

# WH120

## Belt Drive, Wheel Guide

» Ordering key - see page 207  
» Accessories - see page 131  
» Additional data - see page 180

### General Specifications

Parameter	WH120
Profile size (w × h) [mm]	120 × 110
Type of belt	50ATL10
Carriage sealing system	none
Adjustable belt tensioning	the belt can be retensioned by the customer if necessary
Lubrication	lubrication og guiding surfaces
Included accessories	4 × mounting clamps

### Performance Specifications

for Units with Single Standard Carriage (N)<sup>1</sup>

Parameter		WH120
Stroke length (S <sub>max</sub> ), maximum	[mm]	11000
Total length (L <sub>tot</sub> ), maximum	[mm]	11605
Linear speed, maximum	[m/s]	10,0
Acceleration, maximum	[m/s <sup>2</sup> ]	40
Repeatability	[± mm]	0,05
Input speed, maximum	[rpm]	2308
Operation temperature limits	[°C]	0 – 80
Dynamic load (F <sub>x</sub> ), maximum	[N]	5000 <sup>2</sup>
Dynamic load (F <sub>y</sub> ), maximum	[N]	4980
Dynamic load (F <sub>z</sub> ), maximum	[N]	9300
Dynamic load torque (M <sub>x</sub> ), maximum	[Nm]	500
Dynamic load torque (M <sub>y</sub> ), maximum	[Nm]	930
Dynamic load torque (M <sub>z</sub> ), maximum	[Nm]	500
Drive shaft force (F <sub>rd</sub> ), maximum <sup>3</sup>	[N]	700
Input/drive shaft torque (M <sub>ta</sub> ), maximum	[Nm]	200
Pulley diameter	[mm]	82,76
Stroke per shaft revolution	[mm]	260
Weight	[kg]	
of unit with zero stroke		17,00
of every 100 mm of stroke		1,64
of each carriage		5,50

<sup>1</sup> See next page for deviating values of units with other carriage types.

<sup>2</sup> See diagram Force F<sub>x</sub>.

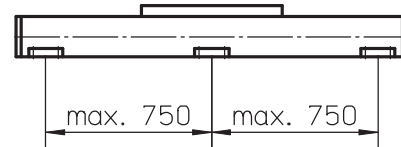
<sup>3</sup> Only relevant for units without RediMount flange.

### Carriage Idle Torque, (M<sub>idle</sub>) [Nm]

Input speed [rpm]	Idle torque [Nm]
150	4,8
1500	7,0
2308	10,0

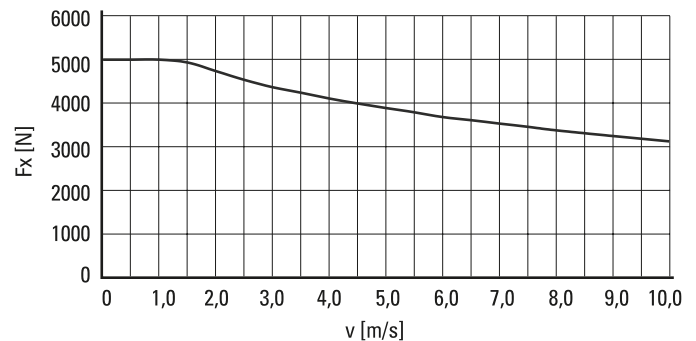
M<sub>idle</sub> = the input torque needed to move the carriage with no load on it.

### Deflection of the Profile

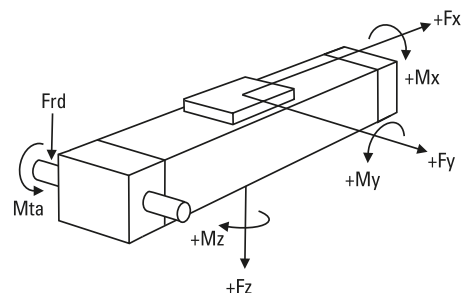


A mounting clamp must be installed at least every 750 mm to be able to operate at maximum load. Less clamps may be required if less load is being operated, see the additional technical data for more information. Units with a profile length over 4900 mm consist of two profiles where the joint between the two profiles must be adequately supported on both sides.

