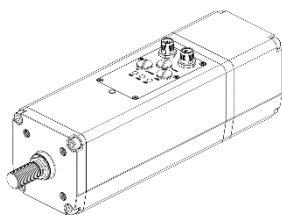




# Datasheet CTC-080



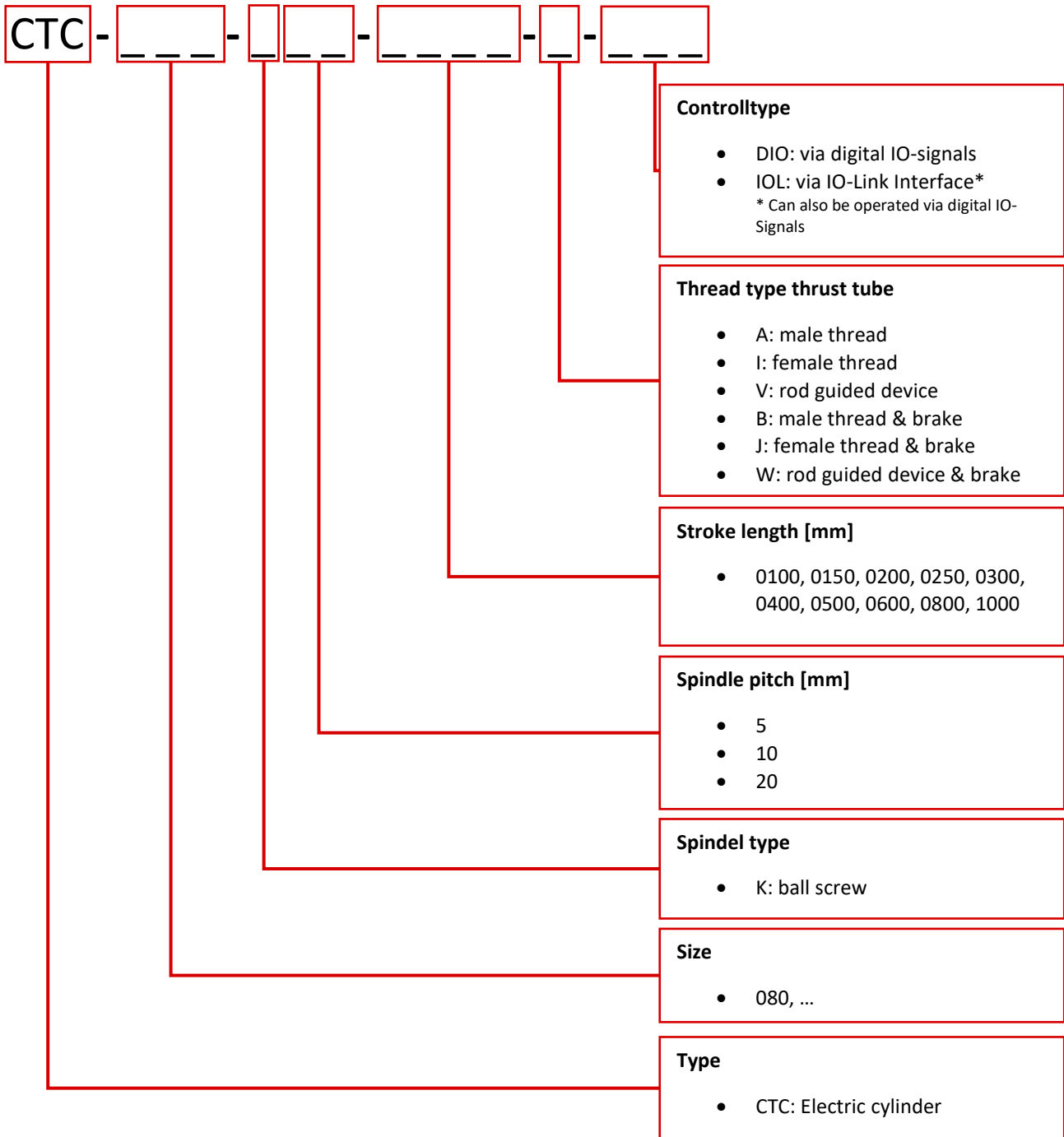
Size		CTC-080		
<b>Control / Parameterization</b>		 <b>IO-Link</b> Positioning movements adjustable in real time	digital I/O e.g. simple stroke movement	
<b>Setting force &amp; speed</b>		 <b>IO-Link</b> Read and write parameters and actual values in real time	control panel	
<b>Stroke</b>	[mm]	100, 150, 200, 250, 300, 400, 500, 600, 800, 1000		
<b>Spindle pitch</b>	[mm/rev]	5	10	20
<b>Max. Feed force (peak)</b>	[N]	1500	750	375
<b>Max. Feed force (continuous operation)</b>	[N]	1000	500	250
<b>Max. Speed</b>	[mm/s]			
In 24V operation		150	300	600
In 48V operation		300	600	1200
<b>Max. Acceleration</b>	[m/s <sup>2</sup> ]	10	20	20
<b>Positioning precision</b>	[mm]	+/- 0.1		
<b>Repeatable precision</b>	[mm]	+/- 0.02		
<b>Spindle type</b>		Ball screw		
<b>Mounting position</b>		any		
<b>Piston rod thread</b>		M16 x 1.5 male / M10 x 1.5 female / end plate		
<b>Ambient temperature</b>	[°C]	0...+40		
<b>Ambient temperature note</b>		At ambient temperatures above 25° C a reduction in performance must be expected.		
<b>Storage temperature</b>	[°C]	-20...+60		
<b>Protection class</b>		IP65 / IP67 according to EN 60529		
<b>Relative humidity</b>	[%]	0...90 (non-condensing)		
<b>Motor type</b>		Synchronous-Servomotor		
<b>Rotor position encoder</b>		Absolute, single turn, 12bit		
<b>Anti-torsion mechanism of the push rod</b>		Sliding guide (no external torque)		
<b>CE mark (see Declaration of Conformity)</b>		According to <b>EU-RoHS-RL</b>		
		According to <b>EU-EMC-Directive</b>		

