	0,13	0,1	0,1
750	3,9	0,1	0,3	0,1	0,2	0,1	0,16	0,1	0,13	0,1	0,1
500	2,6	0,1	0,3	0,1	0,2	0,1	0,16	0,1	0,13	0,1	0,1
300	1,6	0,1	0,3	0,1	0,2	0,1	0,16	0,1	0,13	0,1	0,1
100	0,5	0,1	0,3	0,1	0,2	0,1	0,16	0,1	0,13	0,1	0,1
50	0,3	0,1	0,3	0,1	0,2	0,1	0,16	0,1	0,13	0,1	0,1



CHD 2,5



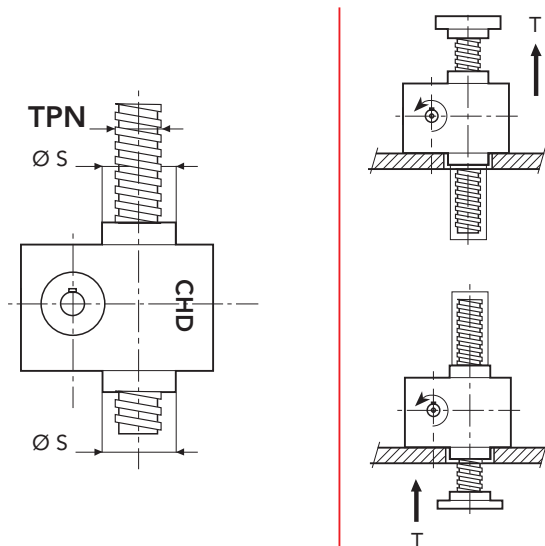
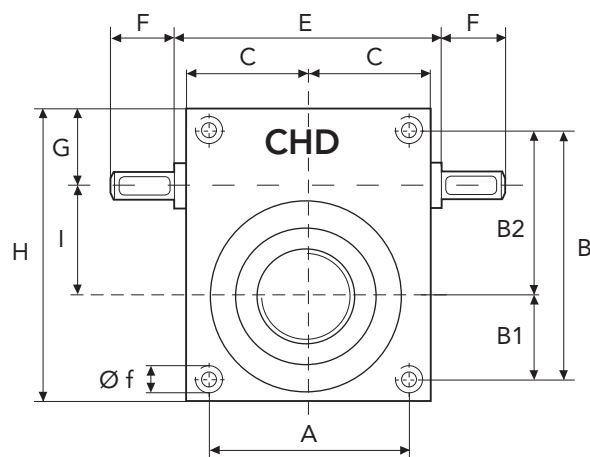
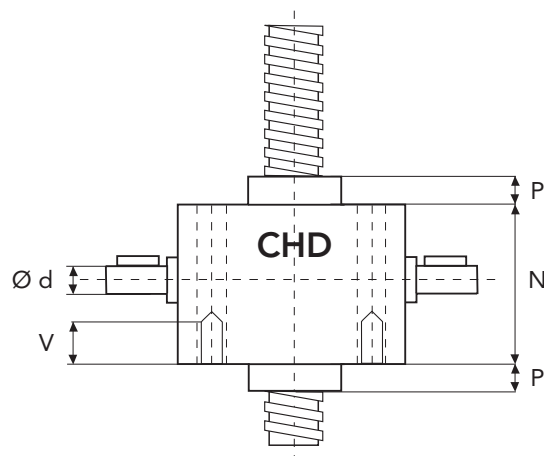


SERIES CHD 5 TS

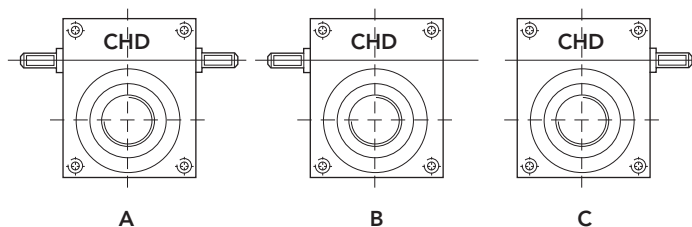
TRANSLATING SCREW

SERIES CHD 5 TS

SCREW JACK MODEL		CHD 5
LOAD	daN (Kg)	500
TPN SCREW	DIAMETER mm PITCH mm	18 4
GEAR RATIOS	NORMAL SPEED SLOW SPEED	1/4 1/16
STROKE FOR INPUT REV.	NORMAL SPEED SLOW SPEED	1 0,25
EFFICIENCY	NORMAL SPEED SLOW SPEED	32 % 27 %
JACK WEIGHT (Kg)		1,6
SCREW WEIGHT TPN X 100 mm (Kg)		0,22
CASE MATERIAL		ALUMINIUM
GREASE QTY (Kg)		0,03
GREASE TYPE	AGIP GR MU EP2	
OPERATING TEMPERATURE	-5° C +80° C	



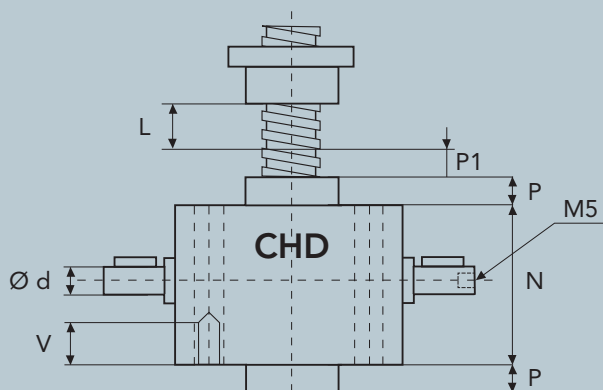
	A	B	B1	B2	C	E	F	G	H
CHD5	52	60	21	39	36	75	22,5	23	78
	I	N	P	P1	V	Ø d	Ø f	Ø s	TPN
CHD5	25	62	12	10	13	10	M8	30	18x4



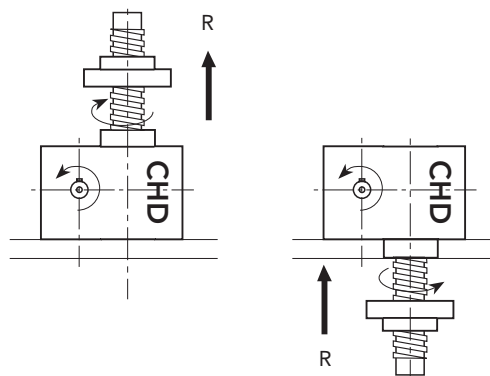
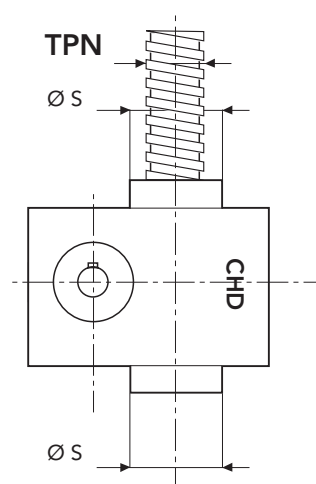
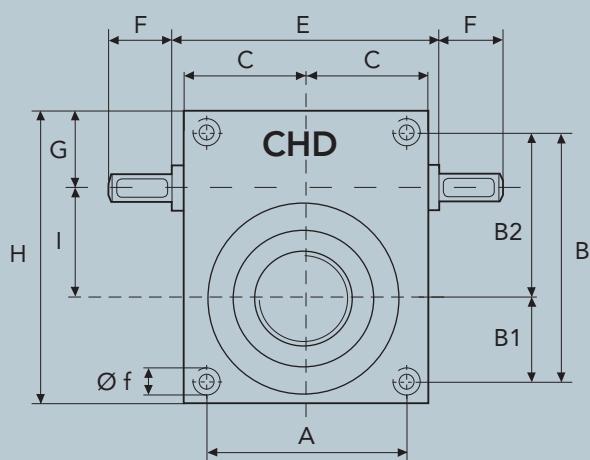


SERIES CHD 5 RS

ROTATING SCREW

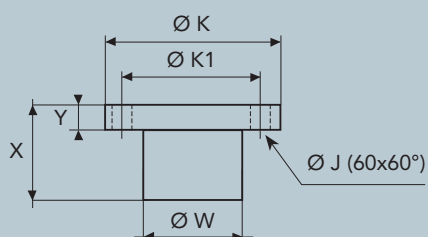


L = STROKE

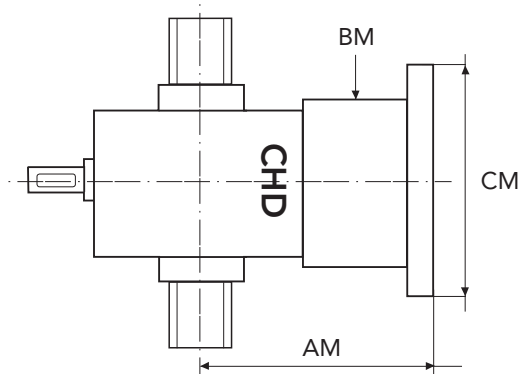


SERIES CHD 5 RS

BRONZE NUT



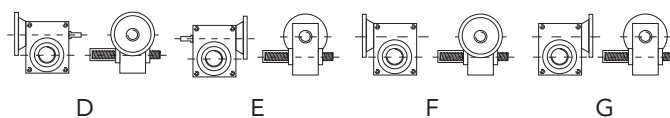
PAM DIMENSIONS FOR BELL AND COUPLING



	X	Y	Ø W	Ø K	Ø K1	Ø J
CHD5	44	12	27,8	48	38	6

MOTOR	FLANGE TYPE	CM	AM	BM
GR. 56	B5	120	93	60
GR. 63	B5	140	96	
GR. 71	B5	160	101	

CONFIGURATION





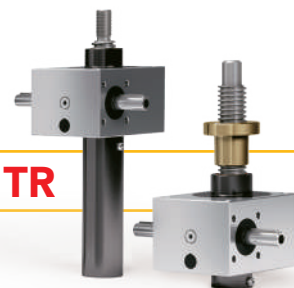
SCREW JACK PERFORMANCE CHD 5

CHD TR SERIES

SCREW JACKS WITH
TRAPEZOIDAL SCREWS

CHD 5 TR

18 x 4



		Load [kN]		5		4		3		2		1	
		nn1 rpm	speed										
		Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
Ratio	N	1500	25,0	0,42	2,7	0,33	2,1	0,25	1,6	0,17	1,1	0,1	0,6
		1000	16,7	0,28	2,7	0,22	2,1	0,17	1,6	0,12	1,1	0,1	0,6
		750	12,5	0,21	2,7	0,16	2,1	0,13	1,6	0,1	1,1	0,1	0,6
		500	8,3	0,14	2,7	0,11	2,1	0,1	1,6	0,1	1,1	0,1	0,6
		300	5,0	0,1	2,7	0,1	2,1	0,1	1,6	0,1	1,1	0,1	0,6
		100	1,7	0,1	2,7	0,1	2,1	0,1	1,6	0,1	1,1	0,1	0,6
		50	0,8	0,1	2,7	0,1	2,1	0,1	1,6	0,1	1,1	0,1	0,6
	L	1500	6,3	0,14	0,9	0,1	0,7	0,1	0,5	0,1	0,4	0,1	0,3
		1000	4,2	0,1	0,9	0,1	0,7	0,1	0,5	0,1	0,4	0,1	0,3
		750	3,1	0,1	0,9	0,1	0,7	0,1	0,5	0,1	0,4	0,1	0,3
		500	2,1	0,1	0,9	0,1	0,7	0,1	0,5	0,1	0,4	0,1	0,3
		300	1,3	0,1	0,9	0,1	0,7	0,1	0,5	0,1	0,4	0,1	0,3
		100	0,4	0,1	0,9	0,1	0,7	0,1	0,5	0,1	0,4	0,1	0,3
		50	0,2	0,1	0,9	0,1	0,7	0,1	0,5	0,1	0,4	0,1	0,3

CHD VRS SERIES

ONLY ROTATING SCREW

see dimensions pages 48/49

CHD 5 VRS

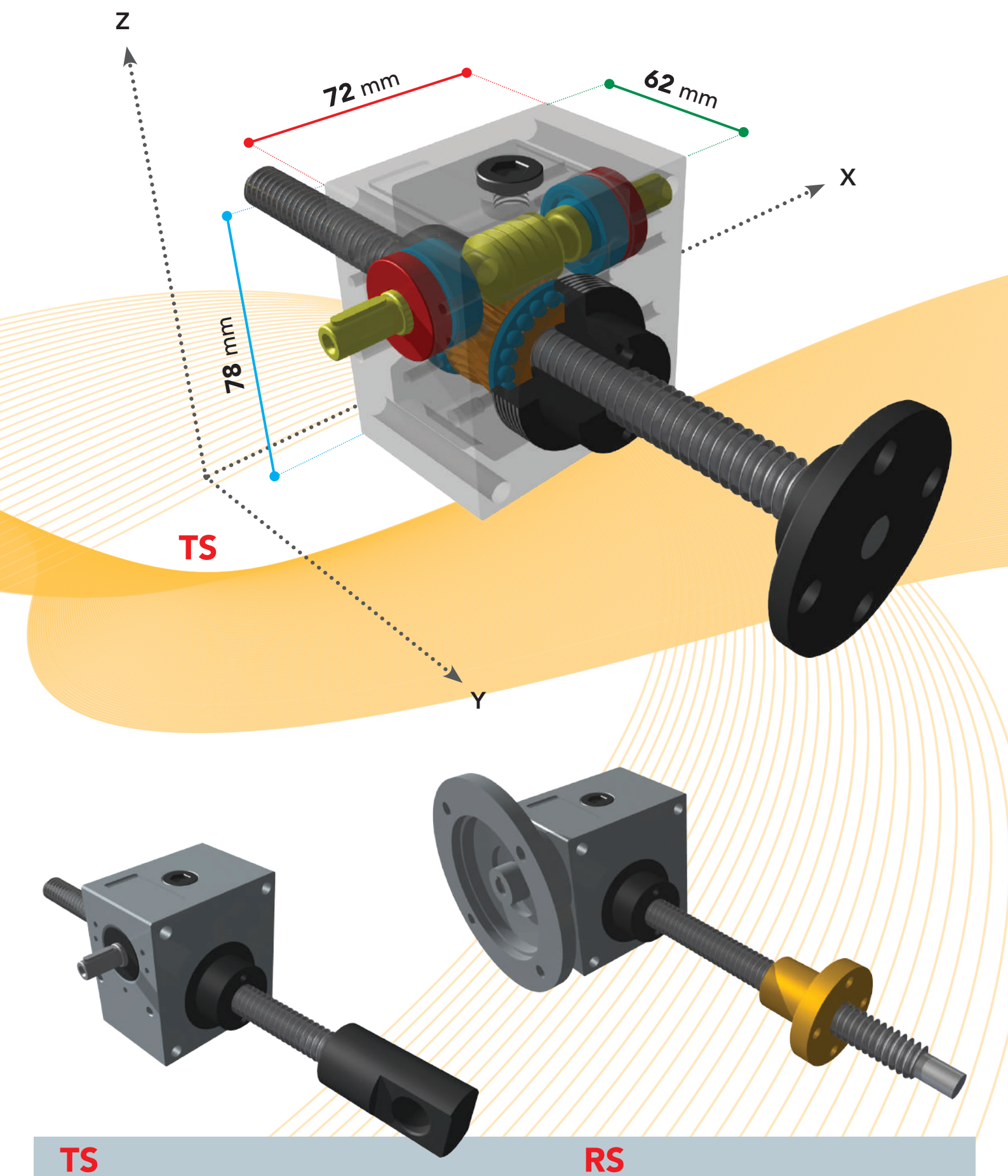
16 x 5



		Load [kN]		5		4		3		2		1	
		nn1 rpm	speed										
		Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
Ratio	N	1500	31,3	0,20	1,3	0,16	1	0,13	0,8	0,1	0,6	0,1	0,4
		1000	20,8	0,14	1,3	0,1	1	0,1	0,8	0,1	0,6	0,1	0,4
		750	15,6	0,1	1,3	0,1	1	0,1	0,8	0,1	0,6	0,1	0,4
		500	10,4	0,1	1,3	0,1	1	0,1	0,8	0,1	0,6	0,1	0,4
		300	6,3	0,1	1,3	0,1	1	0,1	0,8	0,1	0,6	0,1	0,4
		100	2,1	0,1	1,3	0,1	1	0,1	0,8	0,1	0,6	0,1	0,4
		50	1,0	0,1	1,3	0,1	1	0,1	0,8	0,1	0,6	0,1	0,4
	L	1500	7,8	0,1	0,5	0,1	0,4	0,1	0,3	0,1	0,3	0,1	0,2
		1000	5,2	0,1	0,5	0,1	0,4	0,1	0,3	0,1	0,3	0,1	0,2
		750	3,9	0,1	0,5	0,1	0,4	0,1	0,3	0,1	0,3	0,1	0,2
		500	2,6	0,1	0,5	0,1	0,4	0,1	0,3	0,1	0,3	0,1	0,2
		300	1,6	0,1	0,5	0,1	0,4	0,1	0,3	0,1	0,3	0,1	0,2
		100	0,5	0,1	0,5	0,1	0,4	0,1	0,3	0,1	0,3	0,1	0,2
		50	0,3	0,1	0,5	0,1	0,4	0,1	0,3	0,1	0,3	0,1	0,2



CHD 5



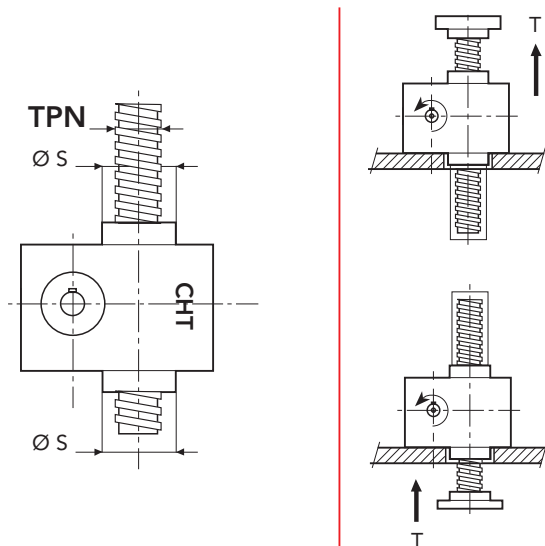
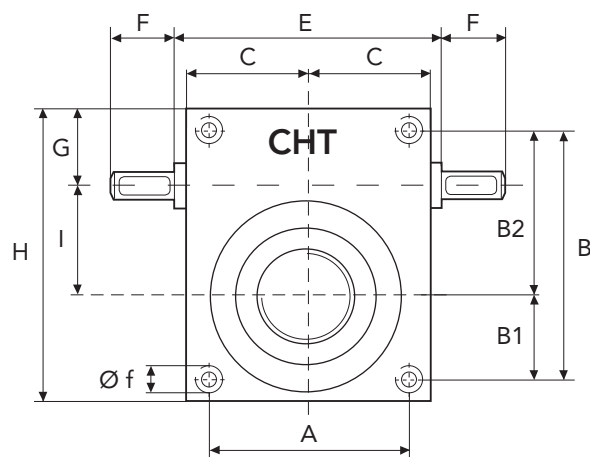
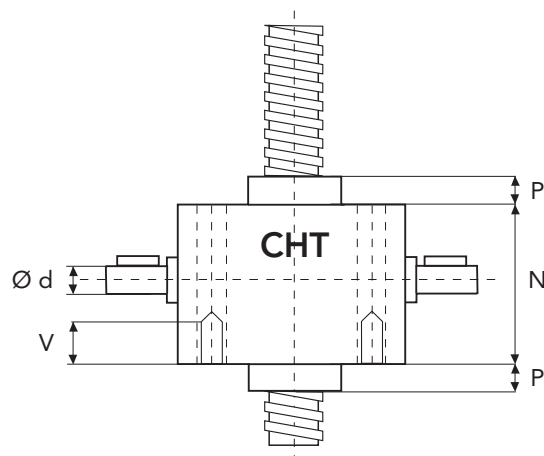


