

Winman WRLK Yataklamalı Milsiz Pnömatik Silindirler / WRLK Rodless Cylinders With Guide



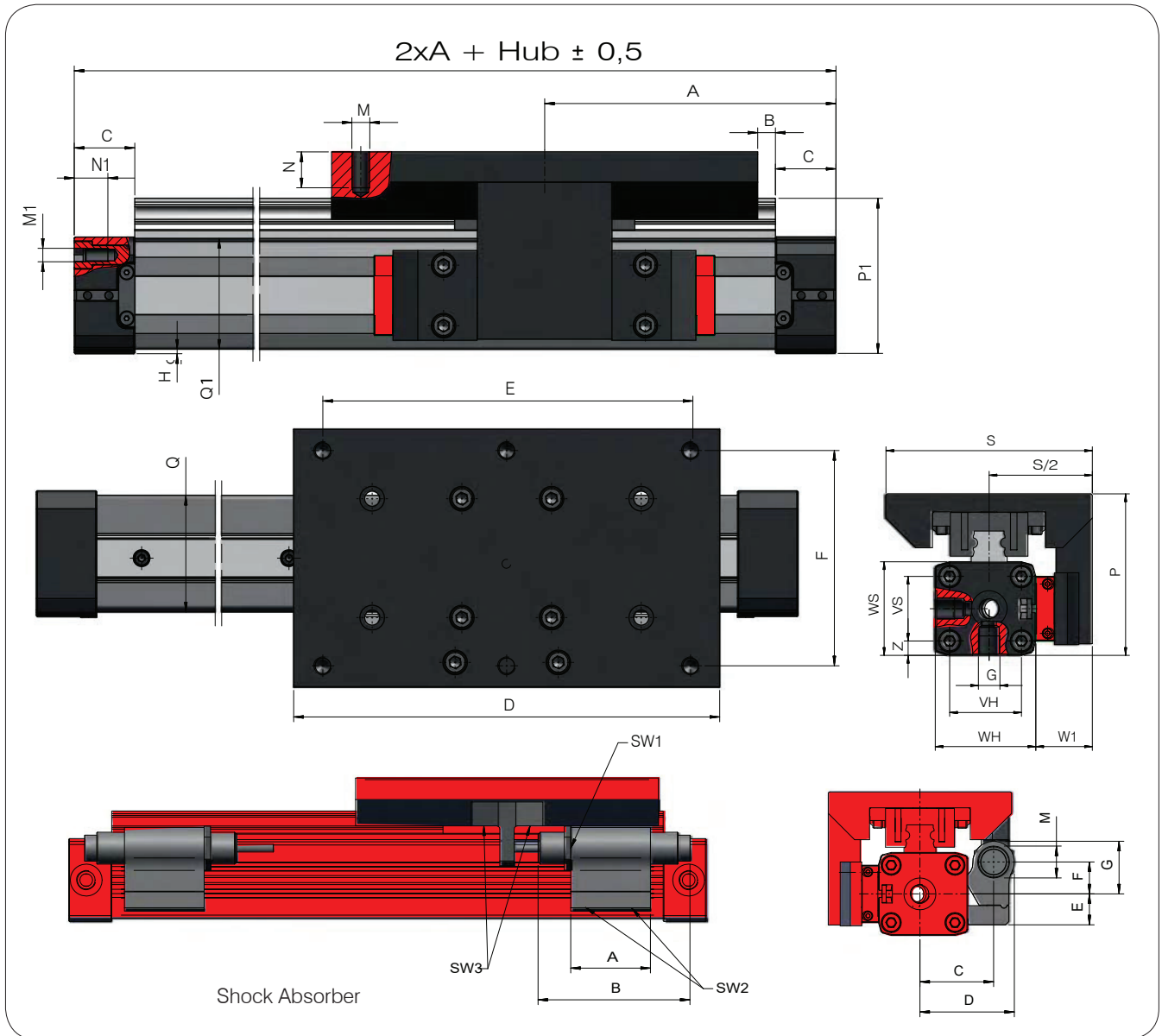
This extremely robust linearsystem from the series WRLK 16 – 63 has been especially developed for use in the machine tool and robotics industries. The move force for this guide is our proven rodless cylinder Ø 16 – 63 mm.