Connectors, signals, control		
Status display		3x LED
Power interface, connection type		Plug 4-pole, M12x1, T-coded according to EN 61076-2-111
Rated voltage power circuit	[V DC]	24 - 48
Max. current consumption	[A]	7 (continuous load operation)
	[A]	12 (consumption peak load operation)
Signal interface, connection type		Plug 8-pole, M12x1, A-coded according to EN 61076-2-101
Operating range signal input	[V DC]	24
Permissible voltage variations	%	+/- 15
Max. current consumption logic	[mA]	50
Max. current digital signal outputs	[mA]	100 / output
Number of digital signal inputs	3	extend, retract, teach
Number of digital signal outputs	3	extended, retracted, ready
Features signal input		not galvanically isolated
Max. cable length	[m]	20, for inputs and outputs
Switching logic outputs		push-pull
Switching logic inputs		positive switching
Reference	extend	fixed stop intern / stop external
	running in	fixed stop intern / stop external

Weight (+/- 10%)		
For 100 mm stroke	[g]	2800
Per 10mm stroke additionally	[g]	74
moving mass / 10 mm stroke	[g]	5.85

Materials	
Housing, cover	Aluminium colorless anodized
Thrust tube	Aluminium, hard anodized
Seals	NBR / PUR / EPDM
Thread attachment	Stainless steel
Screws	Steel Galvanized
Spindle	heat-treated steel
Spindle nut	Roller bearing steel
Covers knobs	Stainless steel
Grease nipple	Steel Galvanized
Connector fittings	Zinc nickel plated
Material reference	RoHS compliant

## Configuration key



Example: CTC-080-K10-0100-A-IOL

## Dimensions

The basic dimensions are based on ISO 15552.

The connection and accessory dimensions comply with ISO 15552.