SERIES CHD 10 TS

TRANSLATING SCREW

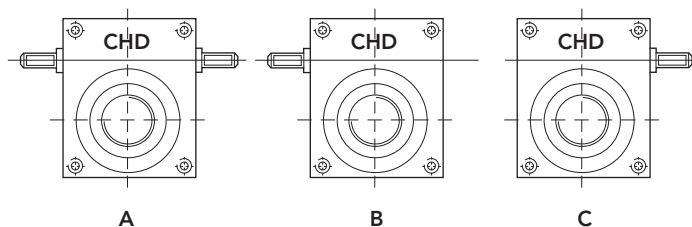
SERIES CHD 10 TS

SCREW JACK MODEL		CHD 10
LOAD	daN (Kg)	1000
TPN SCREW	DIAMETER mm PITCH mm	20 4
GEAR RATIOS	NORMAL SPEED SLOW SPEED	1/4 1/16
STROKE FOR INPUT REV.	NORMAL SPEED SLOW SPEED	1 0,25
EFFICIENCY	NORMAL SPEED SLOW SPEED	30 % 27 %
JACK WEIGHT (Kg)		2,8
SCREW WEIGHT TPN X 100 mm (Kg)		0,2
CASE MATERIAL		ALUMINIUM
GREASE QTY (Kg)		0,05
GREASE TYPE	AGIP GR MU EP2	
OPERATING TEMPERATURE	-5° C +80° C	



	A	B	B1	B2	C	E	F	G	H
CHD10	63	78	29	49	42,5	90	25	27	98
	I	N	P	P1	V	Ø d	Ø f	Ø s	TPN
CHD10	32	75	18	10	15	14	M8	39	20x4

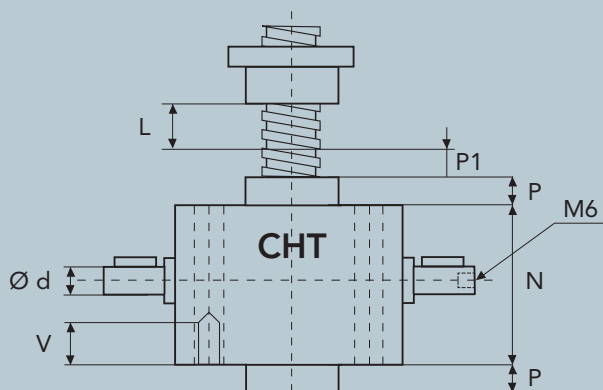
* tapped holes on request



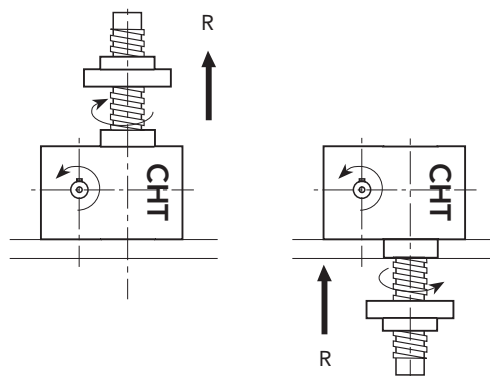
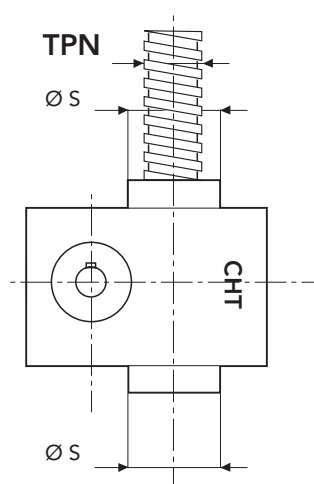
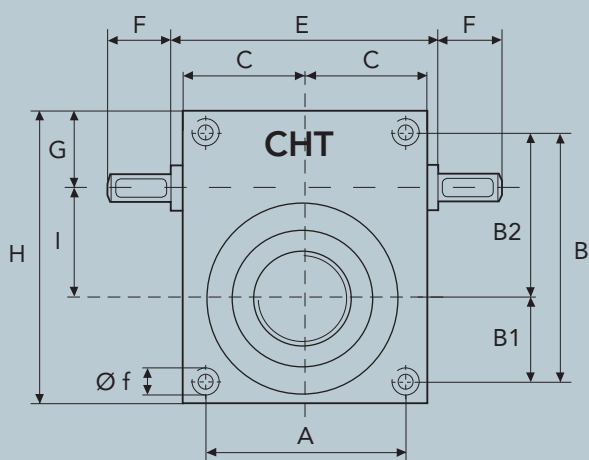


SERIES CHD 10 RS

ROTATING SCREW

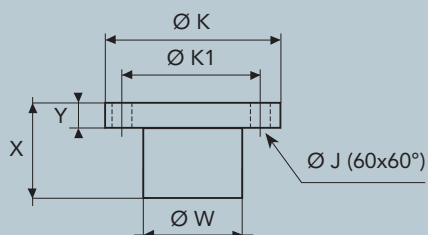


L = STROKE

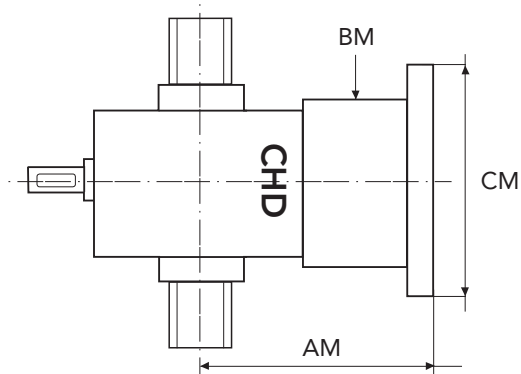


SERIES CHD 10 RS

BRONZE NUT



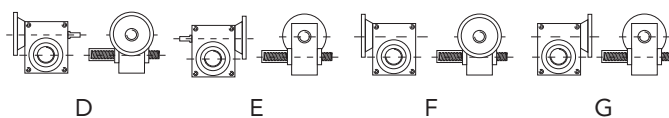
PAM DIMENSIONS FOR BELL AND COUPLING



	X	Y	Ø W	Ø K	Ø K1	Ø J
CHD10	44	12	31,8	55	45	7

MOTOR	FLANGE TYPE	CM	AM	BM
GR. 63	B5	140	117,5	70
GR. 71	B5	160	122,5	
GR. 80	B5	200	132,5	

CONFIGURATION





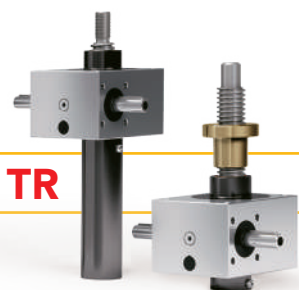
SCREW JACK PERFORMANCE CHD 10

CHD TR SERIES

SCREW JACKS WITH
TRAPEZOIDAL SCREWS

CHD 10 TR

20 x 4



		Load [kN]		10		8		6		4		2	
		nn1 rpm	speed										
		Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
Ratio	N	1500	25,0	0,88	5,6	0,71	4,5	0,55	3,5	0,38	2,4	0,20	1,3
		1000	16,7	0,59	5,6	0,47	4,5	0,37	3,5	0,25	2,4	0,14	1,3
		750	12,5	0,44	5,6	0,35	4,5	0,27	3,5	0,19	2,4	0,1	1,3
		500	8,3	0,29	5,6	0,24	4,5	0,18	3,5	0,13	2,4	0,1	1,3
		300	5,0	0,18	5,6	0,14	4,5	0,11	3,5	0,1	2,4	0,1	1,3
		100	1,7	0,1	5,6	0,1	4,5	0,1	3,5	0,1	2,4	0,1	1,3
		50	0,8	0,1	5,6	0,1	4,5	0,1	3,5	0,1	2,4	0,1	1,3
	L	1500	6,3	0,25	1,6	0,20	1,3	0,17	1,1	0,13	0,8	0,1	0,4
		1000	4,2	0,17	1,6	0,14	1,3	0,12	1,1	0,1	0,8	0,1	0,4
		750	3,1	0,13	1,6	0,1	1,3	0,1	1,1	0,1	0,8	0,1	0,4
		500	2,1	0,1	1,6	0,1	1,3	0,1	1,1	0,1	0,8	0,1	0,4
		300	1,3	0,1	1,6	0,1	1,3	0,1	1,1	0,1	0,8	0,1	0,4
		100	0,4	0,1	1,6	0,1	1,3	0,1	1,1	0,1	0,8	0,1	0,4
		50	0,2	0,1	1,6	0,1	1,3	0,1	1,1	0,1	0,8	0,1	0,4

CHD VRS SERIES

ONLY ROTATING SCREW

see dimensions pages 48/49

CHD 10 VRS

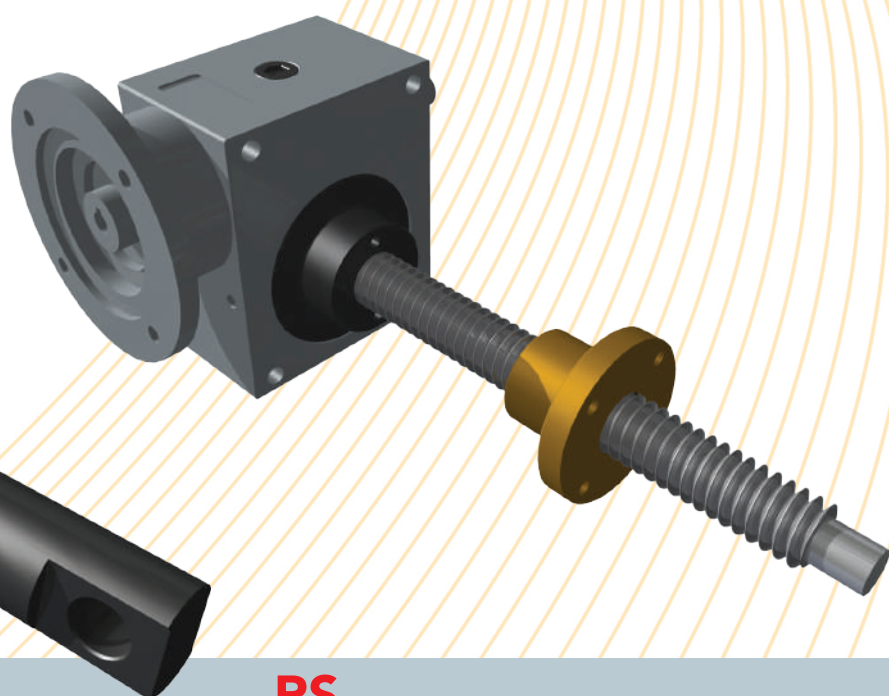
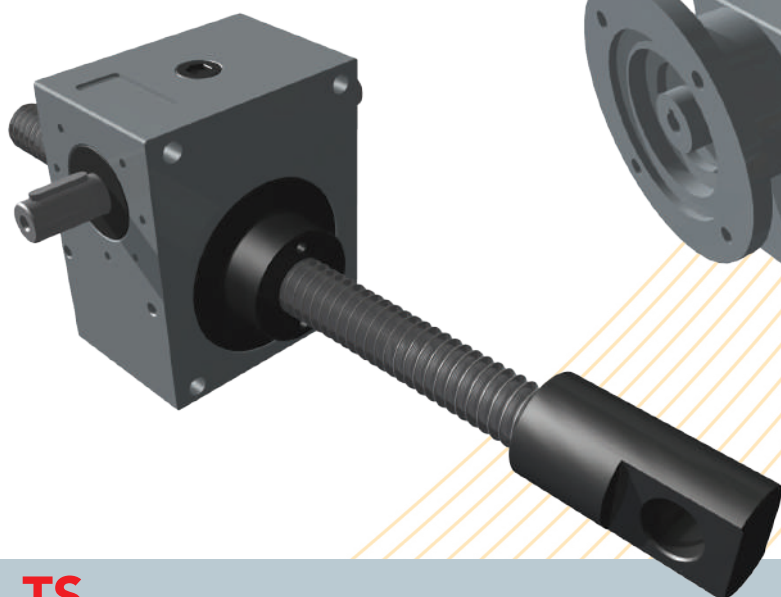
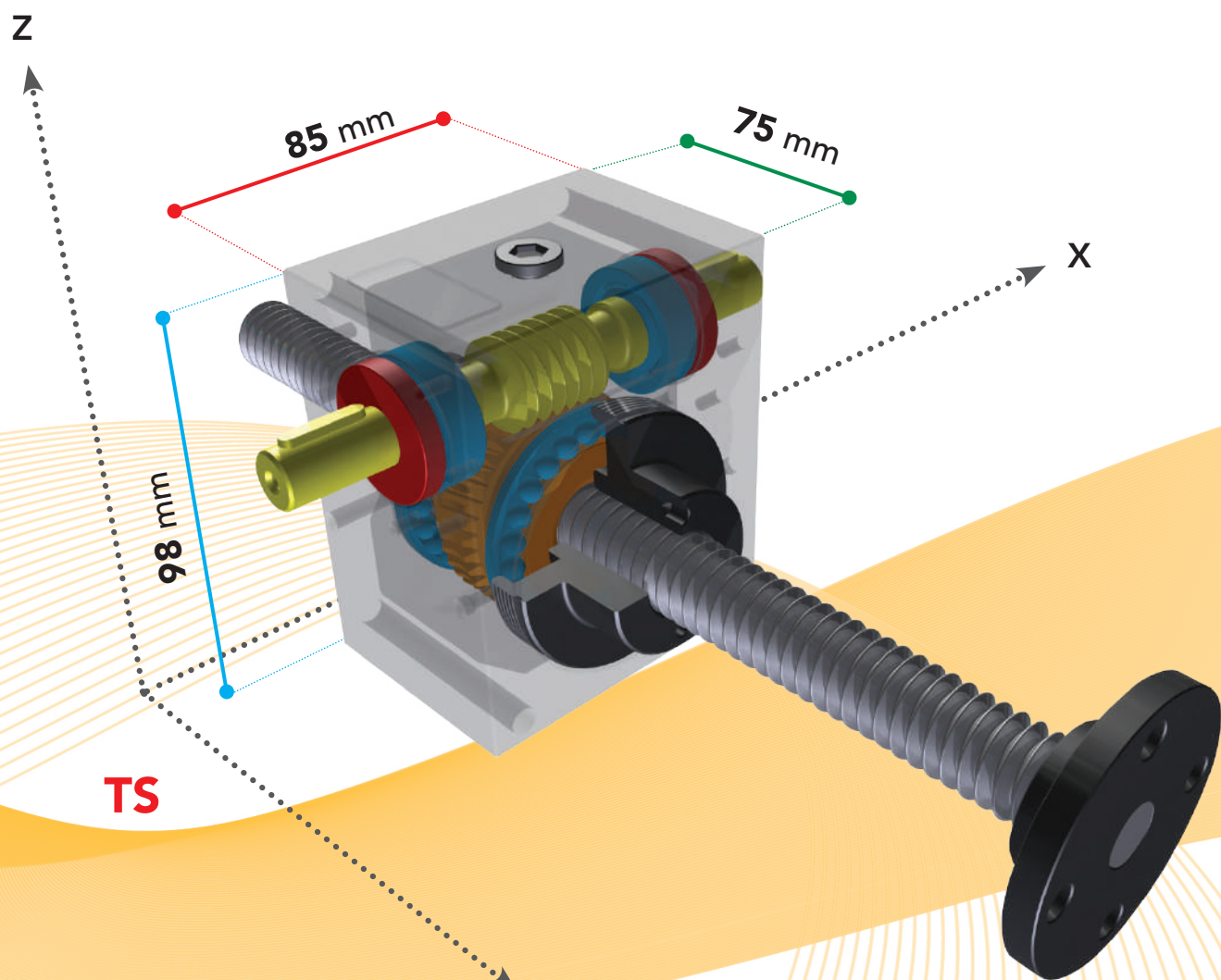
20 x 5



		Load [kN]		10		8		6		4		2	
		nn1 rpm	speed										
		Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
Ratio	N	1500	31,3	0,42	2,7	0,35	2,2	0,27	1,7	0,19	1,2	0,13	0,8
		1000	20,8	0,28	2,7	0,22	2,2	0,18	1,7	0,13	1,2	0,1	0,8
		750	15,6	0,21	2,7	0,17	2,2	0,13	1,7	0,1	1,2	0,1	0,8
		500	10,4	0,14	2,7	0,12	2,2	0,1	1,7	0,1	1,2	0,1	0,8
		300	6,3	0,1	2,7	0,1	2,2	0,1	1,7	0,1	1,2	0,1	0,8
		100	2,1	0,1	2,7	0,1	2,2	0,1	1,7	0,1	1,2	0,1	0,8
		50	1,0	0,1	2,7	0,1	2,2	0,1	1,7	0,1	1,2	0,1	0,8
	L	1500	7,8	0,11	0,7	0,1	0,6	0,1	0,5	0,1	0,4	0,1	0,3
		1000	5,2	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,4	0,1	0,3
		750	3,9	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,4	0,1	0,3
		500	2,6	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,4	0,1	0,3
		300	1,6	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,4	0,1	0,3
		100	0,5	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,4	0,1	0,3
		50	0,3	0,1	0,7	0,1	0,6	0,1	0,5	0,1	0,4	0,1	0,3



CHD 10



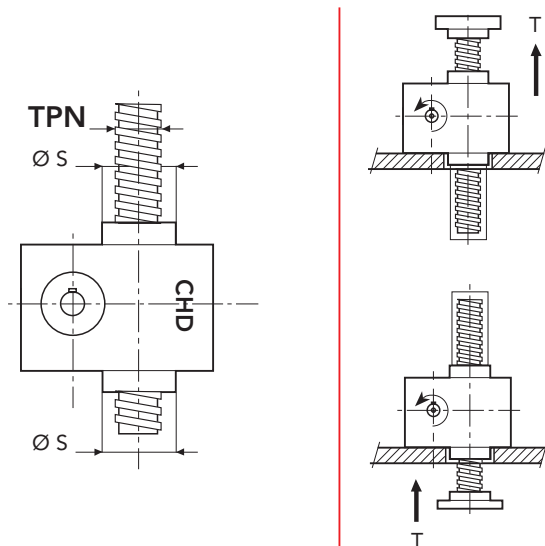
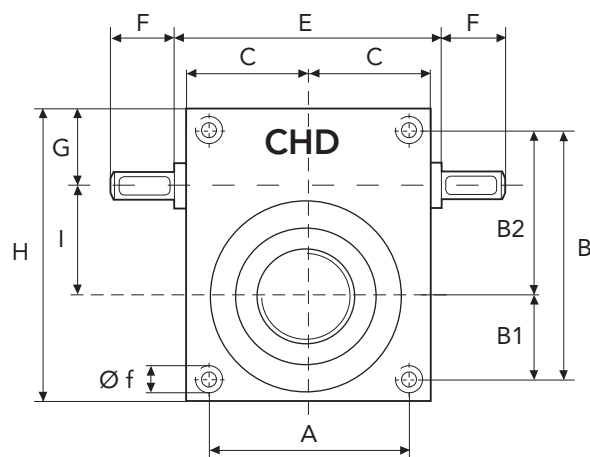
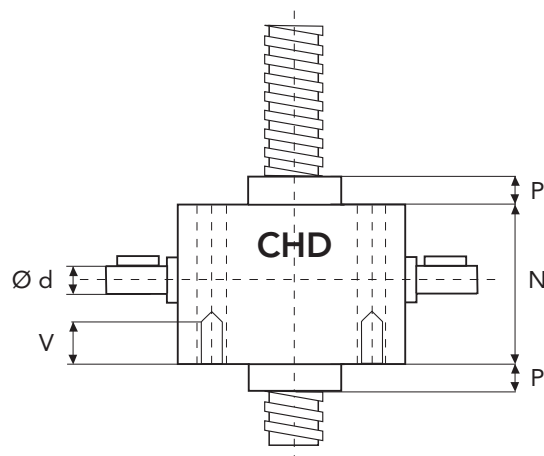


