# PNEUMATIC POWER CYLINDERS

#### **Features**

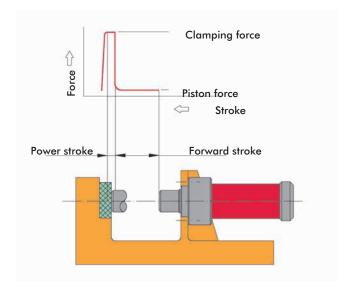
### Your requirements

Power element of machines, tools and devices for the following applications:

- Clamping
- Coining
- Punching
- Riveting
- Stamping
- Pressing
- Notching
- Clinching

#### The solution

DESTACO's double acting power cylinder, which is based on the wedge lever principle.



#### **Product features**

- Mechanical advantage: 10:1
- Characteristic are the two steps of stroke: the forward stroke to move a certain distance and the power stroke with an amplified force on a short distance
- Exact positioning of cylinder by flange mount on cylinder's head
- Cylinder works in any position
- High durability because of solid and maintenance free wedge lever mechanics.
- End position control by magnetic field sensing

Technical Data	
Power forces at 6 bar	4 – 60 kN
Forward strokes	15 – 200 mm
Power strokes	6 and 7 mm*
Air pressure	max. 6 bar, min 3 bar
Mechanical advantage	max. 10:1
Cylinders require clean, water-	and oil free air

<sup>\*</sup>power strokes up to max. 12 mm upon request

# Round design: Type K and WK

 Piston rod with male thread (Type K) or ISO fit (Type WK)



### Rectangular design: Type WR

• Two piston rods prevent twisting



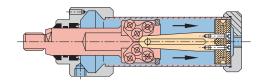
### **Application Recommendations**

- Compressed air should be treated by filter, water separator and pressure regulator. Oiler is not allowed!
- For an adequate piston speed air hoses with 6mm I.D. should be used.
- Do not increase the max. air pressure of 6 bar, because this would reduce the cylinder's life cycle considerably.
- The piston rods of type K and WK are not secured against twisting, an external device should be provided.
- Piston rod should not be subjected to transversal forces. Force should always be exerted by coaxial force through the piston rod to the work piece.
- For Type WR, force must be transmitted via the centre of the pressure plate.
- Connection between rod and tool should be performed as frictional connection (coupling), not as form fitting connection.
- For punching operations we recommend a force reserve of approx. 30 %.
- If the cylinder is used for positioning in the extended rod position you should consider that a possible counter-force will cause an axial deflection of approx. 1 mm. This feature is due to the cylinder's design because after the nominal power stroke the clamping force drops down to the level of the piston force (see force-stroke diagram left side).
- Valves are not usable to avoid piston movement. If the
  piston should be positioned within the range of the forward
  stroke, both chambers of the cylinder have to be vented.
  If the cylinder should stay at a retracted position the piston
  rod chamber should be under pressure and the piston
  chamber should be vented.
- For further facts and additional applications features see operating instruction MAPnkz-2.

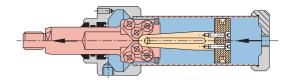


# PNEUMATIC POWER CYLINDERS

### **Functions**

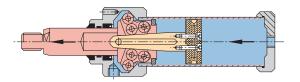


#### **Basic** position



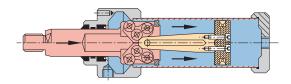
#### Forward stroke

Piston force is identical to the force of a common pneumatic cylinder with adequate piston diameter



#### Power stroke

Beginning of mechanical force amplification. Mechanical advantage max. 10:1

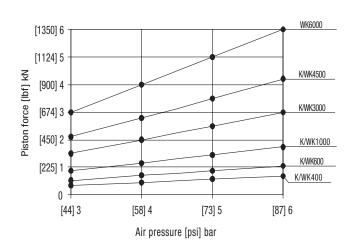


#### Return stroke

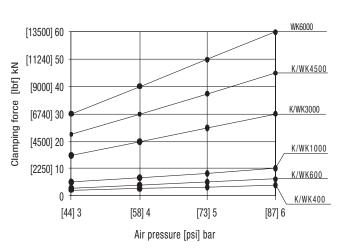
The return stroke can be initiated in any position of piston. The force during return stroke is approx. half of piston force.

#### **Forces**

#### Force within forward stroke



#### Clamping force within power stroke



Return stroke force: half of piston force



# **TYPE K SERIES**

## Pneumatic Power Cylinders | Product Overview | Technical Information



# • Piston rod with male thread

Operating pressure max. 6 bar [87psi], min 3 bar [44psi]. Use only clean, water- and oilfree compressed air. Piston rod is not secured against twisting and should not be loaded transversal. See page MC-PPC-2 for more information.

