



WH40

Belt Drive, Ball Guide

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- » Accessories - see page 117
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General Specifications

Parameter	WH40
Profile size (w × h) [mm]	40 × 40
Type of belt	10 AT 5
Carriage sealing system	none
Adjustable belt tensioning	the belt can be retensioned by the customer if necessary
Lubrication	central lubrication of all parts that require lubrication
Included accessories	4 × mounting clamps

Performance Specifications

for Units with Single Standard Carriage (N)¹

Parameter		WH40
Stroke length (S _{max}), maximum	[mm]	2000
Total length (L _{tot}), maximum	[mm]	2265
Linear speed, maximum	[m/s]	3,0
Acceleration, maximum	[m/s ²]	40
Repeatability	[± mm]	0,05
Input speed, maximum	[rpm]	1800
Operation temperature limits	[°C]	0 – 80
Dynamic load (F _x), maximum	[N]	315 ²
Dynamic load (F _y), maximum	[N]	450
Dynamic load (F _z), maximum	[N]	600
Dynamic load torque (M _x), maximum	[Nm]	10
Dynamic load torque (M _y), maximum	[Nm]	30
Dynamic load torque (M _z), maximum	[Nm]	30
Drive shaft force (F _{rd}), maximum ³	[N]	100
Input/drive shaft torque (M _{ta}), maximum	[Nm]	6
Pulley diameter	[mm]	31,83
Stroke per shaft revolution	[mm]	100
Weight	[kg]	
of unit with zero stroke		1,19
of every 100 mm of stroke		0,15
of each carriage		0,28

¹ See next page for deviating values of units with other carriage types.

² See diagram Force F_x.

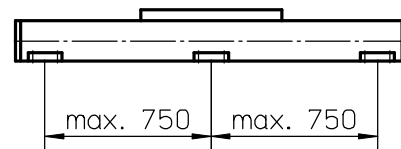
³ Only relevant for units without RediMount flange.

Carriage Idle Torque, (M_{idle}) [Nm]

Input speed [rpm]	Idle torque [Nm]
150	0,1
900	0,3
1800	0,6

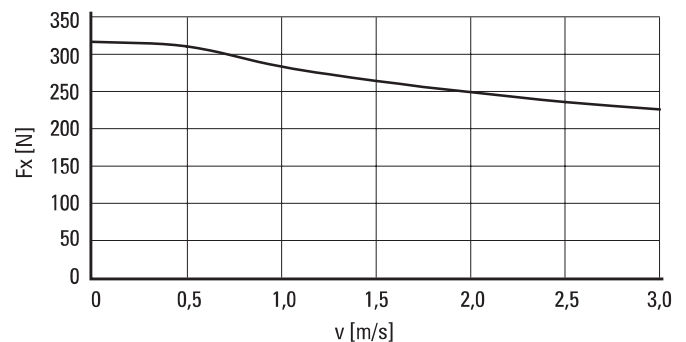
M_{idle} = the input torque needed to move the carriage with no load on it.

Deflection of the Profile

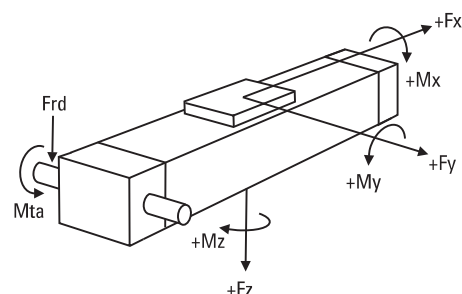


A mounting clamp must be installed at least every 750 mm to be able to operate at maximum load. Less clamps may be required if less load is being operated, see the additional technical data for more information.