SERIES CHD 25 TS

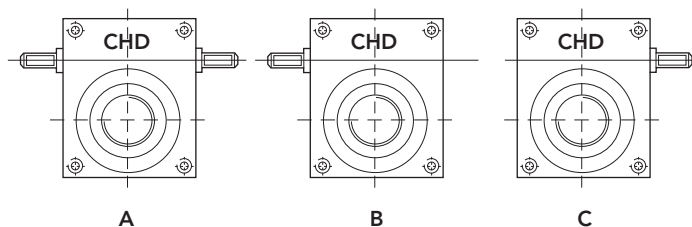
TRANSLATING SCREW

SERIES CHD 25 TS

SCREW JACK MODEL		CHD 25
LOAD	daN (Kg)	2500
TPN SCREW	DIAMETER mm PITCH mm	30 6
GEAR RATIOS	NORMAL SPEED SLOW SPEED	1/6 1/24
STROKE FOR INPUT REV.	NORMAL SPEED SLOW SPEED	1 0,25
EFFICIENCY	NORMAL SPEED SLOW SPEED	30% 24%
JACK WEIGHT (Kg)		5,7
SCREW WEIGHT TPN X 100 mm (Kg)		0,48
CASE MATERIAL		ALUMINIUM
GREASE QTY (Kg)		0,1
GREASE TYPE	AGIP GR MU EP2	
OPERATING TEMPERATURE	-5° C +80° C	



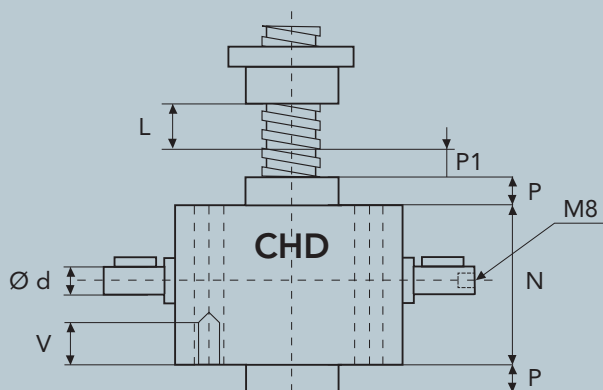
	A	B	B1	B2	C	E	F	G	H
CHD25	81	106	42	64	52,5	109	43	30	128
	I	N	P	P1	V	Ø d	Ø f	Ø s	TPN
CHD25	45	82	23	10	15	16	M10	46	30x6



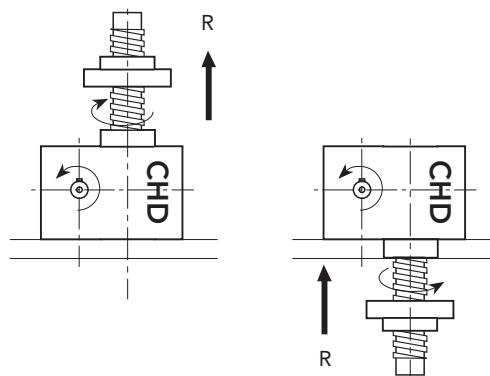
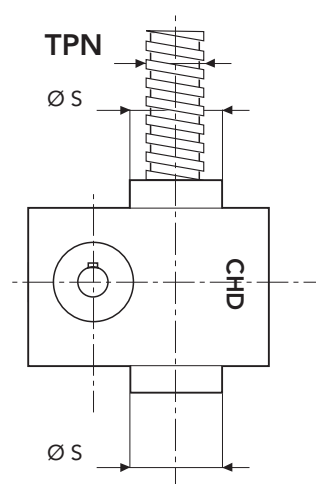
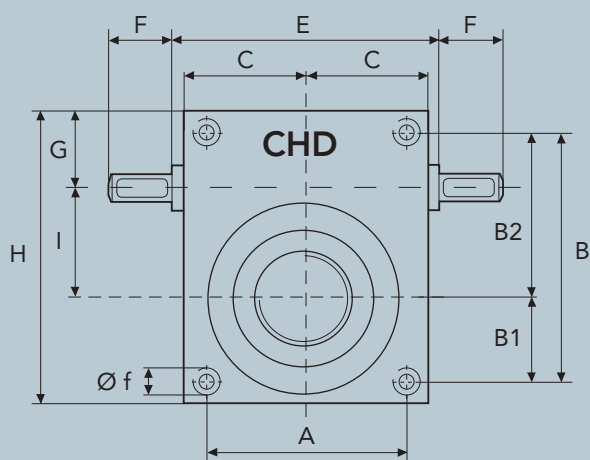


SERIES CHD 25 RS

ROTATING SCREW

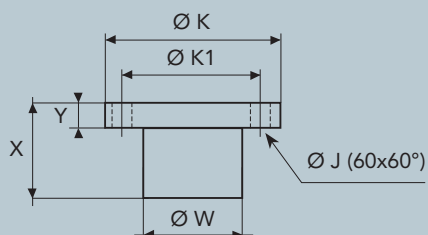


L = STROKE

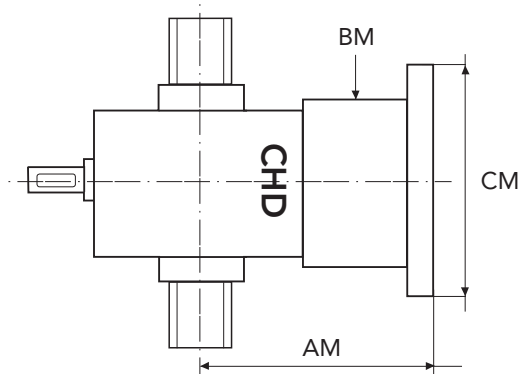


SERIES CHD 25 RS

BRONZE NUT



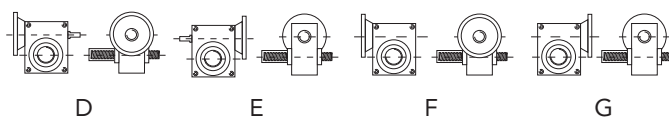
PAM DIMENSIONS FOR BELL AND COUPLING



	X	Y	Ø W	Ø K	Ø K1	Ø J
CHD25	46	14	37,8	60	50	7

MOTOR	FLANGE TYPE	CM	AM	BM
GR. 71	B5	160	142,5	80
GR. 80	B5	200	157,5	
GR. 90	B5	200	157,5	

CONFIGURATION





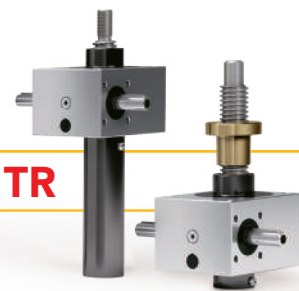
SCREW JACK PERFORMANCE CHD 25

CHD TR SERIES

SCREW JACKS WITH
TRAPEZOIDAL SCREWS

CHD 25 TR

30 x 6



Ratio		Load [kN]		25		20		15		10		7,5		5		2,5	
		nn1 rpm	speed														
				Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
N	1500	25,0	2,29	14,6	1,85	11,7	1,40	8,9	0,94	6	0,72	4,6	0,50	3,2	0,28	1,8	
	1000	16,7	1,53	14,6	1,23	11,7	0,93	8,9	0,63	6	0,48	4,6	0,34	3,2	0,19	1,8	
	750	12,5	1,15	14,6	0,92	11,7	0,70	8,9	0,47	6	0,36	4,6	0,25	3,2	0,14	1,8	
	500	8,3	0,77	14,6	0,06	11,7	0,47	8,9	0,31	6	0,24	4,6	0,17	3,2	0,10	1,8	
	300	5,0	0,46	14,6	0,37	11,7	0,28	8,9	0,19	6	0,14	4,6	0,1	3,2	0,10	1,8	
	100	1,7	0,15	14,6	0,12	11,7	0,1	8,9	0,1	6	0,1	4,6	0,1	3,2	0,10	1,8	
	50	0,8	0,1	14,6	0,1	11,7	0,1	8,9	0,1	6	0,1	4,6	0,1	3,2	0,10	1,8	
L	1500	6,3	0,69	4,4	0,57	3,6	0,44	2,8	0,3	1,9	0,24	1,5	0,16	1,0	0,11	0,7	
	1000	4,2	0,46	4,4	0,38	3,6	0,29	2,8	0,2	1,9	0,16	1,5	0,10	1,0	0,1	0,7	
	750	3,1	0,35	4,4	0,28	3,6	0,22	2,8	0,15	1,9	0,12	1,5	0,1	1,0	0,1	0,7	
	500	2,1	0,23	4,4	0,19	3,6	0,15	2,8	0,1	1,9	0,1	1,5	0,1	1,0	0,1	0,7	
	300	1,3	0,14	4,4	0,11	3,6	0,1	2,8	0,1	1,9	0,1	1,5	0,1	1,0	0,1	0,7	
	100	0,4	0,1	4,4	0,1	3,6	0,1	2,8	0,1	1,9	0,1	1,5	0,1	1,0	0,1	0,7	
	50	0,2	0,1	4,4	0,1	3,6	0,1	2,8	0,1	1,9	0,1	1,5	0,1	1,0	0,1	0,7	

Duty cycle < 10%

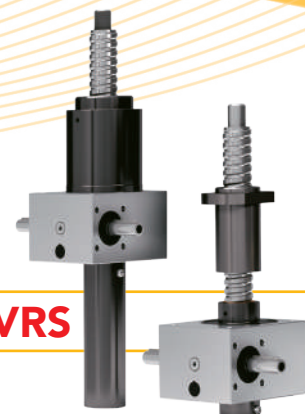
CHD VRS SERIES

FOR TRANSLATING SCREW
BY INTEGRATED NUT

see dimensions pages 48/49

CHD 25 VRS

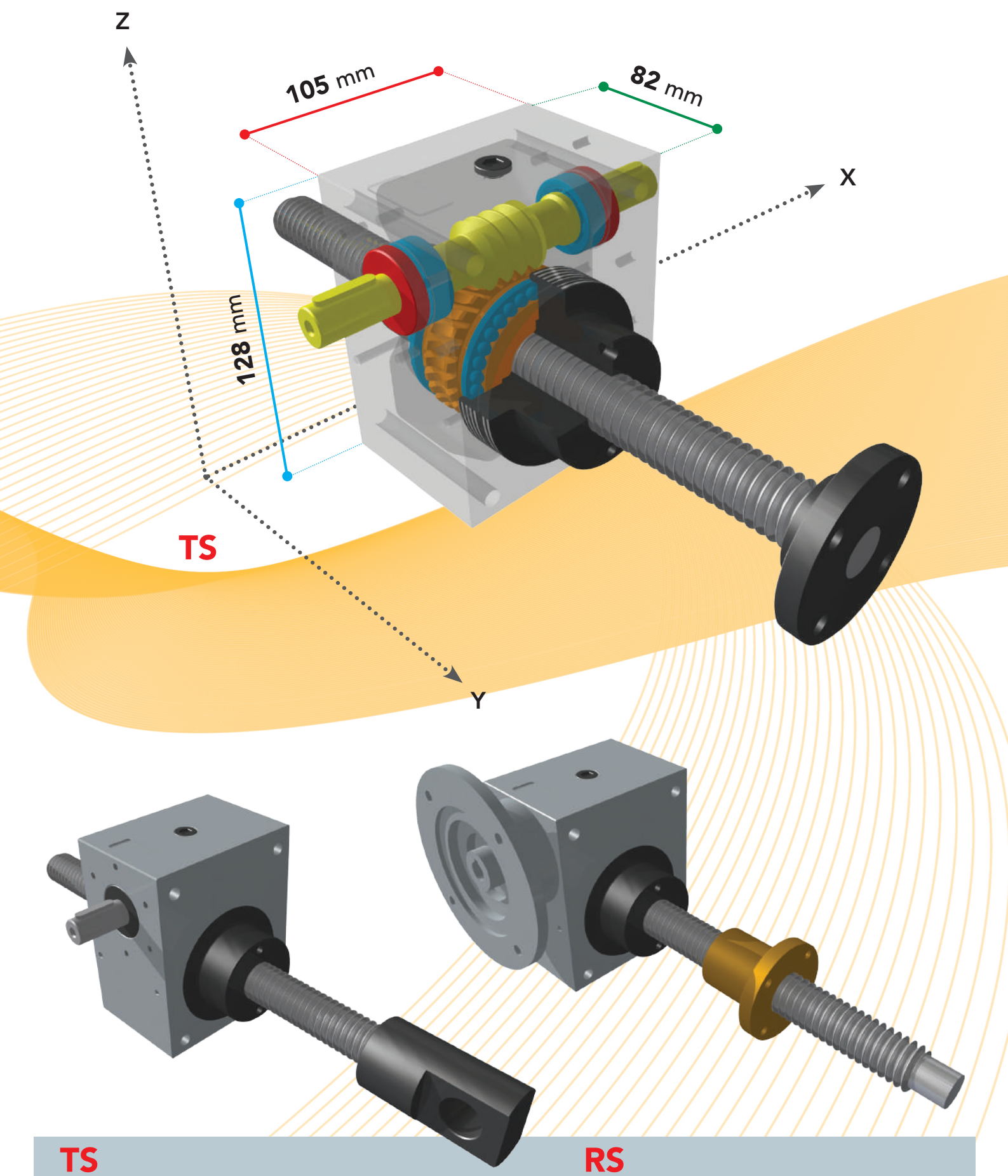
32 x 10



Ratio		Load [kN]		25		20		15		10		7,5		5		2,5	
		nn rpm	speed														
				Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
N	1500	41,6	1,30	8,3	1,05	6,7	0,80	5,1	0,55	3,5	0,44	2,8	0,31	2,0	0,19	1,2	
	1000	27,8	0,87	8,3	0,70	6,7	0,53	5,1	0,37	3,5	0,29	2,8	0,21	2,0	0,13	1,2	
	750	20,8	0,65	8,3	0,53	6,7	0,40	5,1	0,27	3,5	0,22	2,8	0,16	2,0	0,1	1,2	
	500	13,9	0,43	8,3	0,35	6,7	0,27	5,1	0,18	3,5	0,15	2,8	0,1	2,0	0,1	1,2	
	300	8,3	0,26	8,3	0,21	6,7	0,16	5,1	0,11	3,5	0,1	2,8	0,1	2,0	0,1	1,2	
	100	2,8	0,1	8,3	0,1	6,7	0,1	5,1	0,1	3,5	0,1	2,8	0,1	2,0	0,1	1,2	
	50	1,4	0,1	8,3	0,1	6,7	0,1	5,1	0,1	3,5	0,1	2,8	0,1	2,0	0,1	1,2	
L	1500	10,4	0,41	2,6	0,33	2,1	0,25	1,6	0,19	1,2	0,16	1	0,11	0,7	0,1	0,5	
	1000	6,9	0,27	2,6	0,22	2,1	0,17	1,6	0,13	1,2	0,1	1	0,1	0,7	0,1	0,5	
	750	5,2	0,20	2,6	0,16	2,1	0,13	1,6	0,1	1,2	0,1	1	0,1	0,7	0,1	0,5	
	500	3,5	0,14	2,6	0,11	2,1	0,1	1,6	0,1	1,2	0,1	1	0,1	0,7	0,1	0,5	
	300	2,1	0,1	2,6	0,1	2,1	0,1	1,6	0,1	1,2	0,1	1	0,1	0,7	0,1	0,5	
	100	0,7	0,1	2,6	0,1	2,1	0,1	1,6	0,1	1,2	0,1	1	0,1	0,7	0,1	0,5	
	50	0,3	0,1	2,6	0,1	2,1	0,1	1,6	0,1	1,2	0,1	1	0,1	0,7	0,1	0,5	



CHD 25



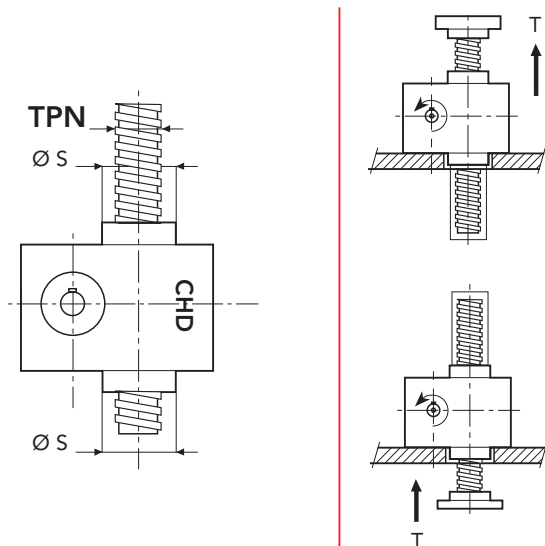
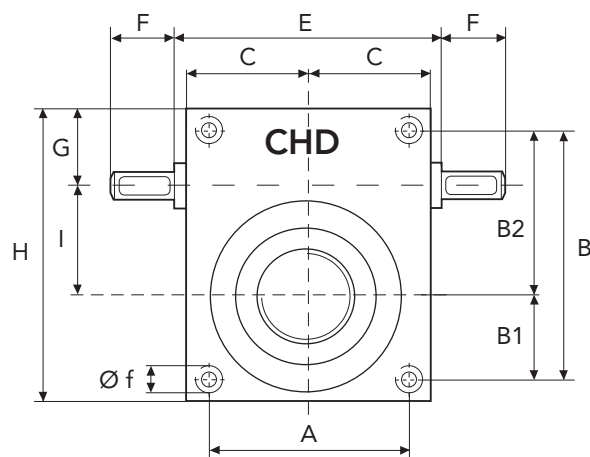
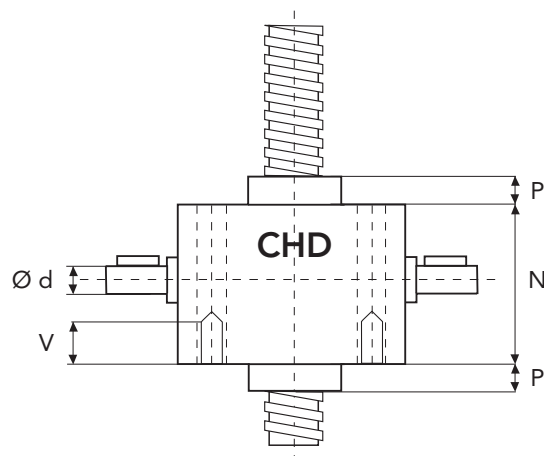


