

## **FourDynamic<sup>®</sup> Linear Motor Systems**



- linear direct drive system
- peak force up to 2.700 N
- ultra-dynamic linear drive
- max. speed 5 m/s
- max. acceleration up to 15 m/s<sup>2</sup>
- stroke up to 350 mm
- freely positionable along the entire stroke
- long operational life

**Linear motor technology for industrial applications!**

## **PackTube<sup>®</sup> Direct Drives**



**PackTube<sup>®</sup> tubular  
linear motors**

**PackTube<sup>®</sup>** linear motor systems are tubular electromagnetic direct drives. The linear motion is generated electromagnetically without use of gear boxes, spindles, tooth belts, racks or cam disks.

The motor consists of only two parts, the stator and the slider. The slider is a precise stainless steel tube with integrated neodymium magnets. The stator contains the motor windings, the plain bearings for central slider guidance, positioning sensors, temperature sensors, as well as a micro controller with integrated name plate. With 400 VAC technology, the winding is designed as a three-phase type. Thanks to the integrated positioning sensor, a robust, incremental measuring system is available.

<b>PackTube<sup>®</sup> motor data overview</b>	peak force depending on controller [N]	continuous force with nat. / forced cooling [N]	peak current / const. current with nat. / forced cooling [A <sub>rms</sub> ]	supply voltage [VAC]	stator Ø [mm]	stator length [mm]	max. stroke [mm]	IP protection class
<b>PT10-70 series</b>								
PT10-70x80U	557	65 / 99	7,8 / 0,9 / 1,4	340 - 480	70	180	1.770	IP67
PT10-70x160U	1.104	126 / 191	14,1 / 1,7 / 2,5	340 - 480	70	260	1.690	IP67
PT10-70x240U	1.617	183 / 279	19,8 / 2,3 / 3,5	340 - 480	70	340	1.610	IP67
PT10-70x320U	2.162	250 / 381	24,0 / 2,9 / 4,4	340 - 480	70	420	1.530	IP67
PT10-70x400U	2.703	312 / 479	24,0 / 2,9 / 4,4	340 - 480	70	500	1.450	IP67

Available stroke lengths are disclosed in the data sheet.  
Technical changes reserved!

## **FourDynamic<sup>®</sup> Linear Motor Modules**

**FourDynamic<sup>®</sup>** linear motor modules are mechatronic systems with integrated **PackTube<sup>®</sup>** servo drives. With their low moving masses, high torsional stiffness, high load ratings and high momentum loads, they easily allow the mechanical integration of linear drives systems into mechanical machine concepts.

**FourDynamic<sup>®</sup>  
linear motor  
module**



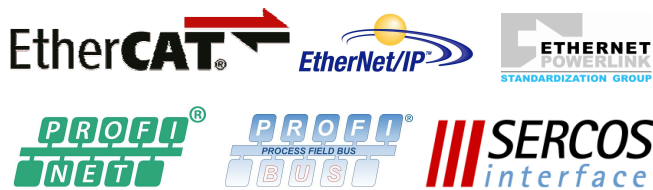
<b>FourDynamic<sup>®</sup> linear modules overview</b>	built in <b>PackTube<sup>®</sup></b> direct drive	peak force [N]	continuous force with nat. / forced cooling [N]	max. stroke [mm]	max. speed [m/s]	max. acceleration [m/s <sup>2</sup> ]
FM10-70x80	PT10-70x80U	557	65 / 99	270	5,0	150
FM10-70x160	PT10-70x160U	1.104	126 / 191	290	5,0	150
FM10-70x240	PT10-70x240U	1.617	183 / 279	310	5,0	150
FM10-70x320	PT10-70x320U	2.162	250 / 381	330	5,0	150
FM10-70x400	PT10-70x400U	2.703	312 / 479	350	5,0	150

Technical changes reserved!

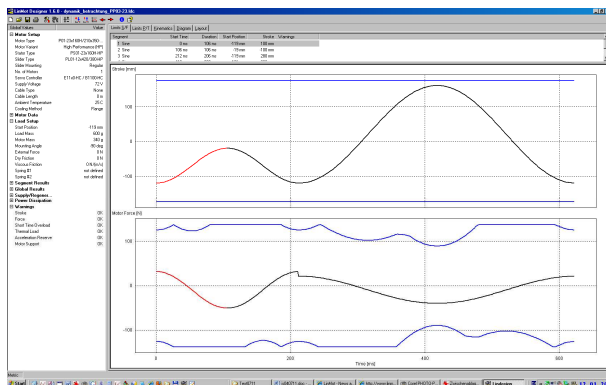
# PackTube<sup>®</sup> Controller & Software

The PackTube<sup>®</sup> positioning controllers include an inverter, positioning control and the interface to machine controls. It enables simple point to point motions for handling applications, as well as complex motion trajectories.

Current fieldbus interfaces and parallel I/O's enable easy integration into machine controls.



FourDynamic<sup>®</sup> system with PackTube<sup>®</sup> E1400 positioning controller



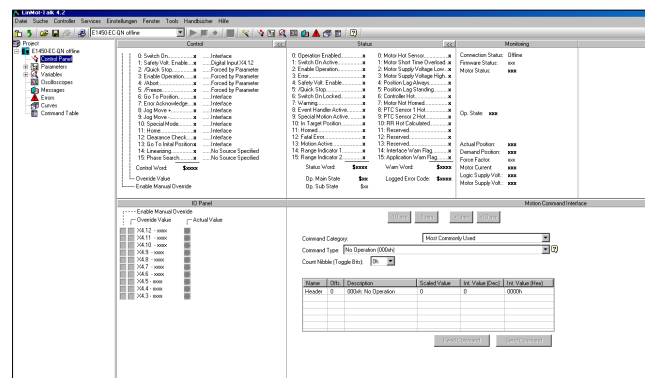
PackTube<sup>®</sup> designer

The PackTube<sup>®</sup> designer is a configuration tool for linear motions, which can simulate various motions and motion curves.

The suitable PackTube<sup>®</sup> components are chosen from the integrated product data base. Applications can be analyzed and optimized by various criteria in seconds, without needing to perform complex calculations manually.

Coordinating with PackTube<sup>®</sup> linear drives and FourDynamic<sup>®</sup> linear motor modules, suitable operating and parameterizing software is available.

The positioning controller can be parameterized by the license-free software tool. Simple point to point positioning tasks, as well as complex sequence programs can be realized.



PackTube<sup>®</sup> talk

**We are one of  
Germany's leading  
suppliers of linear  
direct drive  
technologies!**

**Linear motors and  
mechatronic  
systems from  
a single source!**



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Revision: 28.10.2017 / js110912

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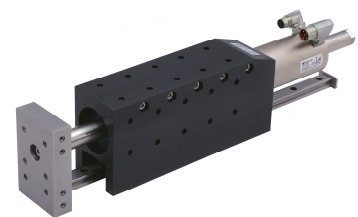
**Linear Motors**



**Motor Cables**



**Positioning Controllers**



**Linear Motor Modules**

**Linear motor systems from a single source!**