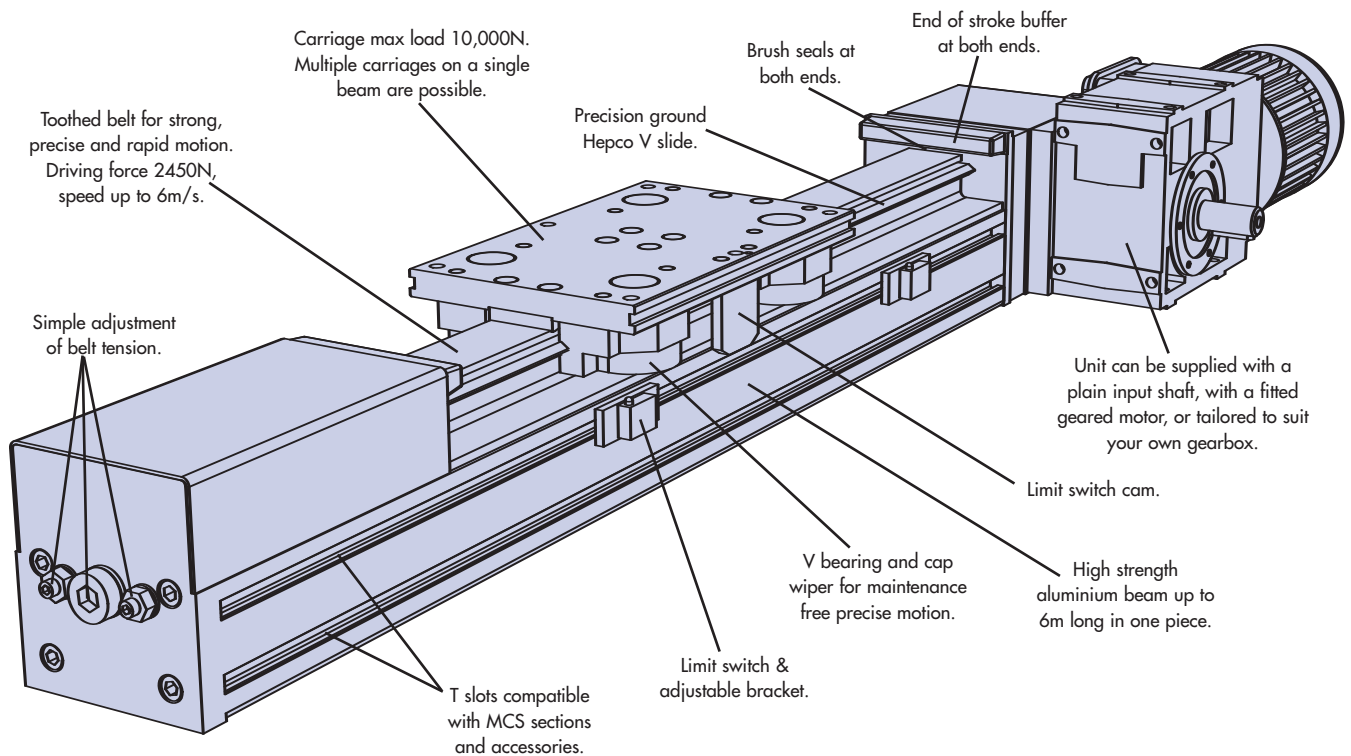


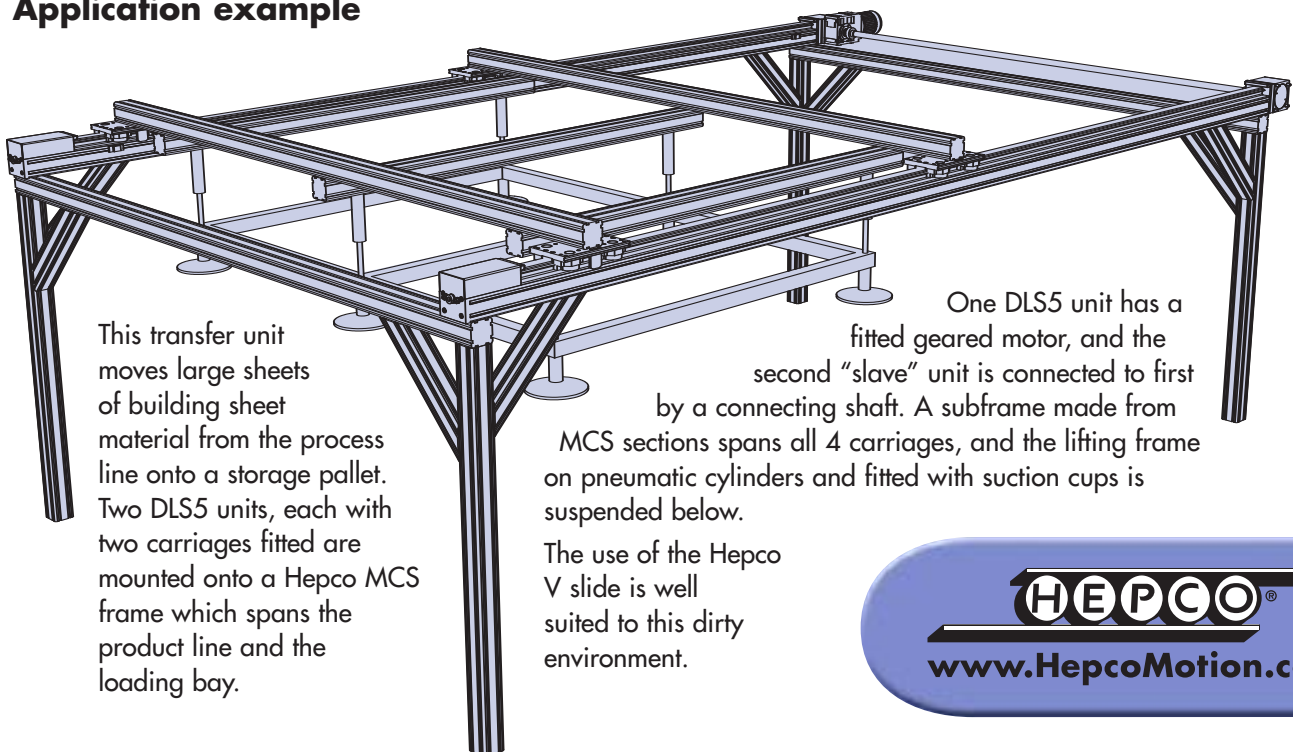
DLS5 belt driven linear transmission

The HepcoMotion DLS5 unit is robustly built on a strong, compact aluminium beam fitted with one of Hepco's popular GV3 slides. The drive is provided by a 50AT10 timing belt and pulley to give an excellent combination of strength, speed and accuracy. Units are compatible with Hepco's MCS framework system and other driven products, including HDLS and DLS.

This data sheet gives a brief overview of the product. Other useful information on applications, calculations, etc. is included in the Hepco DLS catalogue which covers similar, smaller units. Further details may be obtained from Hepco's Technical Sales Department. 3D CAD models are available at www.HepcoMotion.com or on our CAD CD.