SERIES CHD 50 TS

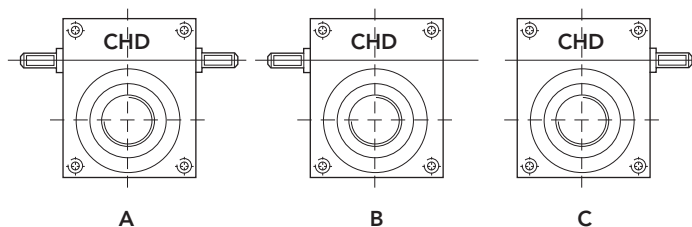
TRANSLATING SCREW

SERIES CHD 50 TS

SCREW JACK MODEL		CHD 50
LOAD	daN (Kg)	5000
TPN SCREW	DIAMETER mm PITCH mm	40 7
GEAR RATIOS	NORMAL SPEED SLOW SPEED	1/7 1/28
STROKE FOR INPUT REV.	NORMAL SPEED SLOW SPEED	1 0,25
EFFICIENCY	NORMAL SPEED SLOW SPEED	28% 24%
JACK WEIGHT (Kg)		20,3
SCREW WEIGHT TPN X 100 mm (Kg)		0,9
CASE MATERIAL		CAST IRON
GREASE QTY (Kg)		0,3
GREASE TYPE	AGIP GR MU EP2	
OPERATING TEMPERATURE	-5° C +80° C	



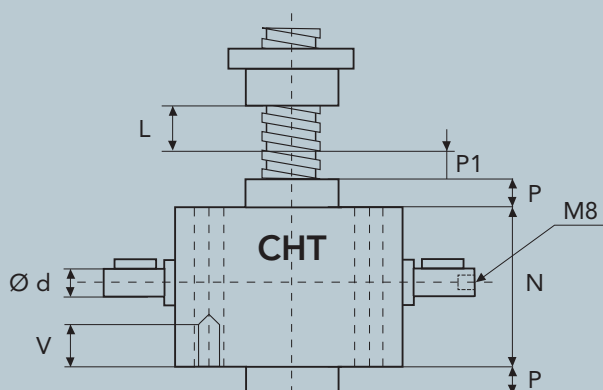
	A	B	B1	B2	C	E	F	G	H
CHD50	115	150	63	87	72,5	160	45	39	180
	I	N	P	P1	V	Ø d	Ø f	Ø s	TPN
CHD50	63	117	32	10	20	20	M12	60	40x7



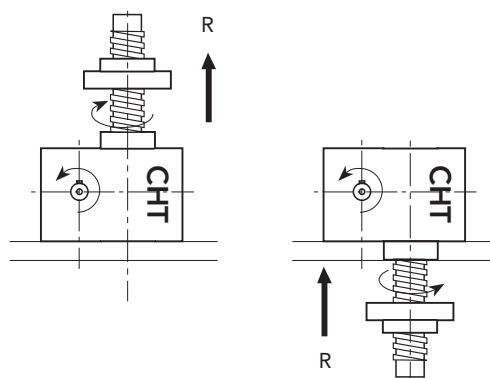
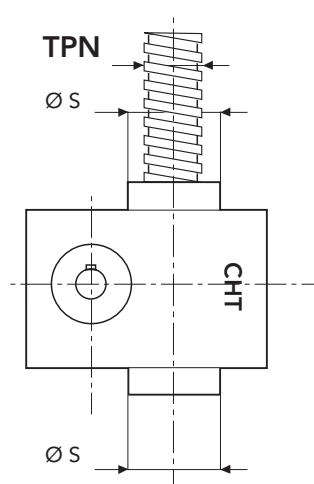
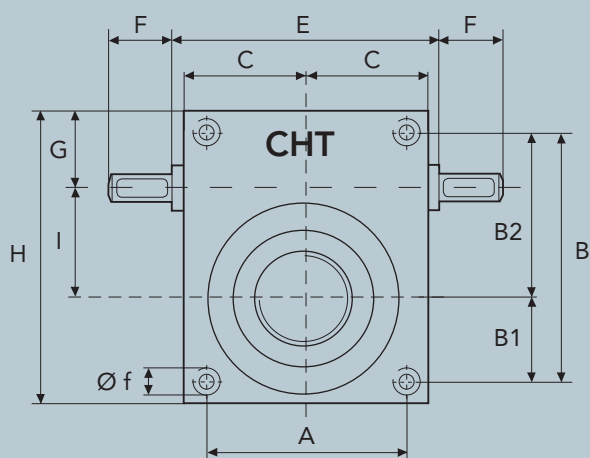


SERIES CHD 50 RS

ROTATING SCREW

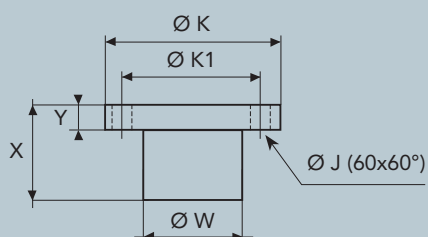


L = STROKE



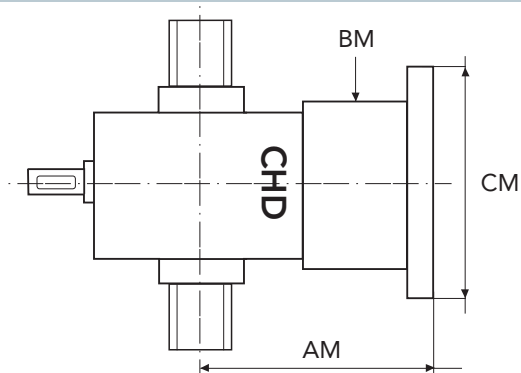
SERIES CHD 50 RS

BRONZE NUT



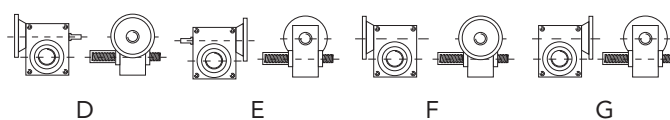
	X	Y	Ø W	Ø K	Ø K1	Ø J
CHD50	73	16	62,5	95	78	9

PAM DIMENSIONS FOR BELL AND COUPLING



MOTOR	FLANGE TYPE	CM	AM	BM
GR. 80	B5	200	184,5	90
GR. 90	B5	200	184,5	
GR. 100/112	B5	250	197,5	

CONFIGURATION





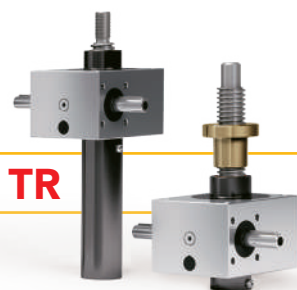
SCREW JACK PERFORMANCE CHD 50

CHD TR SERIES

SCREW JACKS WITH
TRAPEZOIDAL SCREWS

CHD 50 TR

40 x 7



		Load [kN]		50		40		30		20		15		10		5	
Ratio		nn1 rpm	speed	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
N	1500	25,0		4,65	29,6	3,74	23,8	2,83	18	1,93	12,3	1,48	9,4	1,02	6,5	0,57	3,6
	1000	16,7		3,10	29,6	2,49	23,8	1,88	18	1,29	12,3	0,98	9,4	0,68	6,5	0,38	3,6
	750	12,5		2,32	29,6	1,87	23,8	1,41	18	0,97	12,3	0,74	9,4	0,51	6,5	0,28	3,6
	500	8,3		1,55	29,6	1,25	23,8	0,94	18	0,64	12,3	0,49	9,4	0,34	6,5	0,19	3,6
	300	5,0		0,93	29,6	0,75	23,8	0,57	18	0,39	12,3	0,3	9,4	0,20	6,5	0,11	3,6
	100	1,7		0,31	29,6	0,25	23,8	0,19	18	0,13	12,3	0,1	9,4	0,1	6,5	0,1	3,6
	50	0,8		0,15	29,6	0,12	23,8	0,1	18	0,1	12,3	0,1	9,4	0,1	6,5	0,1	3,6
L	1500	6,3		1,40	8,9	1,14	7,2	0,88	5,6	0,61	3,9	0,47	3	0,35	2,2	0,22	1,4
	1000	4,2		0,93	8,9	0,75	7,2	0,59	5,6	0,41	3,9	0,31	3	0,22	2,2	0,14	1,4
	750	3,1		0,70	8,9	0,57	7,2	0,44	5,6	0,31	3,9	0,24	3	0,2	2,2	0,11	1,4
	500	2,1		0,47	8,9	0,38	7,2	0,29	5,6	0,20	3,9	0,16	3	0,12	2,2	0,1	1,4
	300	1,3		0,28	8,9	0,23	7,2	0,18	5,6	0,12	3,9	0,1	3	0,1	2,2	0,1	1,4
	100	0,4		0,1	8,9	0,1	7,2	0,1	5,6	0,1	3,9	0,1	3	0,1	2,2	0,1	1,4
	50	0,2		0,1	8,9	0,1	7,2	0,1	5,6	0,1	3,9	0,1	3	0,1	2,2	0,1	1,4

Duty cycle < 10%

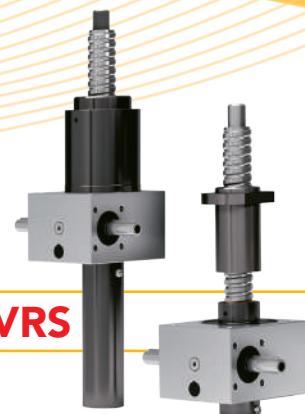
CHD VRS SERIES

FOR TRANSLATING SCREW
BY INTEGRATED NUT

see dimensions pages 48/49

CHD 50 VRS

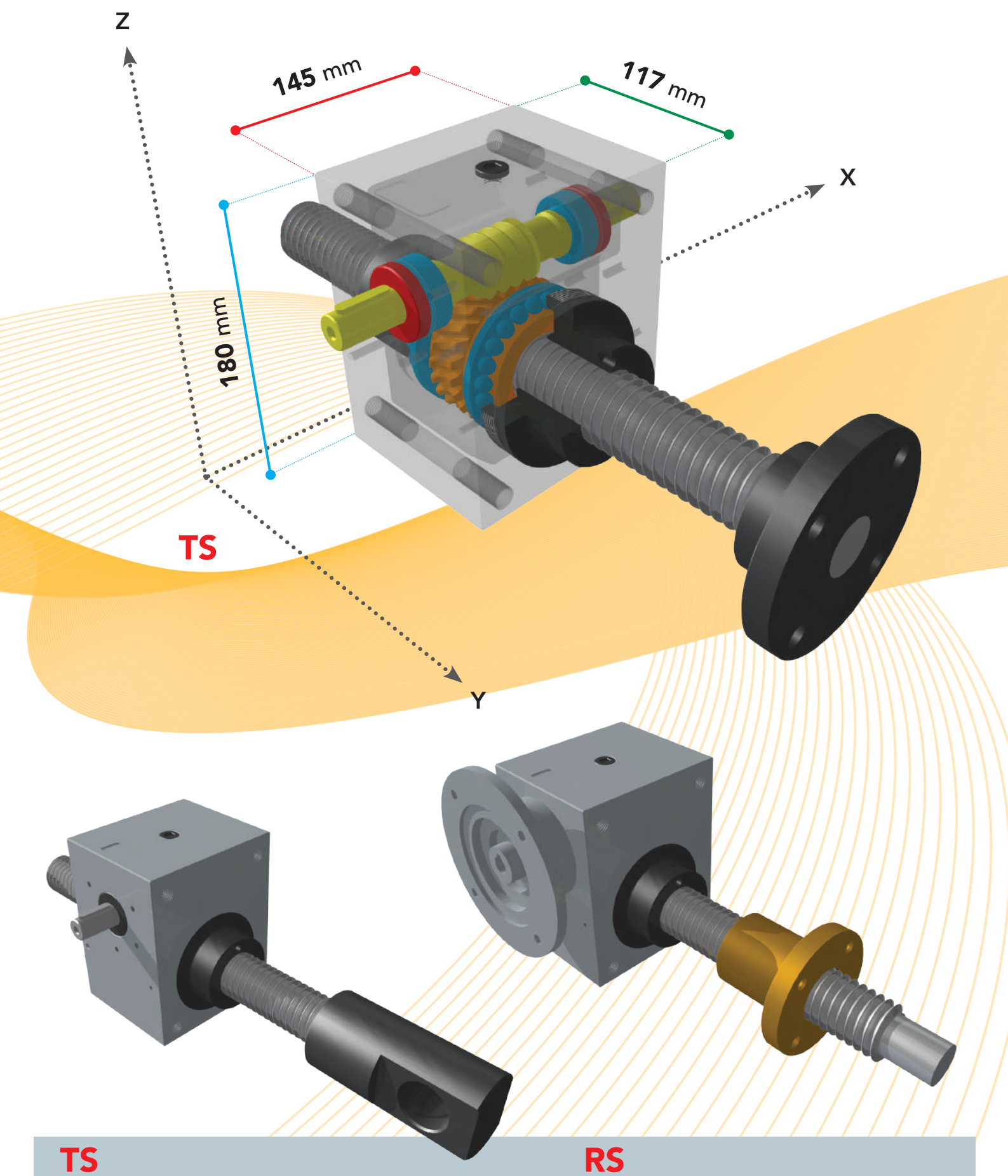
40 x 10



		Load [kN]		50		40		30		20		15		10		5	
Ratio		nn1 rpm	speed	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
N	1500	35,7		2,28	14,5	1,85	11,8	1,41	9	0,99	6,3	0,77	4,9	0,55	3,5	0,33	2,1
	1000	23,8		1,52	14,5	1,24	11,8	0,94	9	0,66	6,3	0,51	4,9	0,37	3,5	0,22	2,1
	750	17,9		1,14	14,5	0,93	11,8	0,71	9	0,49	6,3	0,38	4,9	0,27	3,5	0,16	2,1
	500	11,9		0,76	14,5	0,62	11,8	0,47	9	0,33	6,3	0,26	4,9	0,18	3,5	0,11	2,1
	300	7,1		0,46	14,5	0,37	11,8	0,28	9	0,20	6,3	0,15	4,9	0,11	3,5	0,1	2,1
	100	2,4		0,15	14,5	0,12	11,8	0,1	9	0,1	6,3	0,1	4,9	0,1	3,5	0,1	2,1
	50	1,2		0,1	14,5	0,1	11,8	0,1	9	0,1	6,3	0,1	4,9	0,1	3,5	0,1	2,1
L	1500	8,9		0,71	4,5	0,60	3,8	0,47	3	0,35	2,2	0,27	1,7	0,20	1,3	0,16	1
	1000	6,0		0,47	4,5	0,40	3,8	0,31	3	0,22	2,2	0,18	1,7	0,14	1,3	0,1	1
	750	4,5		0,35	4,5	0,30	3,8	0,24	3	0,17	2,2	0,13	1,7	0,1	1,3	0,1	1
	500	3,0		0,24	4,5	0,20	3,8	0,16	3	0,12	2,2	0,1	1,7	0,1	1,3	0,1	1
	300	1,8		0,14	4,5	0,12	3,8	0,1	3	0,1	2,2	0,1	1,7	0,1	1,3	0,1	1
	100	0,6		0,1	4,5	0,1	3,8	0,1	3	0,1	2,2	0,1	1,7	0,1	1,3	0,1	1
	50	0,3		0,1	4,5	0,1	3,8	0,1	3	0,1	2,2	0,1	1,7	0,1	1,3	0,1	1



CHD 50



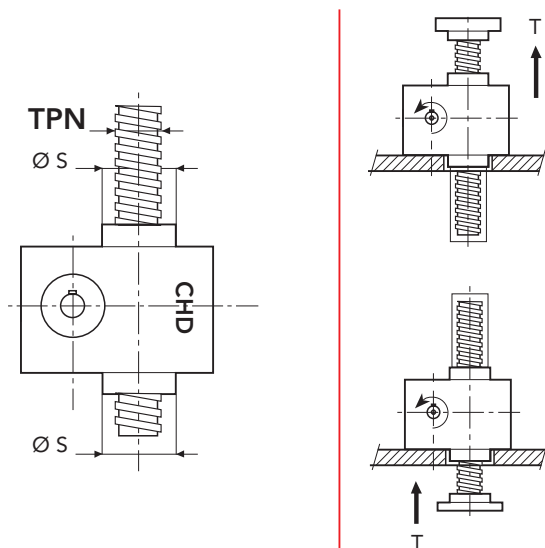
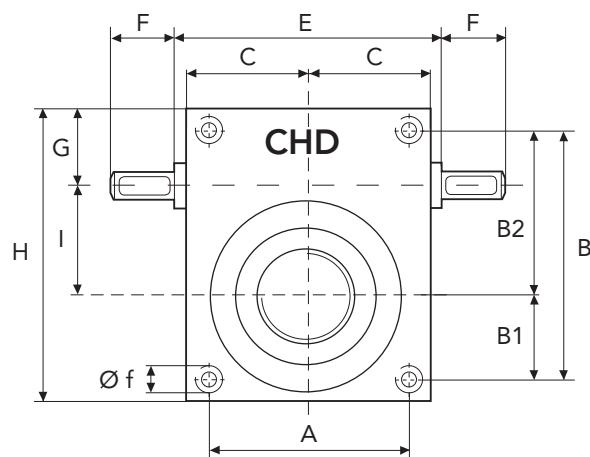
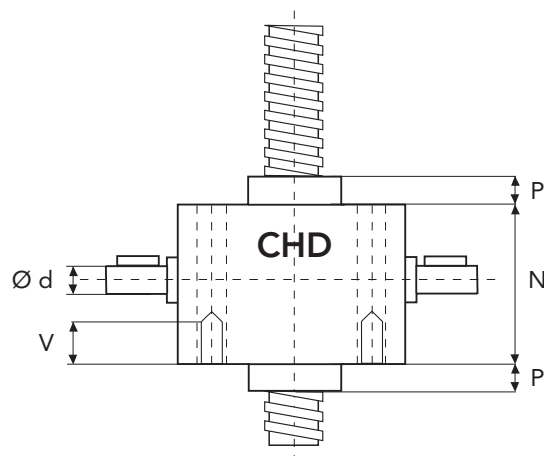


SERIES CHD 100 TS

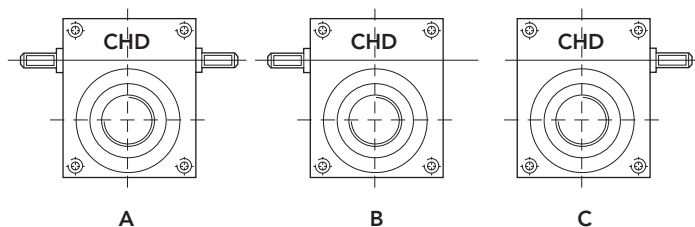
TRANSLATING SCREW

SERIES CHD 100 TS

SCREW JACK MODEL		CHD 100
LOAD	daN (Kg)	10000
TPN SCREW	DIAMETER mm PITCH mm	55 9
GEAR RATIOS	NORMAL SPEED SLOW SPEED	1/9 1/36
STROKE FOR INPUT REV.	NORMAL SPEED SLOW SPEED	1 0,25
EFFICIENCY	NORMAL SPEED SLOW SPEED	24% 20%
JACK WEIGHT (Kg)		37,4
SCREW WEIGHT TPN X 100 mm (Kg)		1,7
CASE MATERIAL		CAST IRON
GREASE QTY (Kg)		0,4
GREASE TYPE	AGIP GR MU EP2	
OPERATING TEMPERATURE	-5° C +80° C	