### Force F<sub>x</sub> as a Function of the Speed



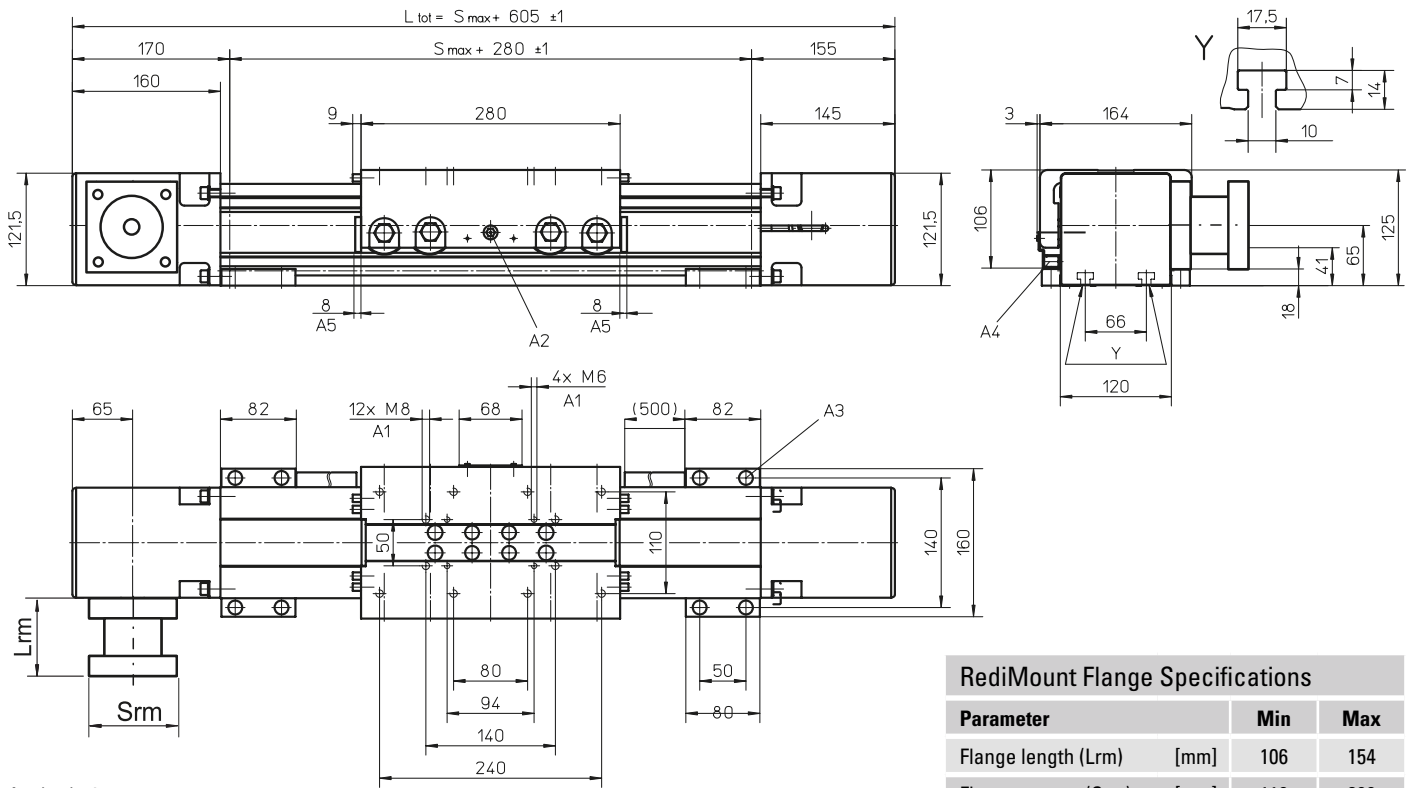
### Definition of Forces



# WH120

## Belt Drive, Wheel Guide

<b>Dimensions</b>	<b>Projection</b>	<b>Online Sizing &amp; Selection!</b>
METRIC		<a href="http://www.LinearMotioneering.com">www.LinearMotioneering.com</a>



- A1: depth 12
- A2: funnel type lubricating nipple DIN3405-M6x1-D1
- A3: socket cap screw ISO4762-M8x20 8.8
- A4: ENF inductive sensor rail kit (optional - see page 166)
- A5: felt pad wipers on both sides of the carriage

Parameter	Min	Max
Flange length (Lrm)	106	154
Flange square (Srm)	110	200
Flange weight *	5,97	

\* Max. weight including coupling and fastening screws

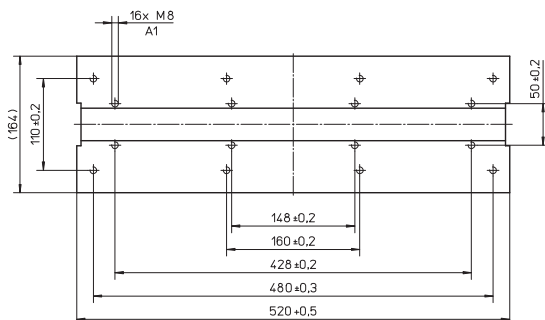
### Performance Specifications for Units with Single Long Carriage (L)

Parameter	WH120
Stroke length (Smax), maximum [mm]	11000
Total length (L tot), maximum [mm]	11845
Carriage length [mm]	520
Dynamic load torque (My), maximum [Nm]	1395
Dynamic load torque (Mz), maximum [Nm]	750
Weight [kg]	8,67

### Performance Specifications for Units with Double Standard Carriage (Z)

Parameter	WH120
Stroke length (Smax), maximum [mm]	10940
Total length (L tot), maximum [mm]	11845
Minimum distance between carriages (Lc) [mm]	300
Dynamic load (Fy), maximum [N]	9960
Dynamic load (Fz), maximum [N]	18600
Dynamic load torque (My), maximum [Nm]	LC <sup>1</sup> × 4,98
Dynamic load torque (Mz), maximum [Nm]	LC <sup>1</sup> × 9,3
Force required to move second carriage [N]	30
Total length (L tot) [mm]	Smax + 605 + Lc

<sup>1</sup> Value in mm



A1: depth 12