Force F_x as a Function of the Speed



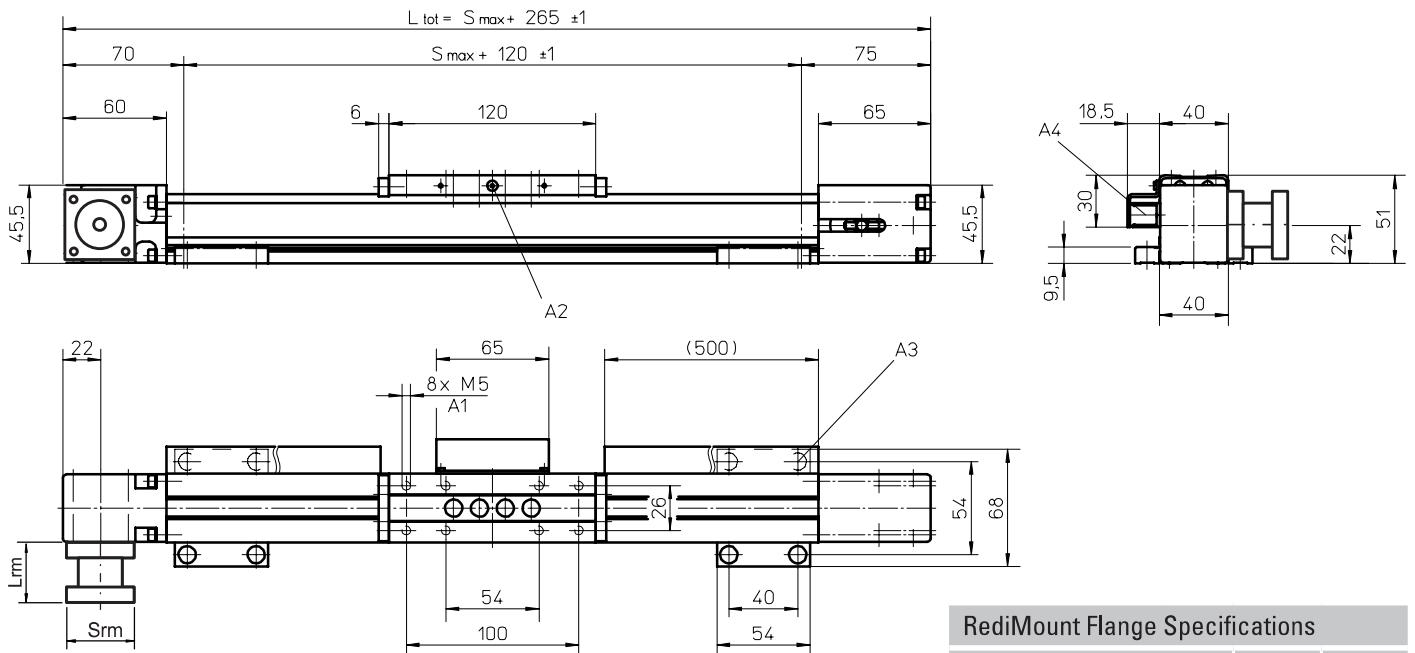
Definition of Forces



WH40

Belt Drive, Ball Guide

Dimensions	Projection	Online Sizing & Selection!
METRIC		www.LinearMotioneering.com



- A1: depth 10
- A2: lubricating nipple on both sides
- A3: socket cap screw ISO4762-M5×12.8.8
- A4: ENF inductive sensor rail kit (optional - see page 150)

Parameter	Min	Max
Flange length (Lrm) [mm]	56	91
Flange square (Srm) [mm]	60	139
Flange weight * [kg]	1,81	

* Max. weight including coupling and fastening screws

Performance Specifications

for Units with Single Long Carriage (L)

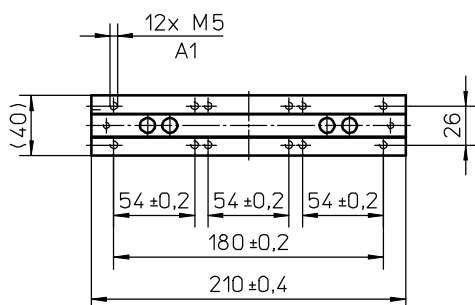
Parameter	WH40
Stroke length (Smax), maximum [mm]	2000
Total length (L tot), maximum [mm]	2355
Carriage length [mm]	210
Dynamic load torque (My), maximum [Nm]	50
Dynamic load torque (Mz), maximum [Nm]	50
Weight [kg]	0,43

Performance Specifications

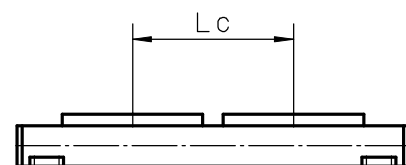
for Units with Double Standard Carriage (Z)

Parameter	WH40
Stroke length (Smax), maximum [mm]	1955
Total length (L tot), maximum [mm]	2355
Minimum distance between carriages (Lc) [mm]	135
Dynamic load (Fy), maximum [N]	900
Dynamic load (Fz), maximum [N]	1200
Dynamic load torque (My), maximum [Nm]	Lc ¹ × 0,45
Dynamic load torque (Mz), maximum [Nm]	Lc ¹ × 0,60
Force required to move second carriage [N]	2
Total length (L tot) [mm]	Smax + 265 + Lc

¹ Value in mm



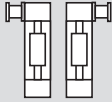
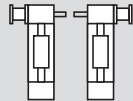
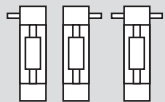
A1: depth 10





Ordering Keys

Linear Motion Systems with Belt Drive and Ball Guides

WH40							
1	2	3	4	5	6	7	8
WH04Z	LX	FB7	-01400	-01755	H	L	0400
<p>1. Type of unit WH04Z = WH40 unit</p> <p>2. Transmission type LX = inline style, directly coupled, RediMount flange SX = inline style, directly coupled, no RediMount flange</p> <p>3. RediMount motor ID code vvw = alphanumeric motor code for suitable RediMount flange when motor is known 999 = RediMount code used when motor is unknown XXX = for units without RediMount flange</p> <p>4. Maximum stroke (Smax) - xxxxx = distance in mm</p> <p>5. Total length of unit (L tot) - yyyyy = distance in mm</p> <p>6. Drive shaft / RediMount flange configuration¹ A = shaft on left side without key way B = shaft on right side without key way C = shaft on left side with key way or RediMount D = shaft on right side with key way or RediMount E = shaft on left side without key way, shaft on right side with key way or RediMount F = shaft on left side with key way or RediMount, shaft on right side without key way G = shaft on left side without key way, shaft on right side for encoder H = shaft on left side for encoder, shaft on right side without key way I = shaft on left side with key way or RediMount, shaft on right side for encoder J = shaft on left side for encoder, shaft on right side with key way or RediMount L = shaft on left and right side without key way M = shaft on left side with key way or RediMount, shaft on right side with key way N = shaft on left side with key way, shaft on right side with key way or RediMount W = hollow shaft on both sides with clamping unit</p>				<p>7. Carriage configuration N = single standard carriage L = single long carriage Z = double standard carriages</p> <p>8. Distance between double carriages (Lc) 0000 = always for single carriages zzzz = distance in mm</p> <p>¹ See below for the definition of shafts. Left, right or both sides with shafts with RediMount</p>  <p>Left or right with RediMount and other side a shaft without RediMount</p>  <p>Left or right without RediMount</p> 			

Notes for ordering of options type EN, ES, KR8, RT, ADG and MGK, see accessory index on page 131.