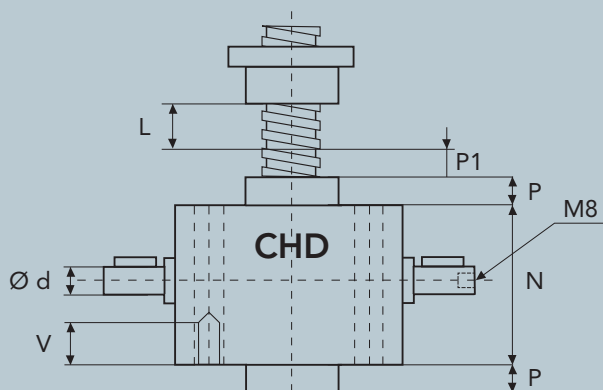
	A	B	B1	B2	C	E	F	G	H
CHD100	131	166	66	100	82,5	170	65	46	200
	I	N	P	P1	V	Ø d	Ø f	Ø s	TPN
CHD100	71	160	40	10	30	24	M20	85	55x9



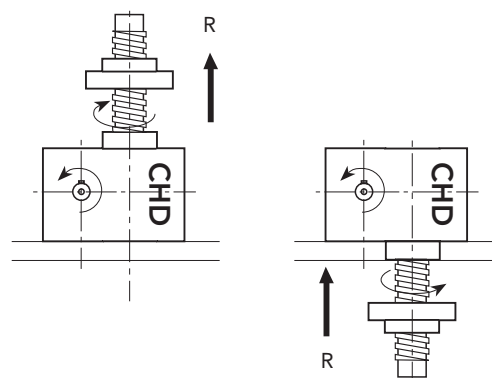
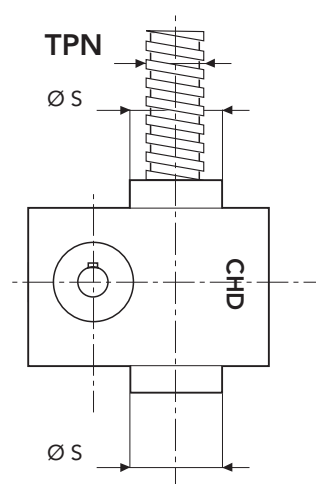
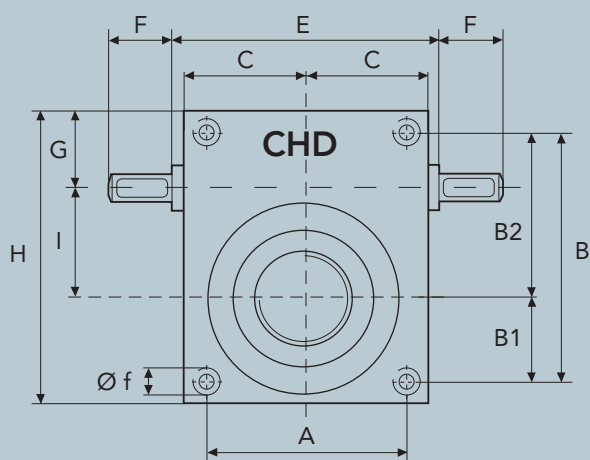


SERIES CHD 100 RS

ROTATING SCREW

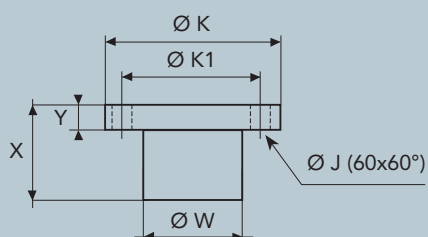


L = STROKE

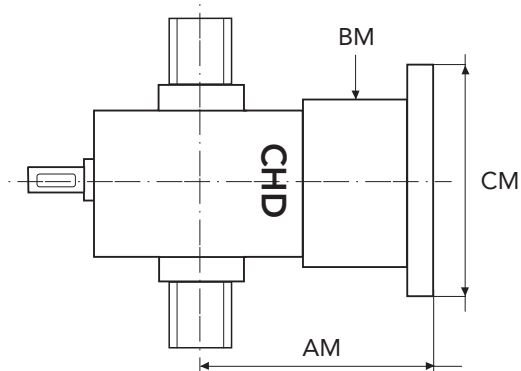


SERIES CHD 100 RS

BRONZE NUT



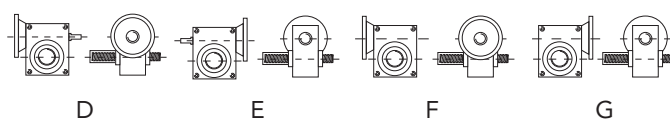
PAM DIMENSIONS FOR BELL AND COUPLING



	X	Y	Ø W	Ø K	Ø K1	Ø J
CHD100	97	18	71,8	110	90	11

MOTOR	FLANGE TYPE	CM	AM	BM
GR. 100/112	B5	250	222,5	100
GR. 132	B5	300	257,5	

CONFIGURATION





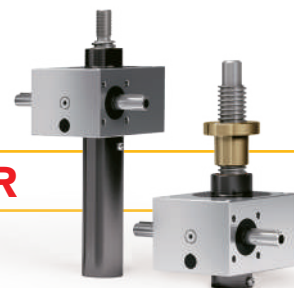
SCREW JACK PERFORMANCE CHD 100

CHD TR SERIES

SCREW JACKS WITH
TRAPEZOIDAL SCREWS

CHD TR

55 x 9



		Load [kN]		100		80		60		40		20		10		5	
		nn1 rpm	speed														
		Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
Ratio	N	1500	25,0	10,72	68,3	8,62	54,9	6,53	41,6	4,45	28,3	2,36	15	1,30	8,3	0,79	5,0
		1000	16,7	7,14	68,3	5,75	54,9	4,36	41,6	2,96	28,3	1,57	15	0,87	8,3	0,52	5,0
		750	12,5	5,36	68,3	4,3	54,9	3,27	41,6	2,22	28,3	1,18	15	0,65	8,3	0,39	5,0
		500	8,3	3,57	68,3	2,9	54,9	2,18	41,6	1,48	28,3	0,79	15	0,43	8,3	0,26	5,0
		300	5,0	2,14	68,3	1,7	54,9	1,31	41,6	0,90	28,3	0,47	15	0,26	8,3	0,16	5,0
		100	1,7	0,71	68,3	0,57	54,9	0,44	41,6	0,30	28,3	0,16	15	0,1	8,3	0,1	5,0
		50	0,8	0,357	68,3	0,29	54,9	0,22	41,6	0,15	28,3	0,1	15	0,1	8,3	0,1	5,0
	L	1500	6,3	3,3	21,2	2,70	17,2	2,10	13,1	1,41	9	0,79	5,0	0,47	3,0	0,31	2,0
		1000	4,2	2,2	21,2	1,80	17,2	1,37	13,1	0,94	9	0,52	5,0	0,31	3,0	0,21	2,0
		750	3,1	1,6	21,2	1,35	17,2	1,00	13,1	0,71	9	0,39	5,0	0,2	3,0	0,16	2,0
		500	2,1	1,1	21,2	0,90	17,2	0,70	13,1	0,47	9	0,26	5,0	0,16	3,0	0,1	2,0
		300	1,3	0,66	21,2	0,54	17,2	0,41	13,1	0,28	9	0,16	5,0	0,1	3,0	0,1	2,0
		100	0,4	0,22	21,2	0,18	17,2	0,14	13,1	0,1	9	0,1	5,0	0,1	3,0	0,1	2,0
		50	0,2	0,11	21,2	0,1	17,2	0,1	13,1	0,1	9	0,1	5,0	0,1	3,0	0,1	2,0

Only static load permissible

CHD VRS SERIES

FOR TRANSLATING SCREW
BY INTEGRATED NUT

see dimensions pages 48/49

CHD 100 VRS

50 x 10



		Load [kN]		100		80		60		40		20		10		5	
		nn1 rpm	speed														
		Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]	Pi [kW]	Mt [Nm]
Ratio	N	1500	27,8	3,62	23	2,95	18,8	2,28	14,5	1,6	10,2	0,94	6	0,60	3,8	0,42	2,7
		1000	18,5	2,41	23	1,97	18,8	1,52	14,5	1,1	10,2	0,63	6	0,40	3,8	0,28	2,7
		750	13,9	1,81	23	1,47	18,8	1,14	14,5	0,8	10,2	0,47	6	0,30	3,8	0,21	2,7
		500	9,2	1,21	23	0,98	18,8	0,76	14,5	0,53	10,2	0,31	6	0,20	3,8	0,14	2,7
		300	5,5	0,72	23	0,59	18,8	0,46	14,5	0,32	10,2	0,19	6	0,12	3,8	0,1	2,7
		100	1,8	0,24	23	0,2	18,8	0,15	14,5	0,11	10,2	0,1	6	0,1	3,8	0,1	2,7
		50	0,9	0,12	23	0,1	18,8	0,1	14,5	0,1	10,2	0,1	6	0,1	3,8	0,1	2,7
	L	1500	6,9	1,18	7,5	0,97	6,2	0,77	4,9	0,57	3,6	0,36	2,3	0,27	1,7	0,20	1,3
		1000	4,6	0,79	7,5	0,65	6,2	0,51	4,9	0,38	3,6	0,24	2,3	0,18	1,7	0,14	1,3
		750	3,4	0,59	7,5	0,49	6,2	0,38	4,9	0,28	3,6	0,18	2,3	0,13	1,7	0,1	1,3
		500	2,3	0,39	7,5	0,32	6,2	0,26	4,9	0,19	3,6	0,12	2,3	0,1	1,7	0,1	1,3
		300	1,3	0,24	7,5	0,19	6,2	0,15	4,9	0,11	3,6	0,1	2,3	0,1	1,7	0,1	1,3
		100	0,5	0,1	7,5	0,1	6,2	0,1	4,9	0,1	3,6	0,1	2,3	0,1	1,7	0,1	1,3
		50	0,2	0,1	7,5	0,1	6,2	0,1	4,9	0,1	3,6	0,1	2,3	0,1	1,7	0,1	1,3

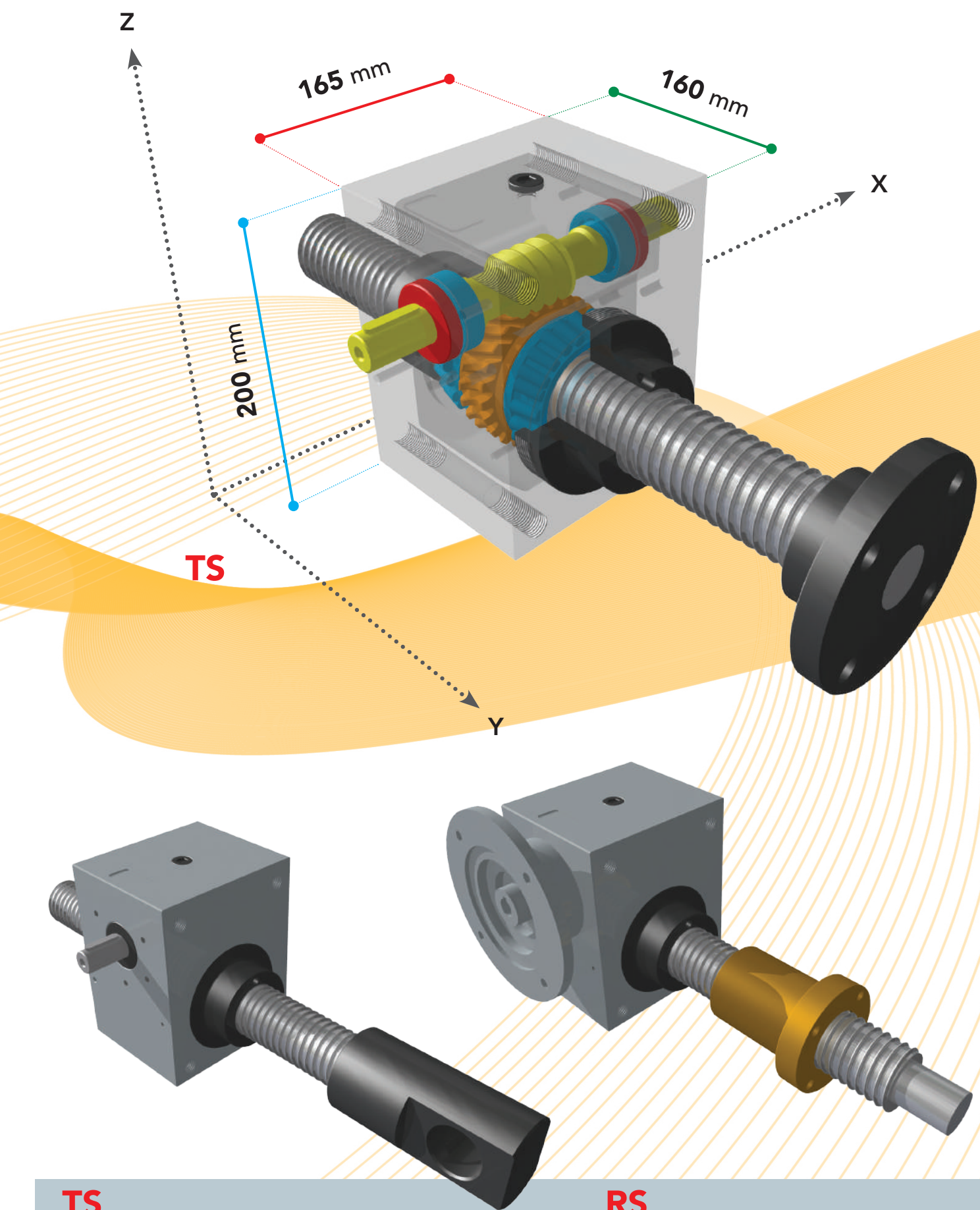
WARNING!: The values shown in the performance tables of versions with recirculating ball screws show input power and torque in relation to the load to be moved.

The dynamic load limits for the various types of standard nuts are shown in the table on pages 48/49.

On request, nuts with higher load ratings can be used.
For further information, contact our technical-sales service.



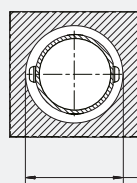
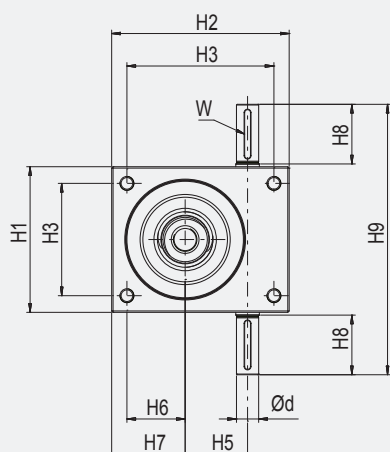
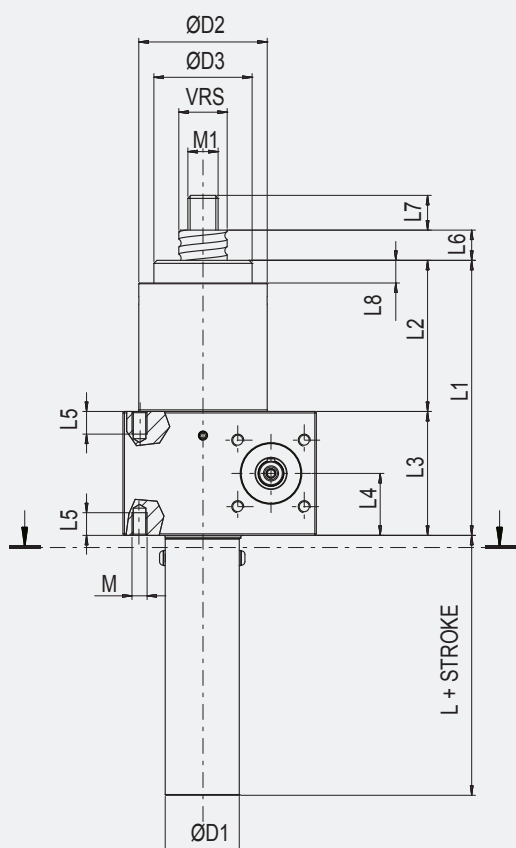
CHD 100





TREVELLING VERSION WITH BALL SCREW

VERSION TR



CHD 2,5	$\varnothing$ 36
CHD 5	$\varnothing$ 40
CHD 10	$\varnothing$ 46
CHD 25	$\varnothing$ 60
CHD 50	$\varnothing$ 79
CHD 100	$\varnothing$ 104

	CHD 25	CHD 50	CHD 100
$\varnothing d$	$\varnothing$ 16	$\varnothing$ 20	$\varnothing$ 24
$\varnothing D1$	$\varnothing$ 50	$\varnothing$ 65	$\varnothing$ 90
$\varnothing D2$	$\varnothing$ 65	$\varnothing$ 85	$\varnothing$ 95
$\varnothing D3$	$\varnothing$ 85	$\varnothing$ 115	$\varnothing$ 130
H1	105	145	165
H2	128	180	200
H3	81	115	131
H4	106	150	166
H5	45	63	71
H6	42	63	66
H7	53	78	83
H8	43	45	65
H9	195	240	300
L	95	108	132
L1	182	217	260
L2	100	100	100
L3	82	117	160
L4	41	58.5	80
L5	15	20	30
L6	20	20	20
L7	22	29	48
L8	15	15	15
M	M10	M12	M20
M1	M20	M30	M36
W	5X5X36	6X6X36	8X7X56
VRS	32X10	40X10	50X10

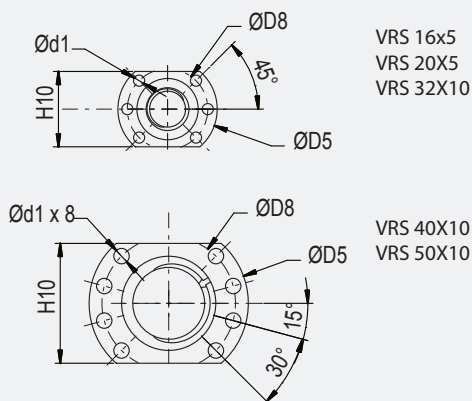
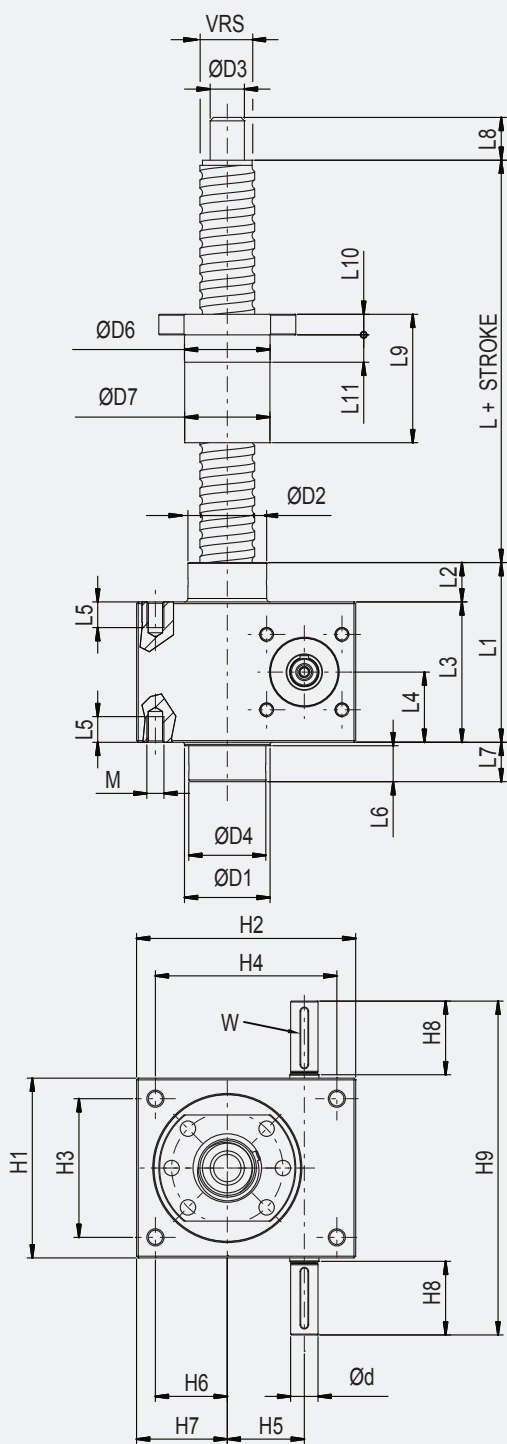
Max admitted loads on ball screw standard nuts VRS