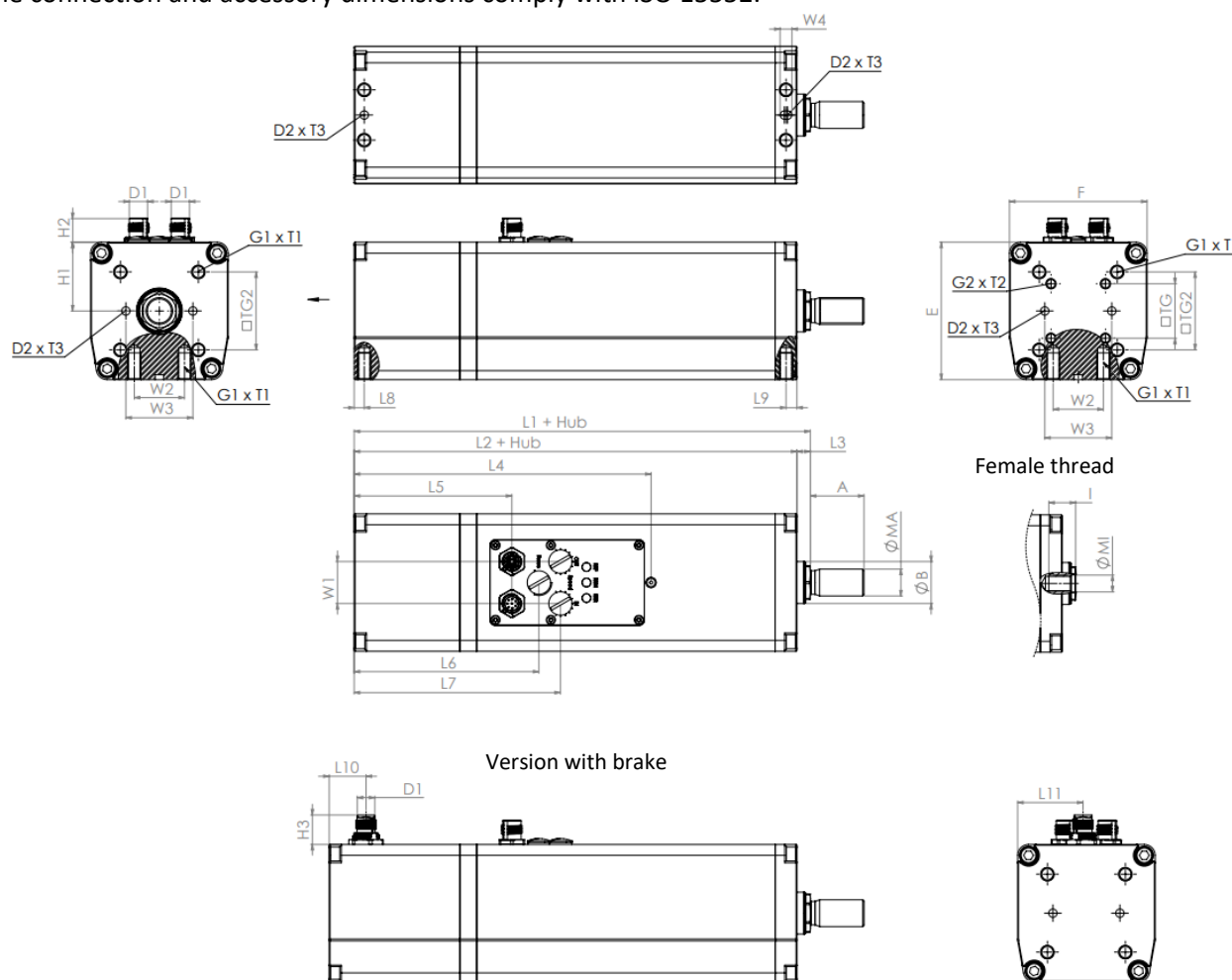


FIGURE 1: DIMENSIONS

CTC-080	L1*	L2*	L3	L4	L5	L6	L7	L8	L9	L10	L11	H1	H2	H3
Standard	172	164	8	177	94	110	123	6	6.5			41	14.3	
With brake	187	179	8	192	109	125	138	6	6.5	22	39	41	14.3	17.6