Faydaları / Benefits

- High loading characteristics
- High static loading in all directions
- Quiet and smooth running
- Robust bearing housing
- Easy access to grease nipple
- Hardened and grinded guiderail
- Low friction bearing
- Easy interchangeability

Design	Rodless cylinder, double acting, direct force transmission
Strokes	
ø 25-63 mm	100-5700mm, in increments of 1 mm (longer strokes on request)
ø 16 mm	100-3300mm, in increments of 1 mm
Air connection	(M5, G 1/8", G 1/4", g3/8")
Mounting	free
Forces + moments	see Forces and moments
Support Forces	see Deflection Diagram
Temperatures	(-10°C bis +80°C) other temperatures on request
Materials	
Barrel	High-strength anodized aluminum
End caps	High-strength anodized aluminum
Guide	Steel / Stainless steel
Seals	Oilproof synthetic material (V < 1m/s (NBR)(V > 1m/s (VITON)
Sealing bands	Stainless steel
Piston caps	Wear proof synthetic material
Sliding parts	Wear proof synthetic material
Pressure range	0,5–8,0 bar
Medium	compressed air, fi ltered max. 50µm

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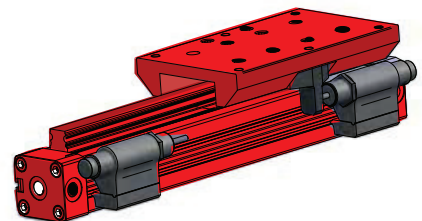

Boyutlar / Dimensions

Uno + Tandem Carriage System

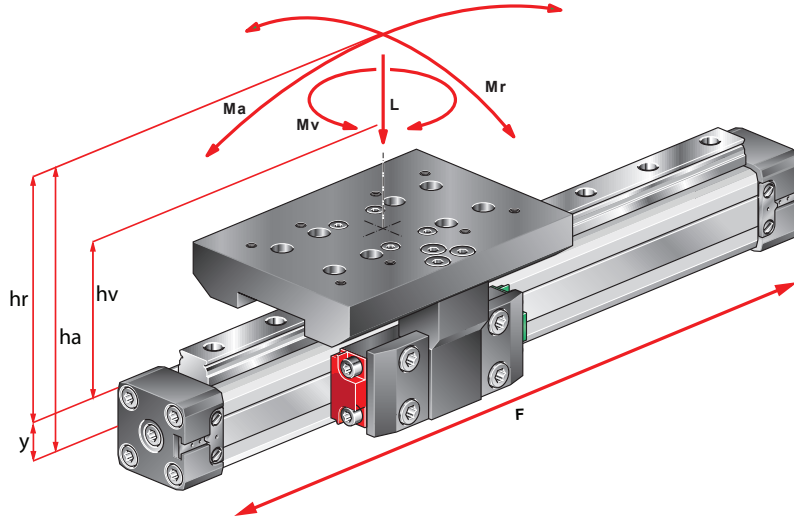
ø	A	B	C	D	E	F	G	H	M	N	M1	N1	P	P1	Q x Q1	S	S2	VH	VS	WH	WS	W1	Z
16	65	5	15	90	70	36	M5	1,0	M4	7	M3	7	48,9	34	24,5 x 25	63	31,5	18	18	27	27	18	4,5
25	100	4,5	23	145	125	64	1/8	2,0	M6	10	M5	10	73	52,3	36 x 36	80	40	27	27	40	40	20	6,5
32	125	3	27	190	164	96	1/4	2,0	M8	14	M6	14	90	69,3	48 x 52	115	57,5	40	36	56	52	30,5	8,0
40	150	25	30	190	164	96	1/4	7,0	M8	17	M6	17	105	84,3	58 x 58	115	57,5	54	54	69	72	24,5	9,0
50	175	34,5	33	215	180	110	1/4	1,0	M8	18	M6	18	130	102,3	77 x 78	130	65	70	70	80	80	28,5	5,0
63	215	57,5	50	215	180	140	3/8	2,0	M8	18	M8	18	155	128,3	102 x 102	170	85	78	78	106	106	31,5	14

Shock Absorber / Shock Absorber

ø	A	B	C	D	E	F	G	M	SW1	SW2	SW3
16	28	43,2	22,2	29,2	13,2	9	16	M10 x 1	SW13	SW3	SW3
25	50	81,3	31,4	41,4	11,7	15,5	25,5	M14 x 1,5	SW17	SW4	SW4
32	50	95,5	46,2	59,2	19,4	20	33	M20 x 1,5	SW24	SW4	SW4
40	50	94,5	47,2	60,2	19,4	20	33	M20 x 1,5	SW24	SW4	SW4
50	70	102,5	63	79	11	31	59	M25 x 1,5	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-