Type	Co [daN]	Ca [daN]
VRS 32X10	5876	5254
VRS 40X10	9377	6611
VRS 50X10	12714	7050



ROTATING VERSION WITH BALL SCREW

VERSION RS



	CHD 2.5	CHD 5	CHD 10	CHD 25	CHD 50	CHD 100
Ø d	Ø 9	Ø 10	Ø 14	Ø 16	Ø 20	Ø 24
Ø d1	Ø 5.5	Ø 5.5	Ø 6.6	Ø 9	Ø 9	Ø 11
Ø D1	Ø 28	Ø 32	Ø 38	Ø 50	Ø 60	Ø 84
Ø D2	Ø 26	Ø 30	Ø 39	Ø 46	Ø 60	Ø 85
Ø D3	Ø 10	Ø 12	Ø 15	Ø 20	Ø 25	Ø 40
Ø D4	Ø 25	Ø 28	Ø 34	Ø 45	Ø 60	Ø 110
Ø D5	Ø 48	Ø 48	Ø 58	Ø 80	Ø 98	Ø 110
Ø D6	Ø 28	Ø 28	Ø 36	Ø 50	Ø 63	Ø 75
Ø D7	Ø 27,8	Ø 27,8	Ø 35,8	Ø 49,8	Ø 62,8	Ø 74,8
Ø D8	Ø 38	Ø 38	Ø 47	Ø 65	Ø 78	Ø 93
H1	50	72	85	105	145	165
H2	60	78	98	128	180	200
H3	38	52	63	81	115	131
H4	48	60	78	106	150	166
H5	20	25	32	45	63	71
H6	16	21	29	42	63	66
H7	22	30	39	53	78	83
H8	20	22.5	25	43	45	65
H9	92	120	140	195	240	300
H10	40	40	44	62	70	85
L	80	80	85	115	130	140
L1	62	74	93	105	149	200
L2	12	12	18	23	32	40
L3	50	62	75	82	117	160
L4	25	31	37.5	41	58.5	80
L5	12	13	15	15	20	30
L6	11	14	17	21	32	32
L7	13	16	19	23	32	32
L8	12	15	20	25	30	45
L9	38	38	43	75	88	100
L10	10	10	10	12	16	16
L11	10	10	10	16	14	20
M	M6	M8	M8	M10	M12	M20
W	3X3X14	3X3X18	5X5X20	5X5X36	6X6X36	8X7X56
VRS	16X5	16X5	20X5	32X10	40X10	50X10

Max admitted loads on ball screw standard nuts VRS

Type	Co [daN]	Ca [daN]
VRS 16X5	1191	1160
VRS 20X5	1985	1525
VRS 32X10	5876	5254
VRS 40X10	9377	6611
VRS 50X10	12714	7050



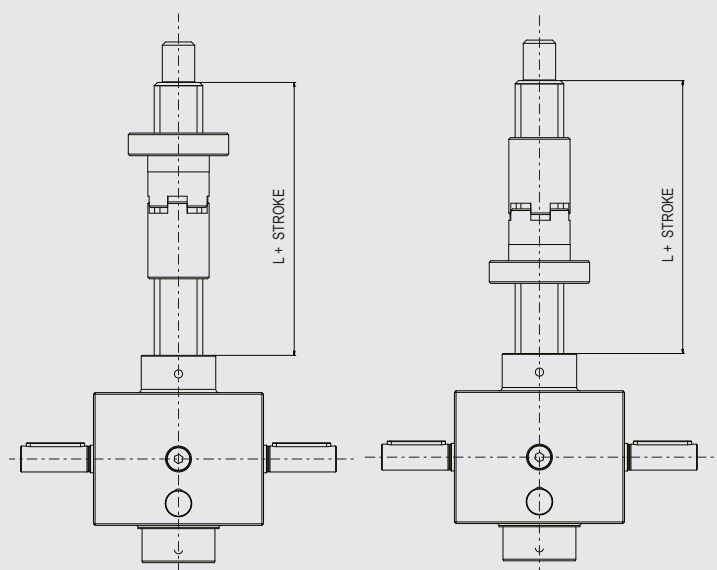
OPTIONS

SAFETY NUT

The safety nut is used to support the load in case of wear of the main nut. Allows thread wear to be monitored to avoid exceeding the permissible wear level and situations of thread collapse.

SN-R SAFETY NUT FOR ROTATING VERSION

In the rotating version the safety nut works in one direction only: specify compression or traction load at the time of the order.



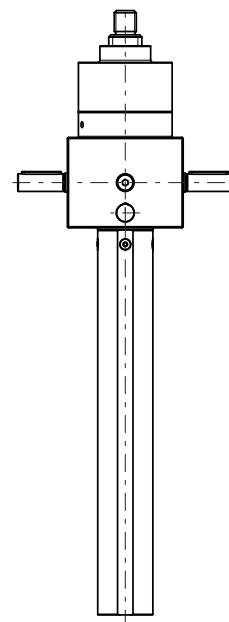
Compression-Pushing load

Traction-Pulling load

SN-T SAFETY NUT FOR TRAVELLING VERSION

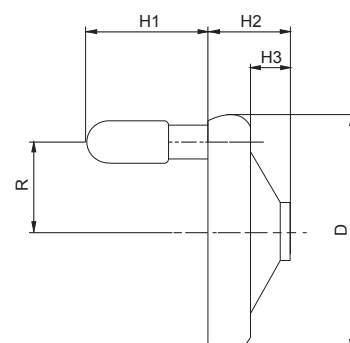
In the travelling version the safety nut works in both directions and it is not necessary to indicate the type of load.

Size	L
CHD 2.5	88
CHD 5	88
CHD 10	102
CHD 25	110
CHD 50	155
CHD 100	199



H HANDWHEEL

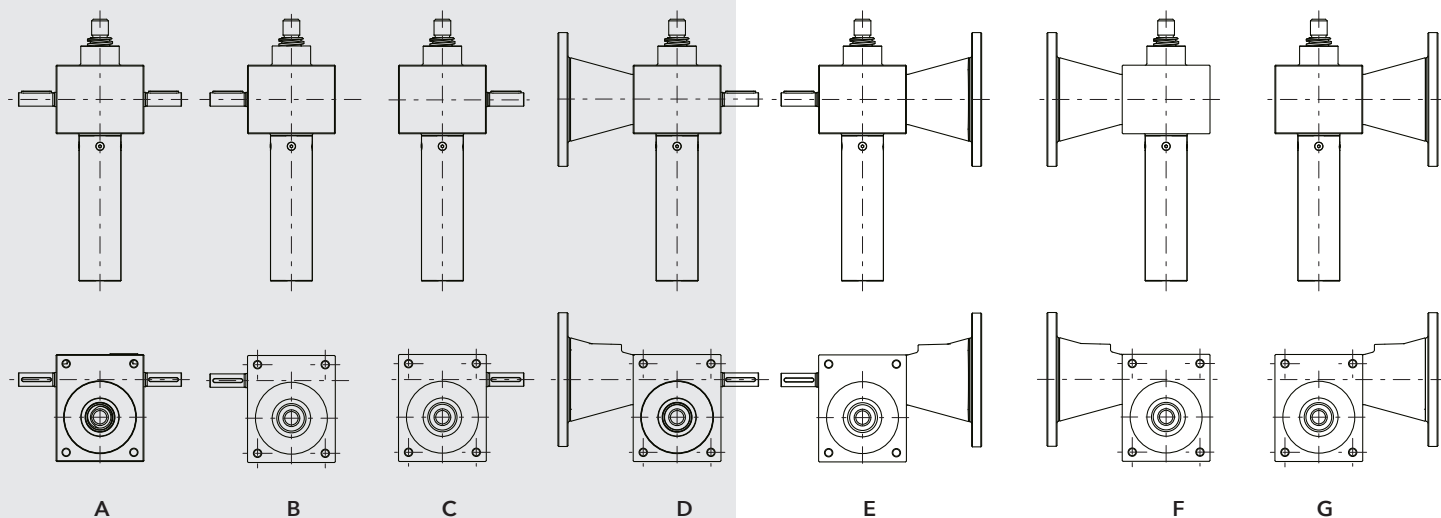
Type	D	R	H1	H2	H3	kg
CHD 2.5	Ø 80	29	45	35	17	0,104
CHD 5	Ø 100	37	60	37	17	0,145
CHD 10	Ø 125	48	65	44	22	0,240
CHD 25	Ø 160	65	73	51	27	0,399
CHD 50	Ø 200	84	80	61	34	0,525
CHD 100	Ø 250	103	90	69	38	0,888





DRIVE FLANGE AND SHAFTS ORIENTATION

- A - Double extension screw standard version
- B - Single spindle screw Lh assembly
- C - Single spindle screw Rh assembly
- D - Double extension screw + drive flange and coupling Lh assembly
- E - Double extension screw + drive flange and coupling Rh assembly
- F - Single spindle screw + drive flange and coupling Lh assembly
- G - Single spindle screw + drive flange and coupling Rh assembly

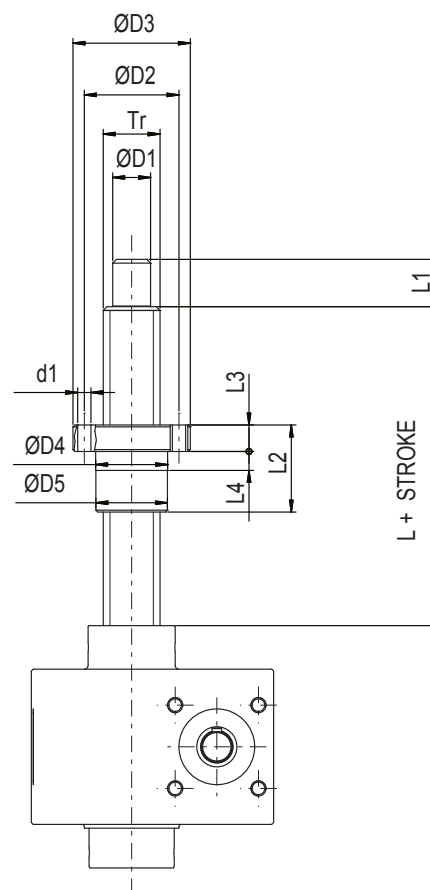


IS OVERSIZED SPINDLE CHD-R

	CHD 2.5	CHD 5	CHD 10	CHD 25	CHD 50	CHD 100
Ød1	Ø 6	Ø 7	Ø 7	Ø 9	Ø 11	Ø 17
ØD1	Ø 12	Ø 15	Ø 20	Ø 25	Ø 40	Ø55
ØD2	Ø 38	Ø 45	Ø 50	Ø 78	Ø 90	Ø 140
ØD3	Ø 48	Ø 55	Ø 60	Ø 95	Ø 110	Ø 180
ØD4	Ø28	Ø 32	Ø 38	Ø 63	Ø 72	Ø 95
ØD5	Ø 27,8	Ø 31,8	Ø 37,8	Ø 63,8	Ø 71,8	Ø 94,8
L	64	64	66	95	117	Ø 130
L1	15	20	25	30	45	Ø 70
L2	44	44	46	73	97	Ø 100
L3	12	12	14	16	18	Ø 30
L4	8	8	10	12	30	Ø 30
Tr	18X4	20X4	30X6	40X7	55X9	70X10

In applications subject to buckling load where it is not possible to obtain the desired stroke, oversized spindles can be installed as an alternative to selecting a larger size, exclusively for rotating version "R".

For further information contact our engineering-commercial department.





ACCESSORIES

ACCESSORIES		DESCRIPTION	Can be used on model		Page
			TRAVELLING	ROTATING	
	PE	Pivot bearing end	✓	✗	54
	FF	Fixing Flanged	✓	✗	54
	RE	Rod end	✓	✗	55
	FE	Fork end	✓	✗	54
	AD	Antirotation Device	✓	✗	55
	EP	Escape protection	✓	✗	55
	B	Bellows	✓	✓	59
	FS	Fastening strips	✓	✓	56
	PBP	Pivot bearing plate	✓	✓	56
	H	Handwheel	✓	✓	50
	SN-R	Safety Nuts	✗	✓	50

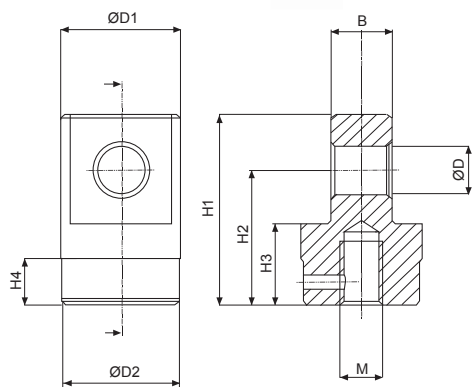


ACCESSORIES

ACCESSORIES		DESCRIPTION	Can be used on model		Page
			TRAVELLING	ROTATING	
	SN-T	Safety Nuts	✓	✗	50
		Motor flange	✓	✓	51
	IS	Increased size screw	✓	✓	51
	SSV	Stainless steel version	✓	✓	–
	VS	Viton seals	✓	✓	–
	SS	Silicone seals	✓	✓	–
	MS	Mechanical limit switches	✓	✗	57
	MLS	Magnetic limit switches	✓	✗	58
	PLS	Proximity (Inductive) sensors	✓	✗	57
		Transmission shafts	✓	✓	61
		Coupling	✓	✓	62



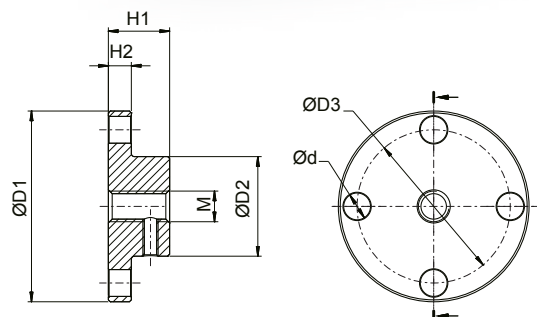
ACCESSORIES



PE PIVOT BEARING END

Size	D1	D2	$\frac{D}{H8}$	H1	H2	H3	H4	$\frac{B}{h10}$	M	Kg
CHD 2.5	Ø 30	Ø 26	Ø 14	51	36	21	15	15	M8x16	0.17
CHD 5	Ø 30	Ø 30	Ø 14	55	40	25	-	15		0.20
CHD 10	Ø 40	Ø 39	Ø 16	63	45	27	15	20		0.42
CHD 25	Ø 45	Ø 45	Ø 24	78	53	33	-	30		0.68
CHD 50	Ø 60	Ø 60	Ø 32	105	70	40	-	35		1.49
CHD 100	Ø 75	Ø 85	Ø 35	110	75	35	15	45		2.51

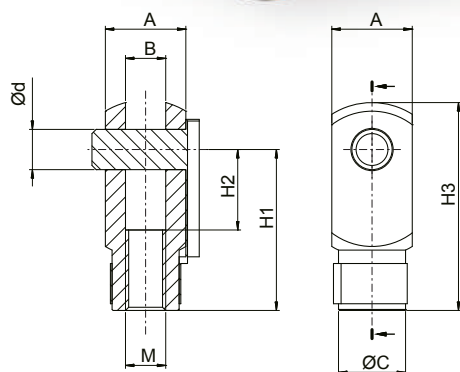
Material: steel, with anti-corrosion treatment. (Stainless Steel on request)



FF FIXING FLANGED

Size	D1	D2	D3	d	H1	H2	M	Kg
CHD 2.5	Ø 50	Ø 26	Ø 40	Ø 7	16	6	M8	0.12
CHD 5	Ø 65	Ø 30	Ø 48	Ø 9	20	7	M12	0.22
CHD 10	Ø 80	Ø 39	Ø 60	Ø 11	21	8	M14	0.39
CHD 25	Ø 90	Ø 46	Ø 67	Ø 11	23	10	M20	0.58
CHD 50	Ø 110	Ø 60	Ø 85	Ø 13	30	15	M30	1.24
CHD 100	Ø 150	Ø 85	Ø 117	Ø 17	50	20	M36	3.62

Material: steel, with anti-corrosion treatment. (Stainless Steel on request)



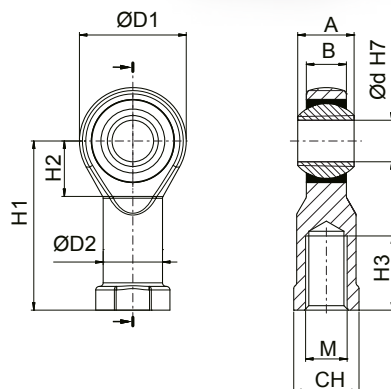
FE FORK END

Size	A	B	C	H1	H2	H3	d	M	Kg
CHD 2.5	16	8	Ø 14	32	16	42	Ø 8	M8	0.10
CHD 5	24	12	Ø 20	48	24	62	Ø 12	M12	0.16
CHD 10	27	14	Ø 24	56	28	72	Ø 14	M14	0.23
CHD 25	40	20	Ø 34	80	40	105	Ø 20	M20	0.72
CHD 50	60	30	Ø 52	120	60	160	Ø 30	M30	2.47
CHD 100	70	35	Ø 60	144	72	188	Ø 35	M36	3.85

From sizes 2.5 to 25 fork ends are complete with pin and clips.
In sizes 50 and 100 fork ends are complete with pin and circlip.
Material: galvanized steel. (Stainless Steel on request)



ACCESSORIES



RE ROD END

Size	A	B	H1	H2	H3	D1	D2	d H7	M	CH	kg
CHD 2.5 *	14	10.5	43	15	20	Ø 28	Ø 15	Ø 10	M10	17	0.08
CHD 5	16	12	50	17	22	Ø 32	Ø 17.5	Ø 12	M12	19	0.12
CHD 10	19	13.5	57	19	25	Ø 36	Ø 20	Ø 14	M14	22	0.18
CHD 25	25	18	77	27	33	Ø 50	Ø 27.5	Ø 20	M20	30	0.44
CHD 50 *	37	25	110	36	51	Ø 70	Ø 40	Ø 30	M30X2	41	1.18
CHD 100 *	43	28	125	41	56	Ø 80	Ø 46	Ø 35	M36X2	50	1.72

In sizes marked * the RE option must be requested when ordering, as rod ends cannot be fitted to standard spindles.