CTC-080	D1	D2	TG	TG2	G1	G2	T1	T2	T3	B	E	F
Standard	M12	5 E8	32.5	46.5	M8	M6	16	12	3	25	82	82
With brake	M12	5 E8		46.5	M8		16		3	25	82	82

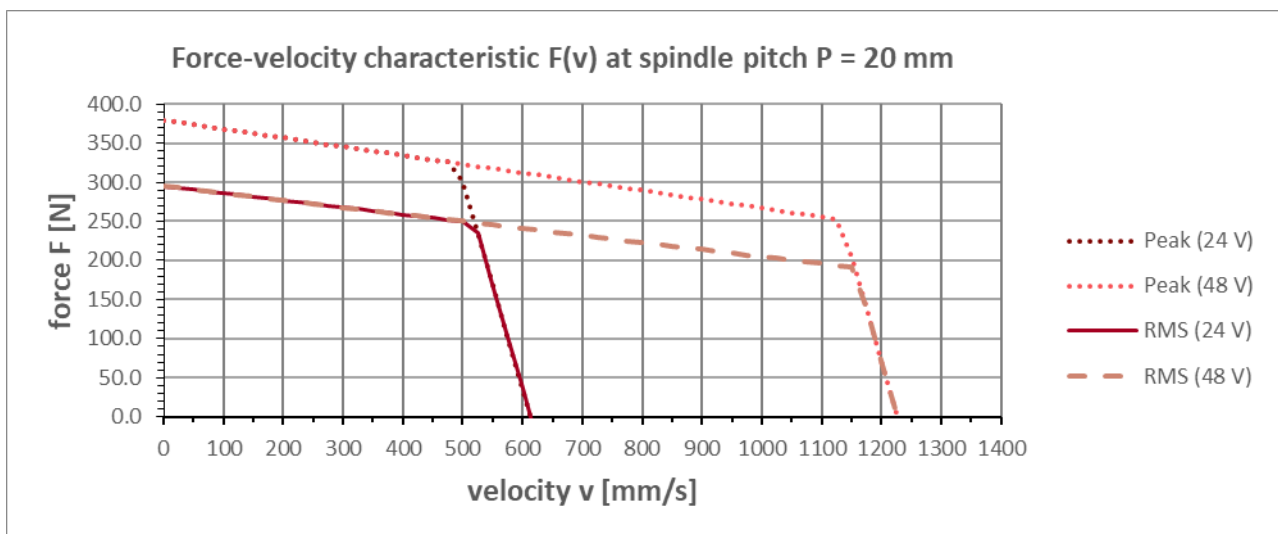
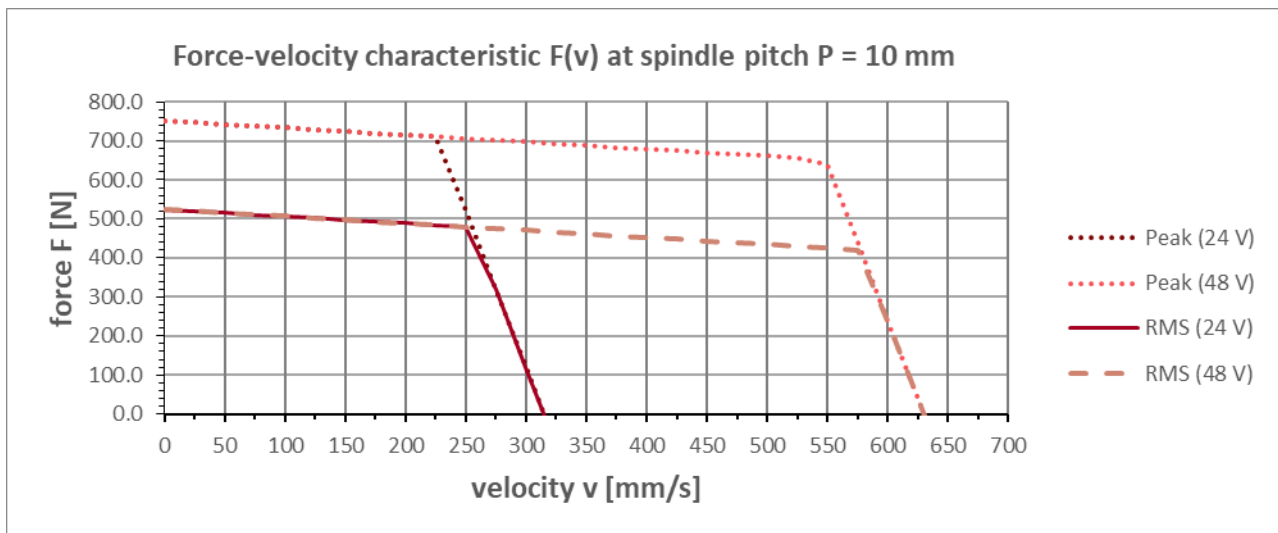
