WHZ80

Belt Drive, Wheel Guide

» Ordering key - see page 209
» Accessories - see page 131
» Additional data - see page 181

General Specifications

Parameter	WHZ80
Profile size (w × h) [mm]	80 × 80
Type of belt	32 ATL 5
Carriage sealing system	none
Adjustable belt tensioning	the belt can be retensioned by the customer if necessary
Lubrication	lubrication of carriage and guide surfaces
Included accessories	-

Performance Specifications

for Units with Single Standard Carriage (N)[1]

Parameter		WHZ80
Stroke length (Smax), maximum	[mm]	3000
Total length (L tot), maximum	[mm]	3410
Linear speed, maximum	[m/s]	10,0
Acceleration, maximum	[m/s²]	40
Repeatability	[± mm]	0,05
Input speed, maximum	[rpm]	3000
Operation temperature limits	[°C]	0 – 80
Dynamic load (Fx), maximum	[N]	1480 [2]
Dynamic load (Fy), maximum	[N]	882
Dynamic load (Fz), maximum	[N]	2100
Dynamic load torque (Mx), maximum	[Nm]	75
Dynamic load torque (My), maximum	[Nm]	230
Dynamic load torque (Mz), maximum	[Nm]	100
Drive shaft force (Frd), maximum [3]	[N]	500
Input/drive shaft torque (Mta), maximum	[Nm]	50
Pulley diameter	[mm]	63,66
Stroke per shaft revolution	[mm]	200
Weight	[kg]	
of unit with zero stroke		11,20
of every 100 mm of stroke		0,91
of each drive station box		6,65

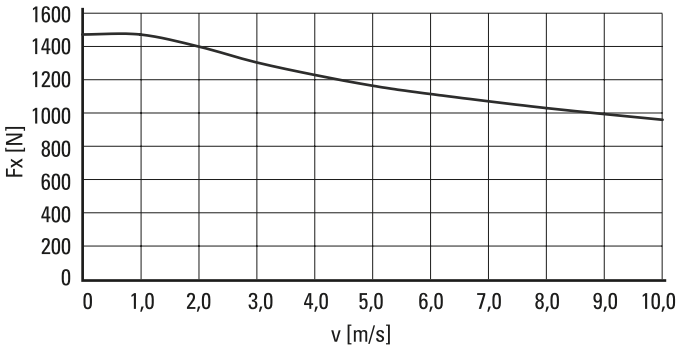
[1] See next page for deviating values of units with other carriage types.
[2] See diagram Force Fx.
[3] Only relevant for units without RediMount flange.

Carriage Idle Torque, (M idle) [Nm]

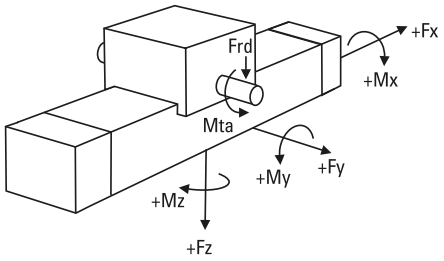
Input speed [rpm]	Idle torque [Nm]
150	2,4
1500	3,5
3000	5,0