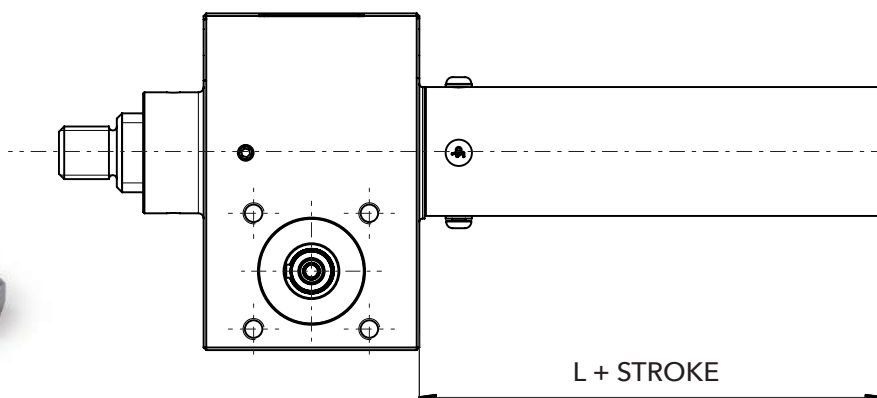
WARNING: Only use with anti-rotation system!

Material: steel.

Size	L
CHD 2.5	63
CHD 5	68
CHD 10	71
CHD 25	76
CHD 50	94
CHD 100	115



AD ANTIROTATION DEVICE



The anti-rotation device constrains the rotation of the translating screw around its own axis.

WARNING:

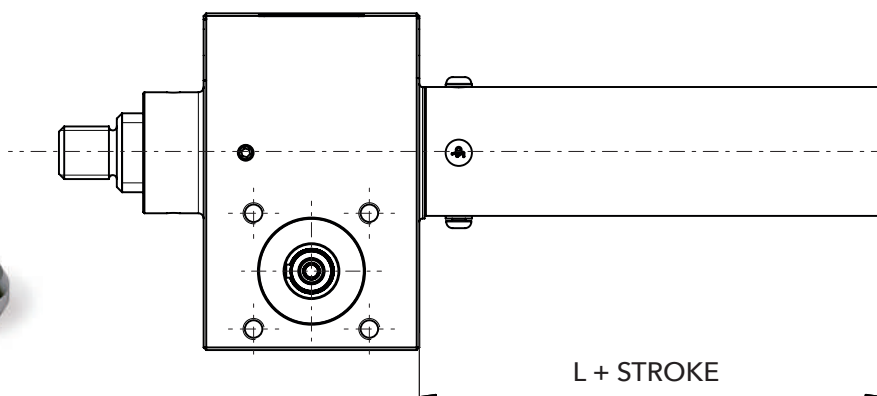
The device is indispensable if the load applied to the jack is not guided and with the use of RE terminals (rod ends).

It also works as an escape protection system. It cannot be used as a stop.

Size	L
CHD 2.5	63
CHD 5	68
CHD 10	71
CHD 25	76
CHD 50	94
CHD 100	115



EP ESCAPE PROTECTION



The escape protection prevents the screw from winding out of the gearbox.

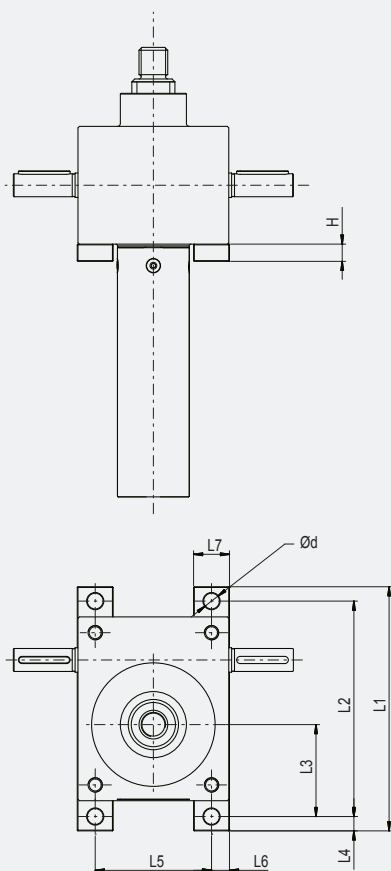
WARNING:

Mandatory in the T version with ball screws! Cannot be used as a stop.

Cannot be fitted in combination with the anti-rotation system.

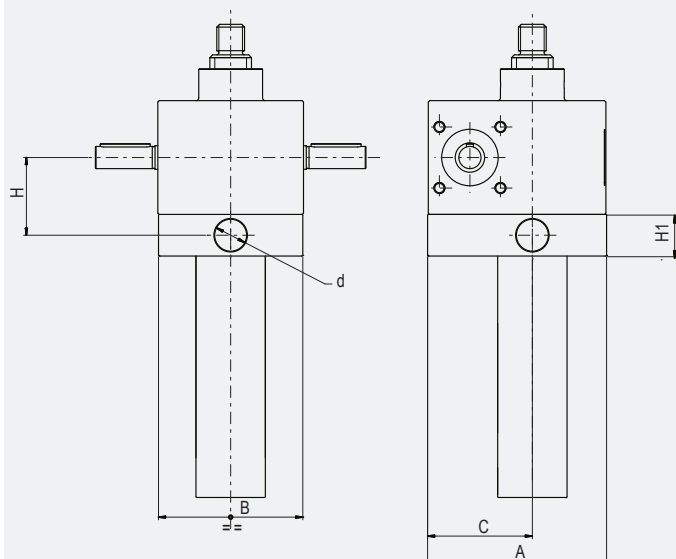


FS FASTENING STRIPS



Size	d	H	L1	L2	L3	L4	L5	L6	L7
CHD 2.5	Ø 6,5	10	90	75	29,5	7,5	38	6	12
CHD 5	Ø 8,5	10	120	100	41	10	52	9	18
CHD 10	Ø 8,5	10	140	120	50	10	63	10	20
CHD 25	Ø 11	12	170	150	64	10	81	12,5	25
CHD 50	Ø 13	16	230	204	90	13	115	15	30
CHD 100	Ø 22	25	270	236	101	17	131	18,5	37

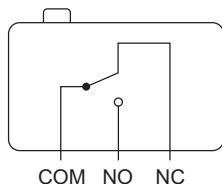
PBP PIVOT BEARING PLATE



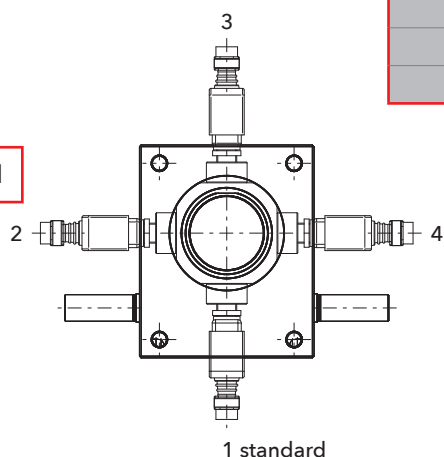
Size	A	B	C	d	H	H1
CHD 2.5	60	50	38	Ø 8	35	20
CHD 5	78	72	48	Ø15	41	20
CHD 10	98	85	59	Ø18	50	25
CHD 25	128	105	75	Ø22	56	30
CHD 50	180	143	102	Ø25	78,5	40
CHD 100	200	163	117	Ø 28	105	50



ACCESSORIES



ORIENTATION



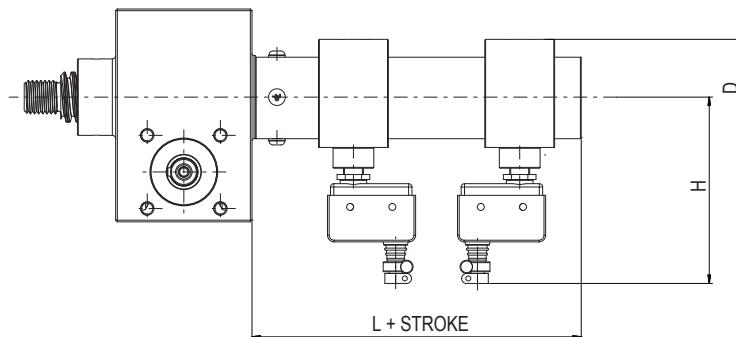
MS MECHANICAL LIMIT SWITCHES

The mechanical limit switches are fixed to the screw protection tube by means of a special support that allows adjustment of ± 5 mm. The standard switches have a double changeover NO and NC contact

ORDER CODE REFERENCE

2MS = 2 microswitches with NO and NC contact

DIMENSIONS			
Type	D	H	L
CHD 2.5	Ø 46	105	91
CHD 5	Ø 50	107	93
CHD 10	Ø 55	109	98
CHD 25	Ø 70	112	104
CHD 50	Ø 80	121	125
CHD 100	Ø 110	130	156



PLS PROXIMITY (INDUCTIVE) SENSORS

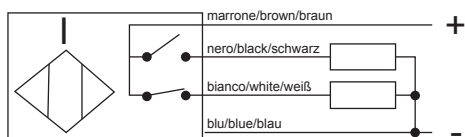
The inductive sensors are fixed to the screw protection tube by means of a special support that allows adjustment of ± 5 mm.

ORDER CODE REFERENCE

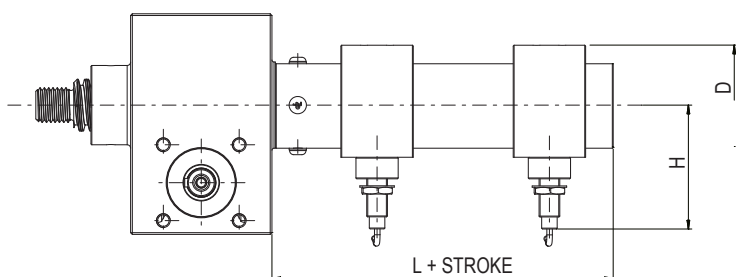
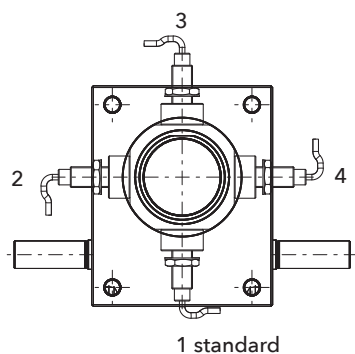
2PLS = 2 Proximity (Inductive) Sensors

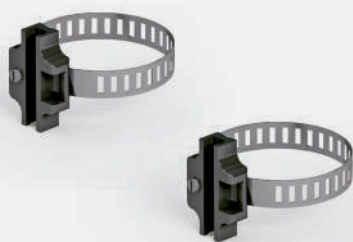
DIMENSIONS				TECHNICAL DATA:	
Type	D	H	L	Supply voltage (UB):	5 ÷ 40 Vdc
CHD 2.5	Ø 46	62	91	Temperature range:	- 25° ÷ + 75°C
CHD 5	Ø 50	64	93	Degree of protection:	IP67
CHD 10	Ø 55	67	98	Switch status indicator:	yellow LED
CHD 25	Ø 70	71	104		
CHD 50	Ø 80	78	125		
CHD 100	Ø 110	88	156		

NA + NC



ORIENTATION





MLS MAGNETIC LIMIT SWITCHES

The magnetic limit switches are fixed to the screw protection tube by means of special supports that allow for stroke adjustment.

When adjusting the stroke, take care not to exceed the limit indicated in the table below to prevent the jack from reaching extreme positions causing contact with mechanical stops. Further information can be found in the use and maintenance manual.

The sensors are fitted in the position indicated in the drawing, but for assembly requirements they can be rotated around the shield tube by means of the special support..

There are three types of sensor available:

NC Reed circuit

Circuit with normally closed reed switch protected by varistor against overvoltage generated when the circuit is opened, and LED display system.

NO Reed Circuit

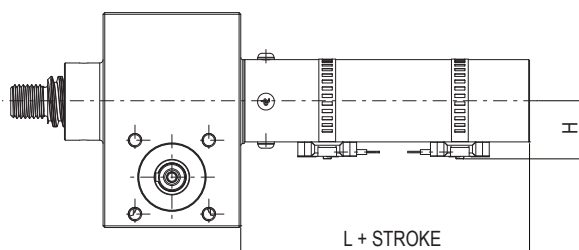
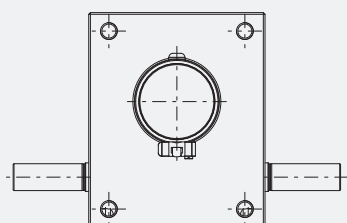
Circuit with normally open reed switch protected by varistor against overvoltage generated when the circuit is opened, and LED display system.

NPN Circuit

Circuit with Hall effect with NPN output. Protected against polarity reversal and against peak overvoltage. LED display system. opened, and LED display system.

DIMENSIONS		
Type	H	L
CHD 2.5	25	63
CHD 5	26	68
CHD 10	29	71
CHD 25	34	76
CHD 50	42	94
CHD 100	55	115

Sensor type	NC Reed	NO Reed Circuit	NPN Circuit
Referenz	2MLS0 2 Sensors circuit Reed NC (standard version)	2MLS1 2 Sensors circuit Reed NO	2MLS2 2 Sensors NPN
DC voltage	3 / 110 V	3 / 30 V	6 / 30 V
AC voltage	3 / 110 V	3 / 30 V	-
Current	0,5 A	0,1 A	0,20 A
Power	20 VA	6 VA	4 W
Supply cable	PVC 2 x 0,14 mm	PVC 2 x 0,14 mm	PVC 3 x 0,14 mm
Cable lenght	2500 mm	2.500 mm	2.500 mm
Protection	IP67	IP67	IP67
Circuit diagram			



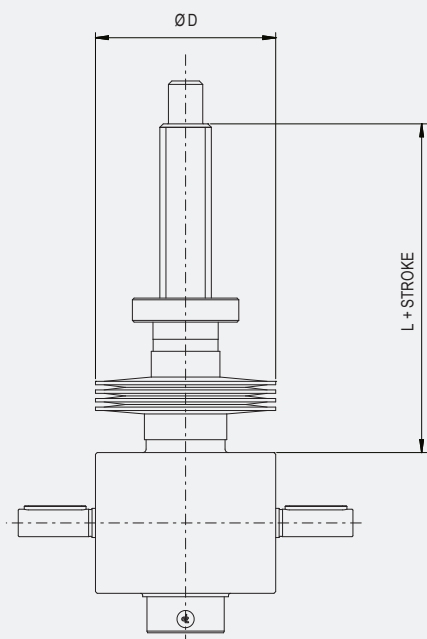
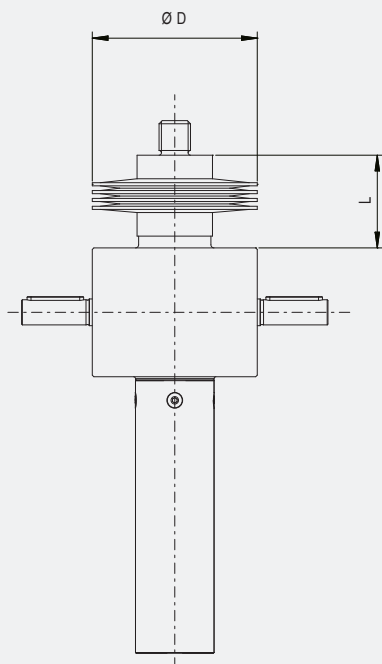


BLS SCREW PROTECTION BELLOWS

IMPORTANT! Assembly of the bellows must be defined at the time of ordering as it involves variations to the jack.

In case of horizontal assembly the bellows must be fitted with support rings to avoid wear due to chaffing against the screw.

Size variation with insertion of the bellows.



TRASLATING VERSION

Type	D	L
CHD 2.5	Ø 60	36 + (1.14 x stroke)- stroke
CHD 5	Ø 70	36 + (1.14 x stroke)- stroke
CHD 10	Ø 80	40 + (1.14 x stroke)- stroke
CHD 25	Ø 105	46 + (1.1 x stroke)- stroke
CHD 50	Ø 125	56 + (1.09 x stroke)- stroke
CHD 100	Ø 150	65 + (1.09 x stroke)- stroke

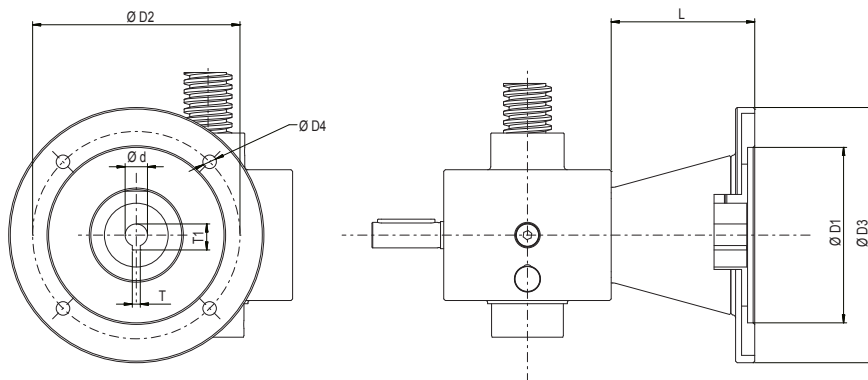
ROTATING VERSION

Type	D	L
CHD 2.5	Ø 60	76 + (1.14 x stroke)- stroke
CHD 5	Ø 70	76 + (1.14 x stroke)- stroke
CHD 10	Ø 80	82 + (1.14 x stroke)- stroke
CHD 25	Ø 105	90 + (1.1 x stroke)- stroke
CHD 50	Ø 125	130 + (1.09 x stroke)- stroke
CHD 100	Ø 150	150 + (1.09 x stroke)- stroke



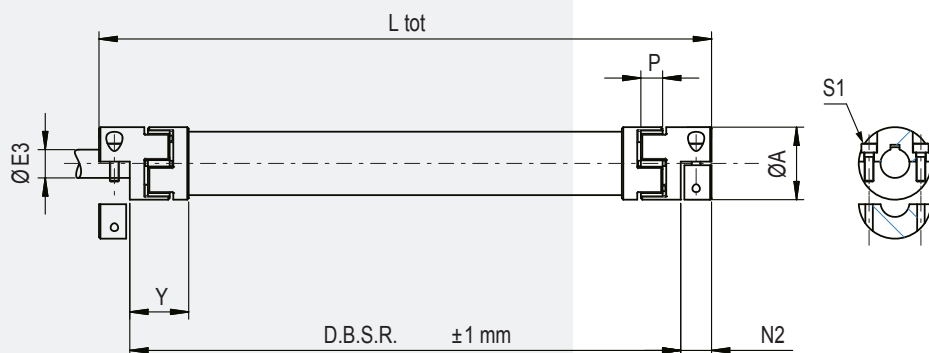
ACCESSORIES

DRIVE FLANGE



Size	d	T	T1	D1	D2	D3	D4	L					
								CHD 2.5	CHD 5	CHD 10	CHD 25	CHD 50	CHD 100
56 B14	Ø9	3	10.4	Ø 50	Ø 65	Ø 80	Ø 7	55	-	-	-	-	-
56 B5	Ø 9	3	10.4	Ø 130	Ø 165	Ø2 00	Ø 7	-	57	-	-	-	-
63 B14	Ø 11	4	12.8	Ø 60	Ø 75	Ø 90	Ø 8.5	55	-	-	-	-	-
63 B5	Ø 11	4	12.8	Ø 130	Ø 165	Ø 200	Ø 8.5	-	60	75	-	-	-
71 B5	Ø 14	5	16.3	Ø 130	Ø 165	Ø 200	Ø 8.5	-	65	80	90	-	-
80 B5	Ø 19	6	21.8	Ø 130	Ø 165	Ø 200	Ø 11	-	-	90	105	112	-
90 B5	Ø 24	8	27.3	Ø 130	Ø 165	Ø 200	Ø 11	-	-	-	105	112	-
100/112 B5	Ø 28	8	31.3	Ø 180	Ø 215	Ø 250	Ø 13	-	-	-	-	125	140
132 B5	Ø 30	10	41.3	Ø 230	Ø 265	Ø 300	Ø13	-	-	-	-	-	175

