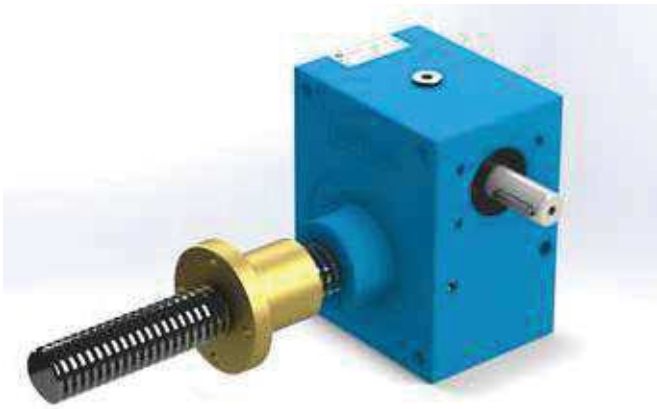
Size 407 - 5 ton - 50 kN

TP Model



TPR Model

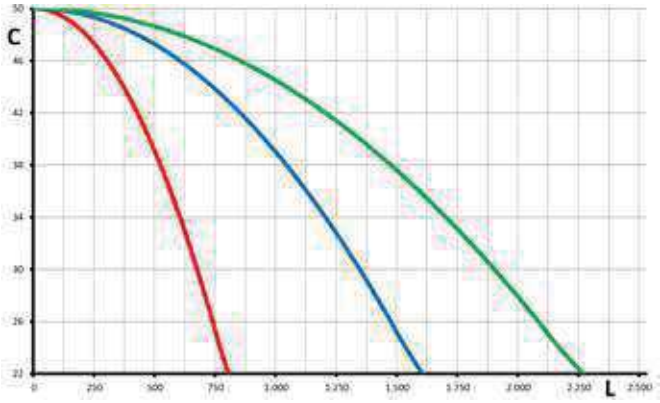
Materials

	Material	Norms	Specs	Indications
Worm	16NiCr4	EN 10084:2008	Casehardening alloy steel	Casehardened and ground on teeth and holds
Worm wheel	CuAl10Fe2-GM	EN 1982:2008	Aluminium bronze	Chill molded
Nut	CuAl10Fe2-GM	EN 1982:2008	Aluminium bronze	Chill molded
Spindle	C45	EN 10083-2:2006	Carbon steel	Tr 40x7 (ISO 2901:2016) - Rolled or machined
Carter	GJL 250	EN 1561:2011	Grey cast iron	Completely machined on 6 faces
Lubricant	Unimec Mark CA		Calcium based grease	0,6 kg

General features

Operating Temperature	-10 °C / 80 °C
Static Load (traction or compression)	80 kN
Dynamic Load (traction or compression)	50 kN
Max input speed	1800 rpm
Main Gearbox Weight	18 kg
Trapezoidal Screw Weight	9 kg/m
Anti-Rotation Torque with Max Load	165 Nm
Max admissible lateral loads	300 N
Center-to-center distance	70 mm
Max radial Load on worm Screw	600 N
Standard Working Conditions	25 °C - service 10%

Euler's law (safety factor =2; dynamic compression load)
Limit **L**oad 1 (red) - 2 (blue) - 3 (green)
C = Load [kN]
L = Overall trapezoidal screw length [mm]

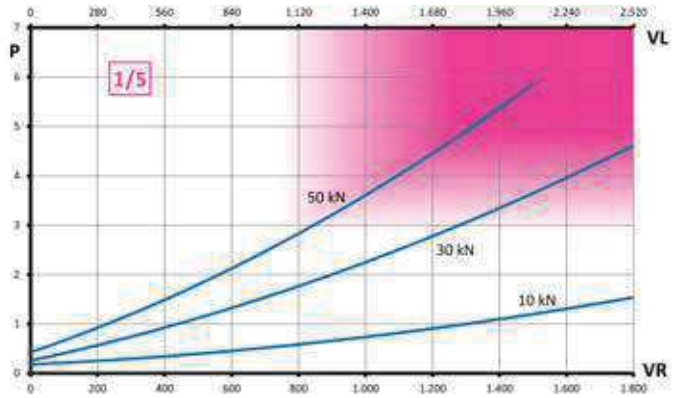


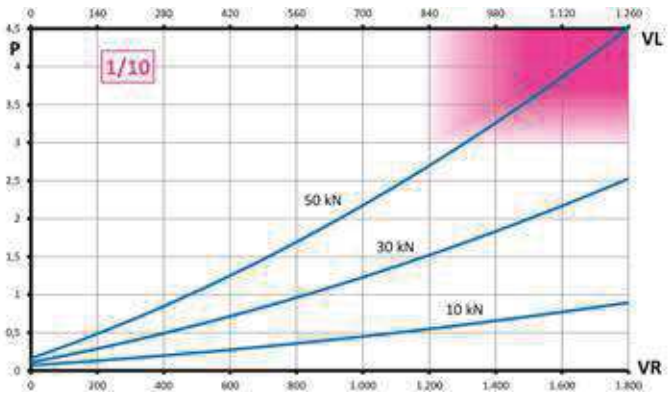
Specific features

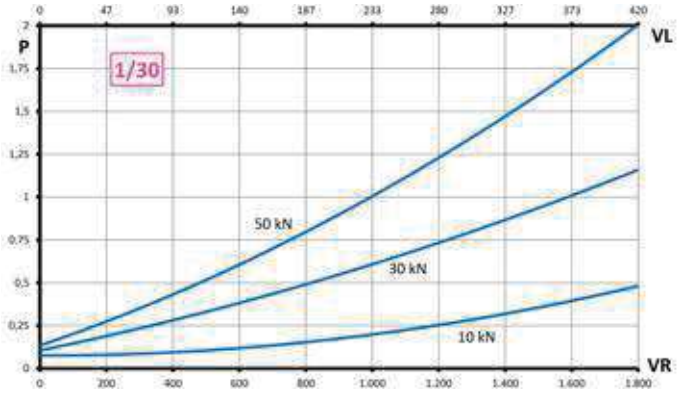
	Nominal Ratios 1/5	1/10	1/30
Real ratio	1/5	1/10	1/30
Translation per worm revolution	1,4 mm	0,7 mm	0,23 mm
Efficiency	28 %	25 %	18 %
Start-up efficiency	20 %	18 %	13 %
Maximum linear speed	2520	1260	420
Torque at maximum load	40 Nm	23 Nm	11 Nm
Worm screw maximum torque	490 Nm	128 Nm	154 Nm
Loadless torque	0,65 Nm	0,45 Nm	0,35 Nm

Power curves

The magenta zone indicates a potential heating risk. Working cycles must be carefully analized.
VR = Worm rotational speed [rpm]
VL = Spindle translation speed [mm/min]
P = Requested input power [kW]







Motor Models

	IEC	Worm screw bore diameter	Centering diameter	Nominal power (4 poles motor)
	IEC 90 B5 / B14	24 mm	130 mm / 95 mm	1,9 kW
	IEC 100-112 B5 / B14	28 mm	180 mm / 110 mm	5 kW
	IEC 132 B5 / B14	38 mm	230 mm / 130 mm	9,2 kW

Construction Forms

Form B	Form D	Form S	Form MBD	Form MD	Form MS	Form MBS
Form B	Form D	Form S	Form MBD	Form MD	Form MS	Form MBS