Model	Piston force within forward stroke at 6 bar kN [lbf]	Forward stroke mm [in]	Clamping force within power stroke at 6 bar kN [lbf]	Power stroke mm [in]	Piston dia. mm [in]	Air consumption per double stroke at 6 bar dm³ [ft³]	Stroke frequency depending on total stroke [min <sup>-1</sup> ]	Temperature range °C [°F]	Weight Kg [lbs]
V400 15 4 1		[0.59] 15				[0.025] 0,71			[2.6] 1,20
K400-15-6-1 K400-30-6-1		[1.18] 30				[0.031] 0,89			[2.8] 1,25
K400-50-6-1	[153]	[1.97] 50	[900lbf]	[0.24]	[1.75]	[0.040] 1,14	5 to 30	[23 to 167]	[2.9] 1,30
K400-70-6-1	0,68	[2.76] 70	4	6	40	[0.049] 1,38	3 10 00	- 5 to +75	[3.0] 1,35
K400-120-6-1		[4.72] 120				[0.070] 1,98			[3.3] 1,50
K400-200-6-1		[7.87] 200				[0.104] 2,94			[3.7] 1,70
K600-15-6-1		[0.59] 15				[0.047] 1,34			[4.5] 2,05
K600-30-6-1		[1.18] 30				[0.058] 1,65			[4.7] 2,15
K600-50-6-1	[238]	[1.97] 50	[1350lbf]	[0.24]	[1.97]	[0.073] 2,06	5 to 30	[23 to 167]	[5.1] 2,30
K600-70-6-1	1,06	[2.76] 70	6	6	50	[0.087] 2,47	5 10 30	- 5 to +75	[5.3] 2,40
K600-120-6-1		[4.72] 120				[0.124] 3,50			[6.0] 2,70
K600-200-6-1		[7.87] 200				[0.182] 5,15			[7.1] 3,20
K1000-15-7-1		[0.59] 15				[0.078] 2,20			[7.9] 3,60
K1000-30-7-1		[1.18] 30				[0.094] 2,66			[8.4] 3,80
K1000-50-7-1	[393]	[1.97] 50	[2250lbf]	[0.27]	[2.48]	[0.115] 3,26	5 to 30	[23 to 167]	[9.0] 4,10
K1000-70-7-1	1,75	[2.76] 70	10	7*	63	[0.136] 3,85	3 10 30	- 5 to +75	[9.7] 4,40
K1000-120-7-1		[4.72] 120				[0.189] 5,35			[11.5] 5,20
K1000-200-7-1		[7.87] 200				[0.273] 7,74			[14.1] 6,40
K3000-15-6-1		[0.59] 15				[0.158] 4,48			[26.0] 11,80
K3000-30-6-1		[1.18] 30				[0.184] 5,20			[27.6] 12,50
K3000-50-6-1	[674]	[1.97] 50	[4500lbf]	[0.24]	[3.35]	[0.218] 6,17	5 to 25	[23 to 167]	[29.5] 13,40
K3000-70-6-1	3	[2.76] 70	30	6*	85	[0.252] 7,13	3 10 23	- 5 to +75	[31.5] 14,30
K3000-120-6-1		[4.72] 120				[0.337] 9,54			[36.6] 16,60
K3000-200-6-1		[7.87] 200				[0.473] 13,40			[44.5] 20,20
K4500-15-6-1		[0.59] 15				[0.218] 6,18			[29.3] 13,30
K4500-30-6-1		[1.18] 30				[0.253] 7,17			[30.9] 14,00
K4500-50-6-1	[944]	[1.97] 50	[10120lbf]	[0.24]	[3.94]	[0.300] 8,50	5 to 25	[23 to 167]	[33.1] 15,00
K4500-70-6-1	4,2	[2.76] 70	45	6*	[ [3.94] [   100	[0.347] 9,83	J 10 2J	- 5 to +75	[34.8] 15,80
K4500-120-6-1		[4.72] 120				[0.466] 13,20			[39.9] 18,10
K4500-200-6-1	. 12	[7.87] 200				[0.653] 18,50			[47.8] 21,70