TS TRANSMISSION SHAFTS



Shafts with clamp hubs

- Practical radial assembly with clamp hubs.
- Easy assembly and adjustment thanks to the clamps.
- Can be supplied with keyway on request.
- Material: high strength aluminium (Stainless Steel on request).
- Backlash-free elastomeric spider with Shore 64D hardness.
- Operating temperature: from -10°C up to +70°C

Size	A	E3 Min.	E3 Max	N2	P	Y	Dt	L	Extension weight [Kg/m]	Total weight [Kg]	D.B.S (R Min) [mm]	S1	Tightening torque [Nm]
14	Ø 30	6	15	14	12	20.5	30	28 + D.B.S.R.	1.06	0.03 + Extension weight	58	M4	3.1
19	Ø 40	8	20	19	16	30.5	35	38 + D.B.S.R.	1.27	0.15 + Extension weight	95	M5	6.2
24	Ø 55	10	30	22	18	37.5	50	44 + D.B.S.R.	1.91	0.28 + Extension weight	113	M6	10.5
28	Ø 65	14	35	25	20	41	60	50 + D.B.S.R.	3.34	0.55 + Extension weight	131	M8	25
38	Ø 80	15	45	34	24	46	70	68 + D.B.S.R.	5.099	0.98 + Extension weight	161	M8	25

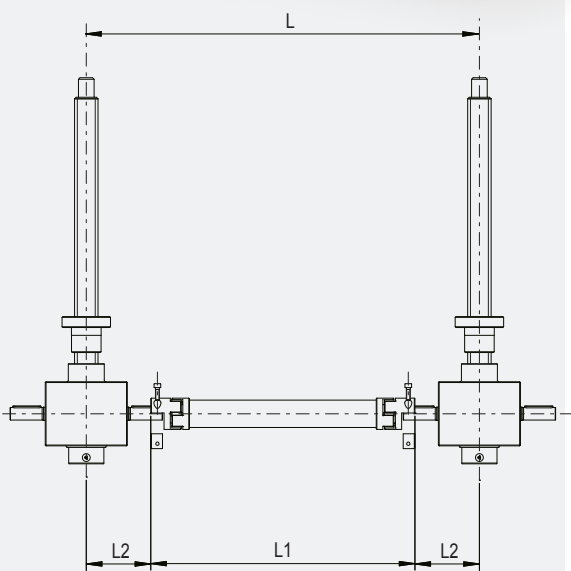
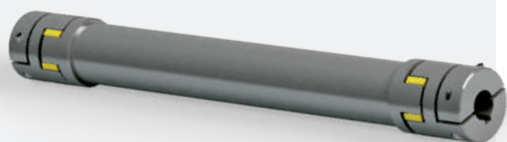
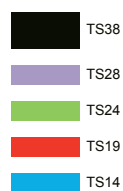
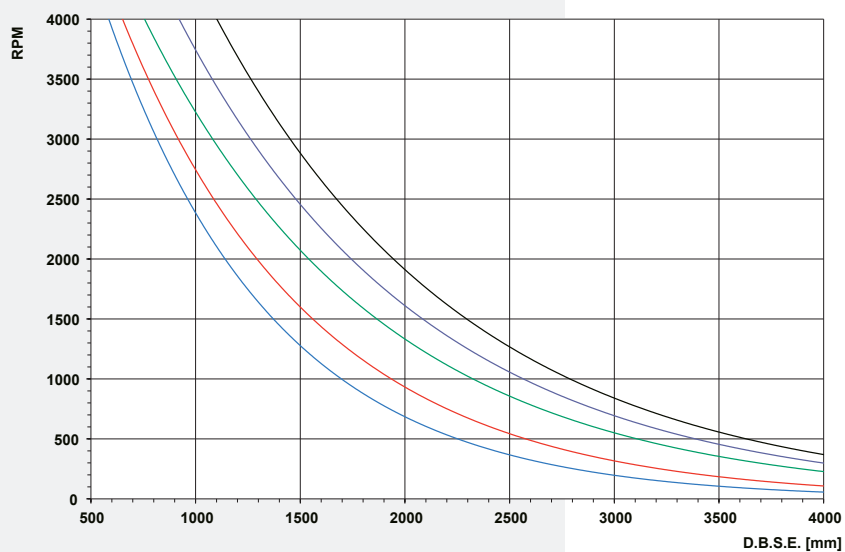


TRANSMISSION SHAFTS

TRANSMISSIBLE TORQUES TYPE C CLAMP LOCKING

Size	6	8	9	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	48
14	6	8	9	10	11	12	14	15	16														
19		14	16	17	19	21	24	26	28	31	33	35	33	36									
24				20	22	24	28	30	32	36	38	40	44	48	50	57	61						
28							55	59	63	71	75	79	86	94	98	110	118	126	137	128			
38								59	63	71	75	79	86	94	98	110	118	126	137	149	157	165	177

SPEED DIAGRAM



$$L1 = L - (2 * L2)$$

L = Jacks centre distance

L1 = Total shaft length with couplings

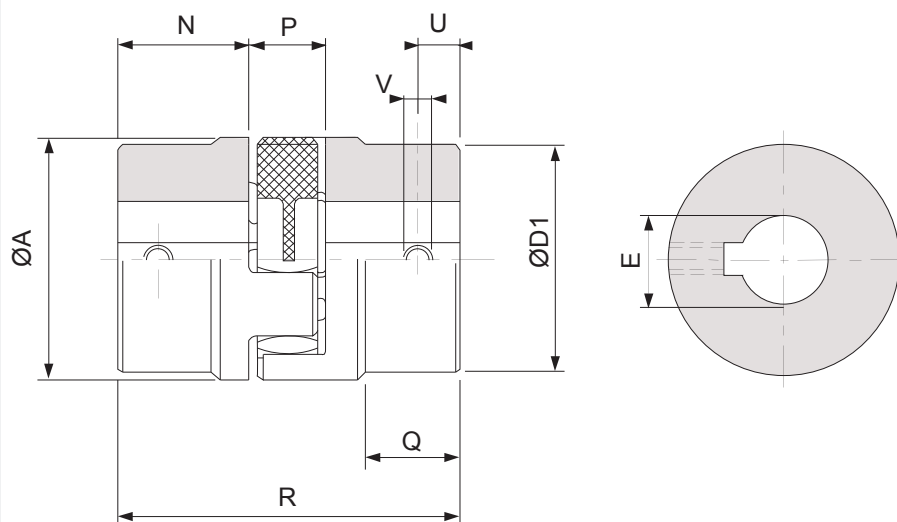
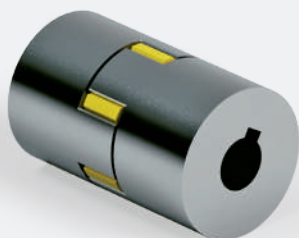
ORDERING KEY

Size	Lenght	Couplings diameters	
TS19	500	16	16
TS 14	Lenght L1		
TS 19			
TS 24			
TS 28			
TS 38			

Type	Shaft Type	L2
CHD 2.5	TS14	32
	TS 14	46
CHD 5	TS 19	41
	TS 24	38
CHD 10	TS 14	56
	TS 19	51
CHD 25	TS 24	48
	TS 19	78,5
	TS 24	75,5
CHD 50	TS 28	72,5
	TS 24	98
	TS 28	95
CHD 100	TS 38	86
	TS 28	125
	TS 38	116



COUPLINGS



Size	A	D1	E Max	N	P	Q	R	U	V	Weight [Kg]
14	30	-	16	11.5	12	-	35	5	M4	0.03
19	40	-	25	25	16	-	66	10	M5	0.15
24	55	53	35	30	18	20	78	10	M5	0.28
28	65	63	40	35	20	24	90	15	M8	0.55
38	80	78	48	45	24	33	114	15	M8	0.98



APPLICATION TECHNICAL SPECS NEEDED FOR THE SCREWJACK CHOICE

Company Date

Address Phone

Contact E-mail

Application description

Total load involved [kN] Screwjacks for each system: n°

Static compression-push load [kN] Static traction-pull load: [kN]

Dynamic compression-push load [kN] Dynamic traction-pull load: [kN]

Type of load: guided ☐ vibrating ☐ off-set ☐

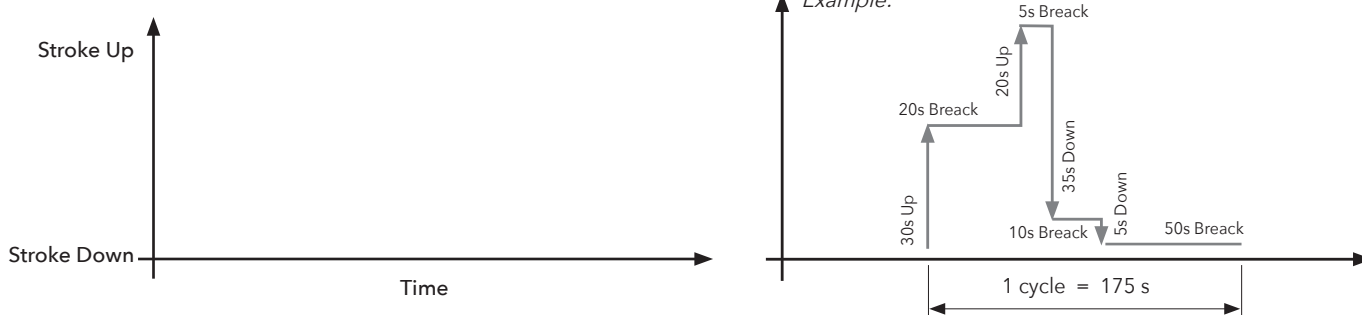
Installation axis: Vertical ☐ Horizontal ☐ Pivoting ☐

Max. stroke: [mm] Effective working stroke: [mm]

Speed: Type N = 25mm/s ☐ Type L = 6.25 mm/s ☐ mm/s ☐

Duty cycle: % Cycle hour: N° Hours per day: N°

For high duty factors or long strokes, fill in the duty cycle diagram below:



Operating conditions: with aggressive work environment, advise

Dusty ☐ AggressiveHumidity ☐ Chipping ☐ Ambient temperature: mis.°C maz.°C

Motor: Three-phase AC motor ☐ Single-phase AC motor. ☐ With brake ☐ Manual release ☐

SN-R	Safety Nuts (CHD-R)		Options
SN-T	Safety Nuts CHD-T version		
IS	Increased size screw CHD-R		
FS	Fastening strips		
PBP	Pivot bearing plate		
2PLS	N°2 Proximity (Inductive) sensors		
2MLS	N° 2 Magnetic limit switches		
2MS	N° 2 Mecanical limit switches		
B	Bellows		
AD	Antirotation Device (CHD-T only)		
EP	Escape protection		
SSV	Stainless steel version		
H	Handwheel		
VS	Viton seals		
SS	Silicone seals		

For multi screw jacks systems see the standard diagrams (pages 18-20) and fill in the dimensions:

Front Fixings:	PE	Pivot bearing end	
	FF	Fixing Flanged	
	RE	Rod end	
	FE	Forked end	



60 YEARS OF HISTORY

The goal pursued by Chiaravalli during more than 60 years of history is to become the Italian and European technological center of excellence in the field of mechanical transmission.



The Manufacturer DISTRIBUTOR

Our Logistic Center in Cantalupa is a coordinated mix of informatic functions intended for storage, picking, packaging and delivery of products.

All the functions have been automated at the highest levels available today.

The Chiaravalli logistic group has established itself over the years becoming an example of excellence for all the European companies working in the same sector.



WE MANUFACTURE

SPECIAL COMPONENTS

Production of special components with high complexity and extremely high precision



MECHANICAL WORM SCREW JACKS

Customized and Standard products as per our catalogue



STANDARD TRANSMISSION

Standard products as per our catalogue



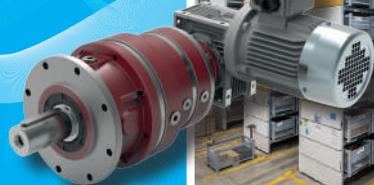
URB BEARINGS



BELTS



GEAR BOXES & ELECTRIC MOTORS



WE DISTRIBUTE

chiaravalli.com

SHIPPING SERVICES

B2B is Chiaravalli Group SpA E-commerce service of Chiaravalli Group SpA and their partners are connected continually 24 hours a day, 365 days a year.

A great, modern and efficient logistics, always.... AT OUR CUSTOMER'S SERVICE.





The Manufacturer DISTRIBUTOR



B2B

*Chiaravalli Group SpA
E-commerce service*

FAST TRACK

*Daily Shipments
by air*



PRIORITY TRUCK SERVICE

Truck priority Shipments

ADVANCED SHIPPING

*Thirty hours Shipments
by air or truck*



YOUR SINGLE NEED IS OUR PRIORITY



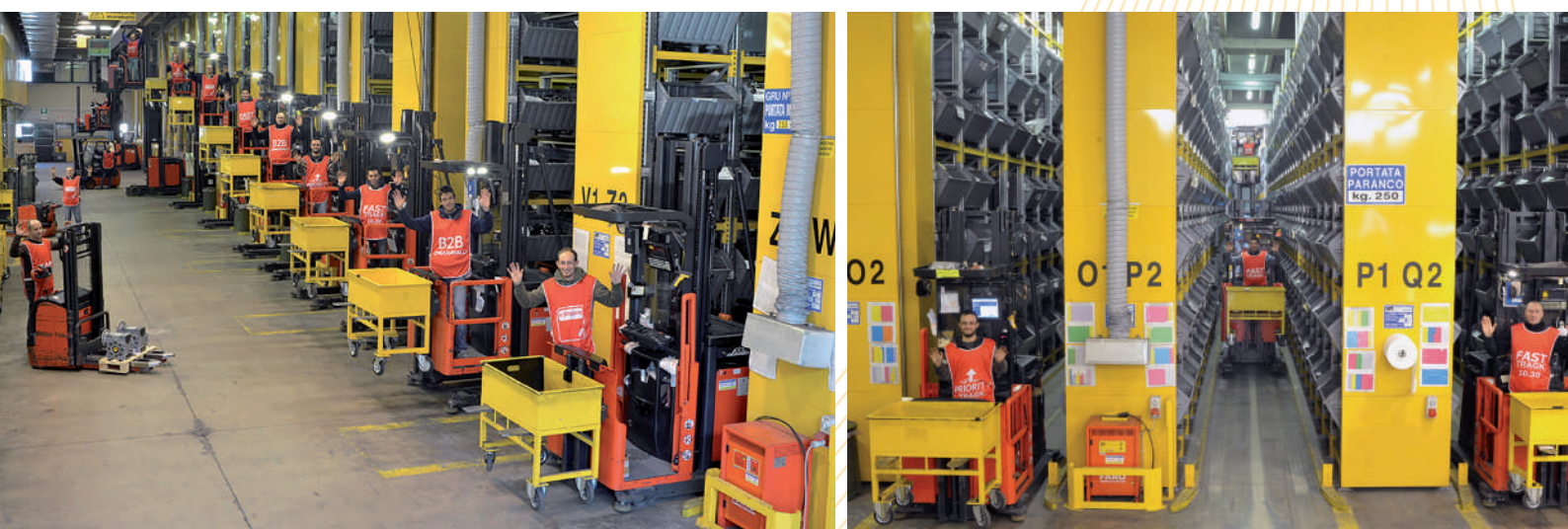
LOGISTIC

CENTER

CANTALUPA

The Chiaravalli Group, always aware of the needs of the market has found it necessary to provide its long-standing customers with complete, steady up-dated information about its products 24 hours a day - 365 days in a year.

The Chiaravalli logistic group has established itself over the years becoming an example of excellence for all the European companies working in the same sector.





GENERAL SALES CONDITIONS

1) ORDERS - Orders for special and standard material must always refer to offers made by CHIARAVALLI GROUP SpA.

The orders are binding for the client. Once work has commenced no cancellations or order reductions will be accepted unless the client reimburses the costs of the material and the work carried out up to the moment in which the order was suspended.

The quantity despatched can vary by $\pm 5\%$ compared to the quantity ordered.

2) PRICES - The prices are those in force at the date of order.

All prices are for goods delivered ex-works Premezzo, packing excluded. If there should be any increase in production and material costs over the duration of the supply, CHIARAVALLI GROUP SpA reserves the right to adapt the prices accordingly, even for orders in course.

3) TERMS OF DELIVERY - Only the terms of delivery indicated by CHIARAVALLI GROUP SpA are to be considered valid. However, they must only be considered as indicative. In the event of difficulty in the procurement of materials, strikes or in any event in all cases of force majeure, the terms of delivery will be automatically extended without CHIARAVALLI GROUP SpA having to pay any reimbursement for damages. The client is obligated to collect special material ordered when ready.

4) DELIVERIES - Deliveries are the responsibility of the purchaser and are carried out at his own risk and peril. Any claims for shortages must be presented within 8 days of receipt of the goods. If it is agreed that the cost of transport is to be paid, even if only in part, by CHIARAVALLI GROUP SpA, the latter reserves the right to choose the most economical means of transport.

5) PACKING - Packing will be invoiced at cost.

6) RETURNS - No returns for any reason will be accepted unless previously authorised and with packing, any customs clearance and the return paid for by the purchaser. To cover warehouse and administrative expenses a debit note will be issued for approx. 15% of the value of the goods returned.

7) WARRANTY - CHIARAVALLI GROUP SpA promises to repair or substitute free of charge any parts that they recognise as being defective. The questioned goods must be returned to the factory of CHIARAVALLI GROUP SpA, free of all expenses. The warranty will be considered cancelled in the event that the parts returned as defective have been repaired or tampered with. The repair of defective parts carried out by the purchaser will only be accepted after authorisation from CHIARAVALLI GROUP SpA and after their approval of the cost estimate. CHIARAVALLI GROUP SpA does not accept responsibility or pay any reimbursement for damages that occur during the use of their products, even if defective. Warranty is excluded for leakage of lubricant caused by wear of the oil seals.

8) RESPONSIBILITY - CHIARAVALLI GROUP SpA does not accept responsibility or pay any reimbursement for damages that occur during the use of their products, even if defective. CHIARAVALLI GROUP SpA declines all responsibility in the execution of parts to a client's design under any patents.

9) PAYMENTS - Only payments carried out in the manner and terms agreed will be considered valid. Once the due date of payment has passed, CHIARAVALLI GROUP SpA will calculate the interest on delayed payment at a rate that is 3% higher than the legal one, retaining the right to demand payment. In the event of delayed or missing payment by the purchaser, the company CHIARAVALLI GROUP SpA reserves the right to suspend deliveries of the orders in course or to demand advance payment without having to pay any reimbursement or compensation to the purchaser. Any dispute regarding materials in manufacture or already possessed by the purchaser does not free the latter from the commitment of making the payment by the agreed date and for the whole amount of the invoice without making any deductions.

10) OWNERSHIP - All of the goods despatched remain the property of CHIARAVALLI GROUP SpA until the invoice is fully paid.

11) COMPETENT COURT - Any controversy concerning business relations with CHIARAVALLI GROUP SpA will be dealt with under the jurisdiction of the Court of Busto Arsizio. Chiaravalli Group SpA accepts no responsibility for any errors in the production of this catalogue and reserves the right to add to the designs or dimensions of the listed products any modification called for by manufacturing requirements or due to evolution of the product.



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