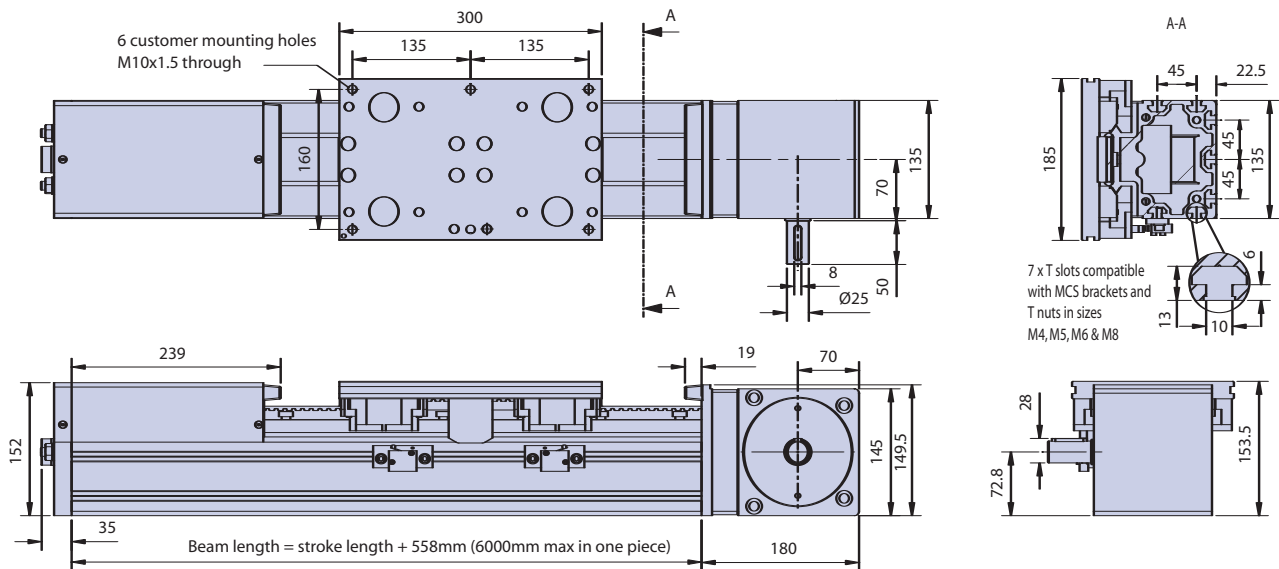
Application example



This transfer unit moves large sheets of building sheet material from the process line onto a storage pallet. Two DLS5 units, each with two carriages fitted are mounted onto a Hepco MCS frame which spans the product line and the loading bay.

One DLS5 unit has a fitted geared motor, and the second "slave" unit is connected to first by a connecting shaft. A subframe made from MCS sections spans all 4 carriages, and the lifting frame on pneumatic cylinders and fitted with suction cups is suspended below. The use of the Hepco V slide is well suited to this dirty environment.

Data and Dimensions



Load Capacities

The table below shows the maximum loading for the carriage in each possible loading mode. It also includes loads for 10,000km travel. This table is intended as a guide for initial selection only. Please send your application details to Hepco and we will calculate the system Load/Life for you.

max 10,000N @500km 3,600N @ 10,000km	max 10,000N @500km 3600N @10,000km	max 360Nm @ 500km 130Nm @ 10,000km	max 990Nm @500km 360Nm @10,000km	max 990Nm @ 500km 360Nm @ 10,000km

Data Required for Calculations

Data for DLS5 is included in the table below. Please see Hepco DLS catalogue for formulae and sample calculations.

mass of carriage	M_c	5.2 kg	max linear force	F_{max}	2450 N
mass of belt per m	M_b	0.32 kg	mass of unit with 1000mm beam*		34 kg
pulley radius	r	5.1cm	extra mass per 1000mm beam		17.5 kg
drive efficiency	η_d	0.9	linear move per shaft rev		0.32 m
break away friction	F_{ba}	40 N	beam I_{x-x}		6,100,000 mm ⁴
coefficient of friction	μ	0.03	beam I_{y-y}		8,100,000 mm ⁴
pulley moment of inertia (M.O.I.)	I_p	30 kgcm ²			

* assumes one shaft, no gearbox.

Ordering Details

Product range	DLS5
Beam length in mm - 6000 max in one piece	3018
Drive input type - K indicates a keyed input shaft W indicates a fitted geared motor or gearbox	K
Drive output type - K indicates a keyed output shaft O indicates no shaft	O
Input handing - R or L indicates drive input on the Right or Left hand side as viewed from the drive end	L

Note: Customers requiring further details of optional geared motors or gearbox fitting kits should contact Hepco.

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