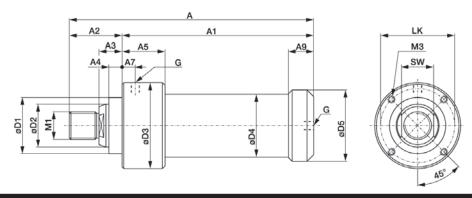
<sup>\*</sup> Power strokes up to 12 mm and other forward strokes upon request



# **TYPE K SERIES**

# Pneumatic Power Cylinders | Technical Information

# Type K in standard version

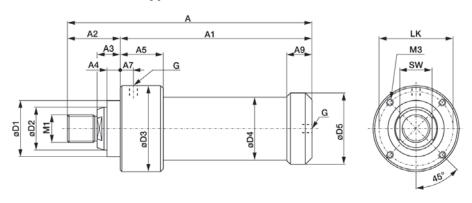


Model			Differe	nces of	f dimen					ard vers net pist			hart or	ı page	MC-PPC	-10		
	A	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	A <sub>5</sub>	A <sub>7</sub>	A9	Ø D <sub>1</sub>	Ø D <sub>2</sub>	ØD <sub>3</sub>	Ø D <sub>4</sub>	ØD <sub>5</sub>	M <sub>1</sub>	М3	LK	SW	G
K400-15-6-1	[7.32] 186	[5.71] 145																
K400-30-6-1	[7.91] 201	[6.30] 160																
K400-50-6-1	[8.70] 221	[7.09] 180	[1.6]	[0.8]	[0.5]	[1.5]	[0.4]	[0.9]	[1.6]	[1.0]	[2.5]	[1.7]	[1.9]	[0.06]	[0.1] M5,	[2.1]	[0.8]	G1/8
K400-70-6-1	[9.49] 241	[7.87] 200	41	21	12	39	10	23,5	<sup>40</sup> h8	25 <sub>h7</sub>	63	44	49	M16 x 1,5	10mm deep	54	21	G1/8
K400-120-6-1	[11.46] 291	[9.84] 250																
K400-200-6-1	[14.61] 371	[12.99] 330																
K600-15-6-1	[7.91] 201	[6.30] 160																
K600-30-6-1	[8.50] 216	[6.89] 175																
K600-50-6-1	[9.29] 236	[7.68] 195	[1.6]	[0.8]	[0.5]	[1.5]	[0.4]	[0.9]	[1.6]	[1.0]	[2.9]	[2.1]	[2.3]	[0.06]	[0.1] M6,	[2.5]	[0.1]	G1/8
K600-70-6-1	[10.08] 256	[8.46] 215	41	21	12	39	10	23,5	<sup>40</sup> h8	25 <sub>h7</sub>	73	54	59	M16 x 1,5	10mm deep	64	21	G1/8
K600-120-6-1	[12.05] 306	[10.43] 265																
K600-200-6-1	[15.20] 386	[13.58] 345																
K1000-15-7-1	[9.57] 243	[7.36] 187																
K1000-30-7-1	[10.16] 258	[7.95] 202																
K1000-50-7-1	[10.94] 278	[8.74] 222	[2.2]	[1.0]	[0.6]	[2.0]	[0.4]	[1.1]	[2.5]	[1.6]	[3.9]	[2.7]	[2.9]	[0.98]	[1] M8,	[3.3]	[1.3]	G1/8
K1000-70-7-1	[11.73] 298	242	56	25	15	52	10	29	63 <sub>h8</sub>		100	68	74,5	M24	12mm deep	85	32	31/6
K1000-120-7-1	[13.70] 348	[11.50] 292																
K1000-200-7-1	[16.85] 428	[14.65] 372																