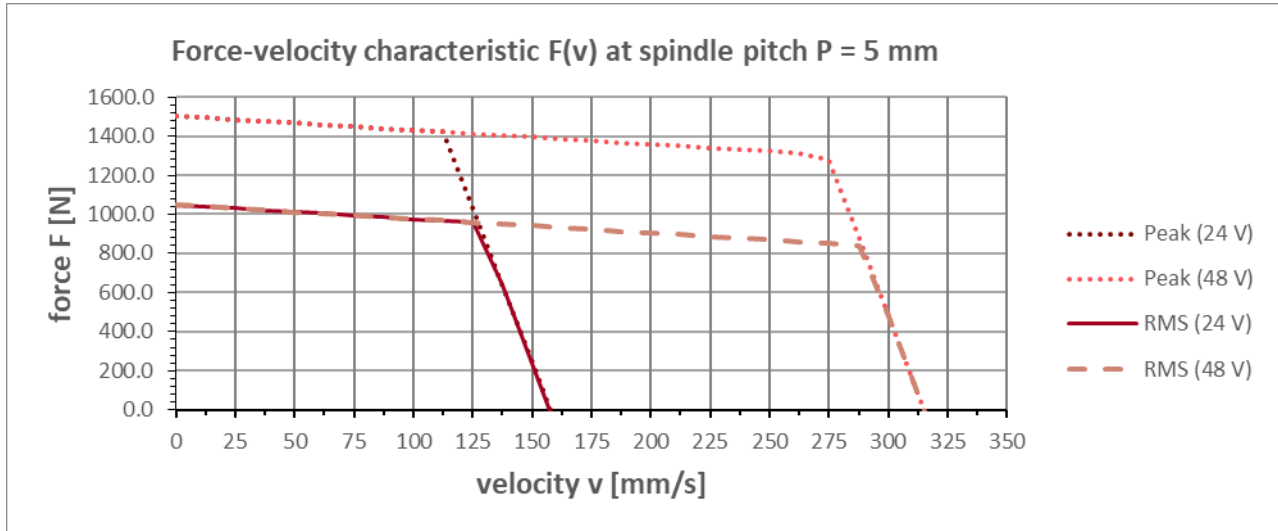
CTC-080	A	MA	I	MI	W1	W2	W3	W4
Standard	32	M16x1.5	16	M10	25	30	40 ±0.01	7
With brake	32	M16x1.5	16	M10	25	30	40 ±0.01	7

All dimensions in mm.