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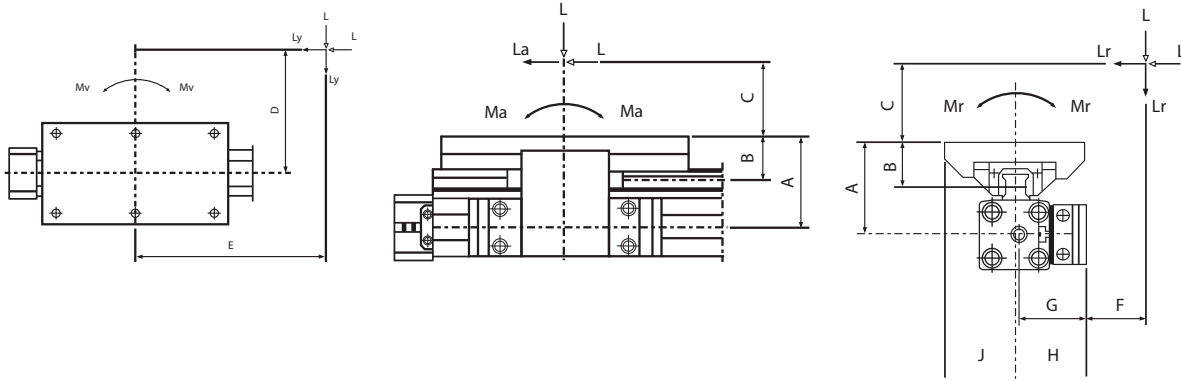
Formules
Formulas

$$M_a = F * h_a$$

$$M_r = F * h_r$$

$$M_v = F * h_v$$

Kuvvet ve Analar / Forces and Moments



Uno-Sistem / Uno-System

Characteristics	16	25	32	40	50	63
effect force (6 bar) (N)	110	250	420	640	1000	1550
cushioning (mm)	15	21	26	32	32	40
A (mm)	35,0	53,0	64,0	69	90	102
B (mm)	19,0	26,0	29,7	29,7	40	38,5
C/D/E/F (mm)	Dimensions according design					
G (mm)	30,3	38,0	55,0	54,5	65	75
H (mm)	31,5	40,0	57,5	57,5	68,5	85
J (mm)	31,5	40,0	57,5	57,5	65	85
Load forces max L (N)	500	1500	2950	3960	7500	7500
Moment forces maxLa,Lr,Lv (N)	500	1500	2950	3960	4000	4000
Axial moments max Ma (Nm)	4	40	62	115	580	580
Radial moments max Mr (Nm)	6	14	30	52	210	230
torsion moments max Mv (Nm)	11	40	62	70	258	580

- 1. The above mentioned moments (Ma max, Mr max, Mv max) are related to the guide rail centre. The load force (L) is the summary of all single forces related to the common centre of the mass. The centre of the mass can be placed inside or outside the surface area of the carriage.
- 2. Normally the carriage would experience a dynamic load, which has to be considered with the calculation of needed piston force (F) and capacity of the ballguided system. Use the following calculation formular:

$$\frac{M_a}{M_{a \max}} + \frac{M_r}{M_{r \max}} + \frac{M_v}{M_{v \max}} + \frac{L}{L_{\max}} \leq 1$$



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•••• Ident-figures for stroke definition (0100-5700 mm)

Type	Ident.-No.	Description
WRLK16.1	71.691. ••••	Uno Rodless cylinder PLF16 Linear unit
WRLK16.2	71.692. ••••	Tandem Rodless cylinder PLF16 Linear unit
WRLK25.1	72.591. ••••	Uno Rodless cylinder PLF25 Linear unit
WRLK25.2	72.592. ••••	Tandem Rodless cylinder PLF25 Linear unit
WRLK32.1	73.291. ••••	Uno Rodless cylinder PLF32 Linear unit
WRLK32.2	73.292. ••••	Tandem Rodless cylinder PLF32 Linear unit
WRLK40.1	74.091. ••••	Uno Rodless cylinder PLF40 Linear unit
WRLK40.2	74.092. ••••	Tandem Rodless cylinder PLF40 Linear unit
WRLK50.1	75.091. ••••	Uno Rodless cylinder PLF50 Linear unit
WRLK50.2	75.092. ••••	Tandem Rodless cylinder PLF50 Linear unit
WRLK63.1	76.391. ••••	Uno Rodless cylinder PLF63 Linear unit
WRLK63.2	76.392. ••••	Tandem Rodless cylinder PLF63 Linear unit

Special version: Viton seals and stainless steel on request

Aksesuarlar / Accessories

Types	Ident.-No.	Zyl.-Ø	Description
Shock Absorber Mounting Ø 16 Ø 25 Ø 32 - 40 Ø 50 	71.631.0000 72.531.0000 73.231.0000 75.031.0000	WRLK16 WRLK25 WRLK32-40 WRLK50	Colour: natur Material: Zinc diecasting
Shock Absorber Stop Ø 16 Ø 25 Ø 32 - 40 Ø 50 	71.631.0003 72.531.0003 73.231.0003 75.031.0003	WRLK16 WRLK25 WRLK32-40 WRLK50	Colour: natur Material: Zinc diecasting