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

Force Fx as a Function of the Speed



Definition of Forces



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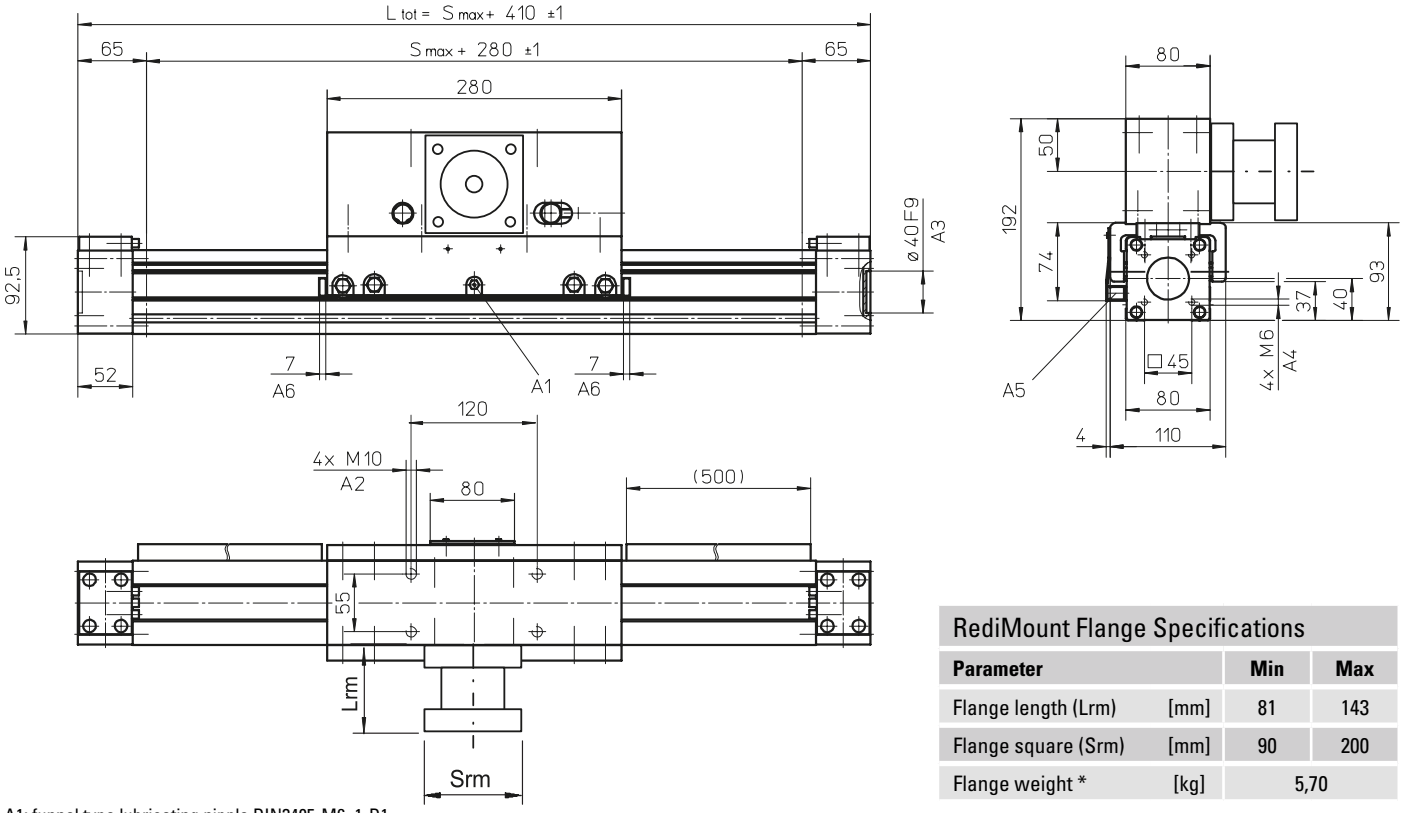
Dimensions	Projection	Online Sizing & Selection!
METRIC		www.LinearMotioneering.com



A1: funnel type lubricating nipple DIN3405-M6×1-D1
A2: depth 4
A3: depth 15
A4: ENF inductive sensor rail kit (optional - see page 166)
A5: felt pad wipers on both sides of the carriage

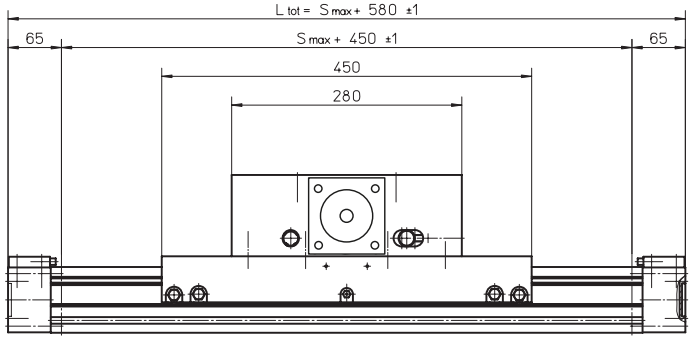
RediMount Flange Specifications

Parameter		Min	Max
Flange length (Lrm)	[mm]	81	143
Flange square (Srm)	[mm]	90	200
Flange weight *	[kg]	5,70	

* Max. weight including coupling and fastening screws

Performance Specifications
for Units with Single Long Carriage (L)

Parameter		WHZ80
Stroke length (Smax), maximum	[mm]	3000
Total length (L tot), maximum	[mm]	3580
Carriage length	[mm]	450
Dynamic load torque (My), maximum	[Nm]	345
Dynamic load torque (Mz), maximum	[Nm]	150
Weight	[kg]	7,4



Performance Specifications
for Units with Double Standard Carriage (Z)

Parameter		WHZ80
Stroke length (Smax), maximum	[mm]	2870
Total length (L tot), maximum	[mm]	3580
Minimum distance between carriages (Lc)	[mm]	300
Dynamic load (Fy), maximum	[N]	1764
Dynamic load (Fz), maximum	[N]	4200
Dynamic load torque (My), maximum	[Nm]	Lc[1] × 0,882
Dynamic load torque (Mz), maximum	[Nm]	Lc[1] × 2,1
Force required to move second carriage	[N]	20
Total length (L tot)	[mm]	Smax + 410 + Lc

[1] Value in mm
[2] Second carriage is always a long carriage