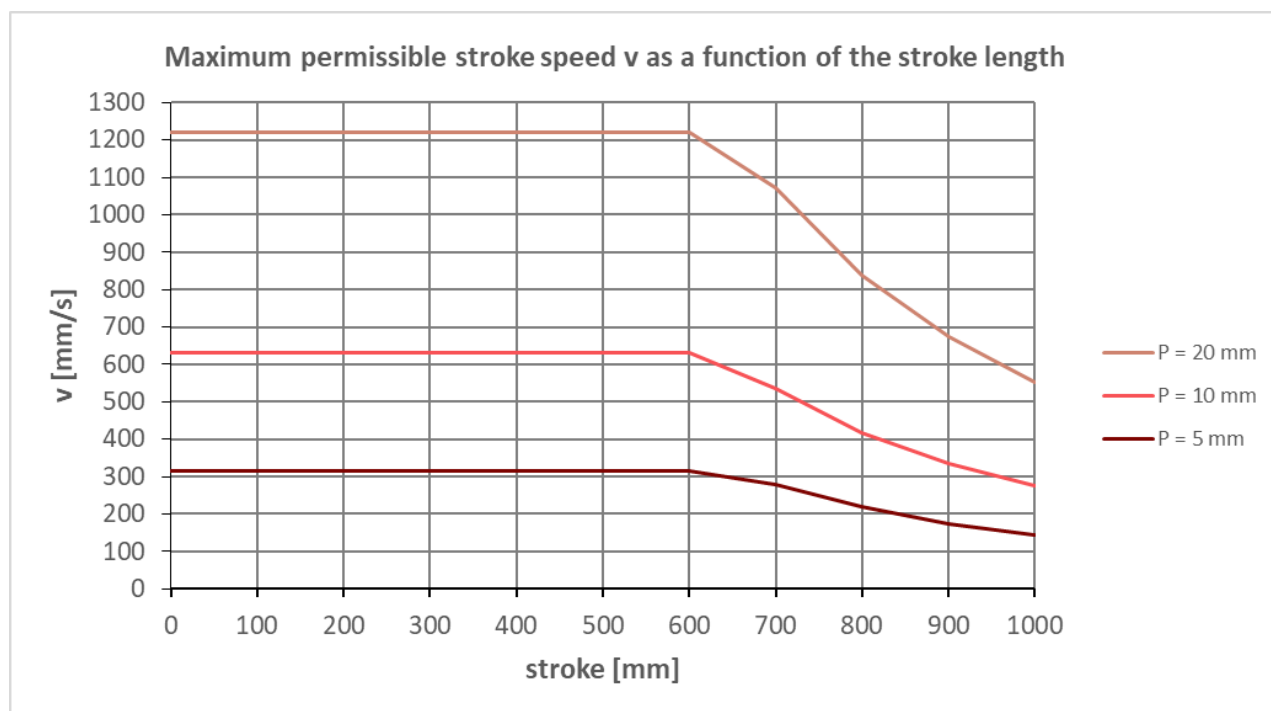
\* Stroke-dependent dimensions

# Characteristics

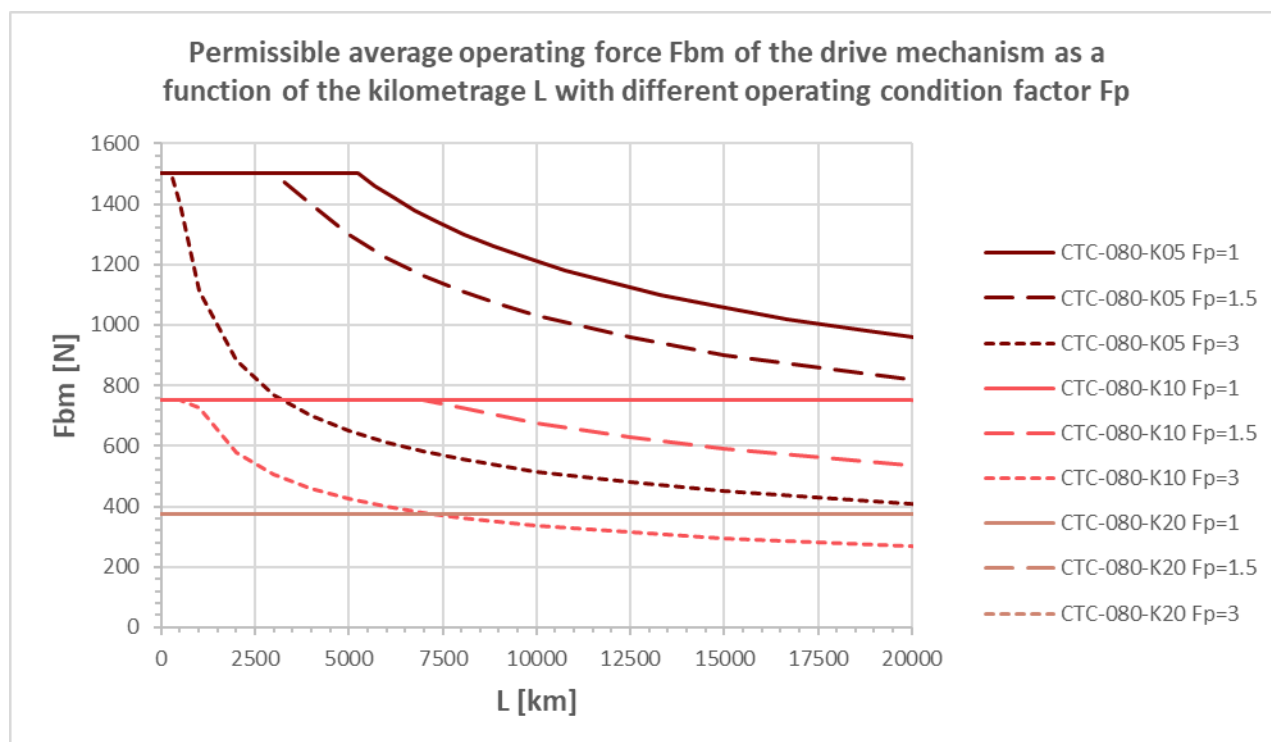
## Force-velocity characteristic



## Stroke speed



## Lifetime characteristic \* of the drive mechanism \*\*



Operating condition factor  $F_p$ :

$F_p = 1$       Operation under ideal conditions

$F_p = 1.5$       Operation under normal conditions

$F_p = 3$       Operation with high impact and vibration or short stroke application (stroke < 100 mm)

\* Failure probability 10%

\*\* Ball screw and its bearing

## Holding brake

Size		CTC-080		
Functionality of the holding brake		Spring-loaded, currentless braked		
Spindle pitch	[mm/rev]	5	10	20
Maximum holding force	[N]	1600	800	400
Nominal voltage	[V DC]	24 +/-10%		
Coil Power (@20 °C)	[W]	7.0 max.		
Release Voltage (@20 °C)	[V DC]	18 max.		
Voltage to maintain open brake (@20 °C)	[V DC]	10 max.		
Brake re-engage voltage (@20 °C)	[V DC]	6.5 max		
Brake release (current rise) time	[ms]	<30		
Brake engage (current decay) time	[ms]	<85		

## Relubrication interval

Cylinder type		Relubrication interval according to application				Lubricant quantity + number of repetitions				
	Stroke [mm]	Spindel pitch	Dauerbetrieb (> 3600 Hübe / h)	Medium mileage (10 - 3600 strokes / h)	Low Mileage (< 10 strokes / h)	Short stroke Applications (< 100 mm travel)	Lubrication quantity per lubrication operation [cm3]	Lubricating strokes after each lubrication operation	number of lubrication operations	
CTC-080	100 - 300	K05	250 km	3 Months	1 x / Year	Lubrication stroke after 1 million movement cycles (= 4x stroke over entire nominal stroke range required)	0.6	6	2	
		K10	500 km							
		K20	1000 km							
	400 - 600	K05	250 km	3 Months	1 x / Year		Relubrication interval: 2 months	1.2	6	2
		K10	500 km							
		600 - 800	K05							
K10	500 km									