# **TYPE K SERIES**

# Pneumatic Power Cylinders | Technical Information

# Type K in standard version



Model			Differe	nces of	dimen					ard ver net pist				n page	MC-PPC	:-10		
	A	Α1	A <sub>2</sub>	A <sub>3</sub>	$A_4$	A <sub>5</sub>	A <sub>7</sub>	A9	ø D <sub>1</sub>	Ø D <sub>2</sub>	ø D <sub>3</sub>	Ø D <sub>4</sub>	ØD <sub>5</sub>	M <sub>1</sub>	М3	LK	sw	G
K3000-15-6-1	[12.40] 315	[9.25] 235																
K3000-30-6-1	[12.99] 330	[9.84] 250																
K3000-50-6-1	[13.78] 350	[10.63] 270	[3.1]	[1.4]	[0.8]	[2.8]	[0.8]	[1.8]	[3.3]	[2.6]	[5.1]	[3.7]	[4.3]	[1.65]	[1.7] M10,	[4.4]	[2.2]	61/4
K3000-70-6-1	[14.57] 370	[11.42] 290	80	35	20	70	20	45	85 <sub>h8</sub>	65 <sub>h7</sub>	130	95	108	M42	16mm deep	112	່55	G1/4
K3000-120-6-1	[16.54] 420	[13.39] 340																
K3000-200-6-1	[19.69] 500	[16.54] 420																
K4500-15-6-1	[12.40] 315	[9.25] 235																
K4500-30-6-1	[12.99] 330	[9.84] 250																
K4500-50-6-1	[13.78] 350	[10.63] 270	[3.1]	[1.4]	[0.8]	[2.8]	[0.8]	[1.8]	[3.3]	[2.6]	[5.7]	[4.3]	[4.8]	[1.65]	[1.7] M10,	[5.0]	[2.2]	
K4500-70-6-1	[14.57] 370	[11.42] 290	80	35	20	70	20	45	85 <sub>h8</sub>	65 <sub>h7</sub>	145	110	123	M42	16mm deep	127	55	G1/4
K4500-120-6-1	[16.54] 420	[13.39] 340																
K4500-200-6-1	[19.69] 500	[16.54] 420																

# **TYPE WK SERIES**

# Pneumatic Power Cylinders | Product Overview | Technical Information



### Piston rod with ISO fit Note:

Operating pressure max. [87psi]6 bar, min [44psi] 3 bar. Use only clean, water- and oilfree compressed air.Piston rod is not secured against twisting and should not be loaded transversal. See page MC-PPC-2 for more information.

Model	Piston force within forward stroke at 6 bar kN [lbf]	Forward stroke mm [in]	Clamping force within power stroke at 6 bar kN [lbf]	Power stroke mm [in]	Piston dia. mm [in]	Air consumption per double stroke at 6 bar dm³ [ft³]	Stroke frequency depending on total stroke [min <sup>-1</sup> ]	Temperature range °C [°F]	Weight [lbs] kg
WK400-15-6-1		[0.59] 15				[0.025] 0,71			[2.6] 1,20
WK400-30-6-1		[1.18] 30				[0.031] 0,89			[2.8] 1,25
WK400-50-6-1	[153]	[1.97] 50	[900lbf]	[0.24]	[1.75]	[0.040] 1,14	5 to 30	[23 to 167]	[2.9] 1,30
WK400-70-6-1	0,68	[2.76] 70	4	6	40	[0.049] 1,38	3 10 30	- 5 to +75	[3.0] 1,35
WK400-120-6-1		[4.72] 120				[0.070] 1,98			[3.3] 1,50
WK400-200-6-1		[7.87] 200				[0.104] 2,94			[3.7] 1,70
WK600-15-6-1		[0.59] 15				[0.047] 1,34			[4.5] 2,05
WK600-30-6-1		[1.18] 30				[0.058] 1,65			[4.7] 2,15
WK600-50-6-1	[238]	[1.97] 50	[1350lbf]	[0.24]	[1.97]	[0.073] 2,06	5 to 30	[23 to 167]	[5.1] 2,30
WK600-70-6-1	1,06	[2.76] 70	6	6	50	[0.087] 2,47	5 10 30	- 5 to +75	[6.3] 2,40
WK600-120-6-1		[4.72] 120				[0.124] 3,50			[6.6] 2,70
WK600-200-6-1		[7.87] 200				[0.182] 5,15			[7.1] 3,20
WK1000-15-7-1		[0.59] 15				[0.078] 2,20			[7.9] 3,60
WK1000-30-7-1		[1.18] 30				[0.094] 2,66			[8.4] 3,80
WK1000-50-7-1	[393]	[1.97] 50	[2250lbf]	[0.27]	[2.48]	[0.115] 3,26	5 to 30	[23 to 167]	[9.0] 4,10
WK1000-70-7-1	1,75	[2.76] 70	10	7*	63	[0.136] 3,85	5 10 30	- 5 to +75	[9.7] 4,40
WK1000-120-7-1		[4.72] 120				[0.189] 5,35			[11.5] 5,20
WK1000-200-7-1		[7.87] 200				[0.273] 7,74			[14.1] 6,40
WK3000-15-6-1		[0.59] 15				[0.158] 4,48			[26.0] 11,80
WK3000-30-6-1		[1.18] 30				[0.184] 5,20			[27.6] 12,50
WK3000-50-6-1	[674]	[1.97] 50	[4500lbf]	[0.24]	[3.35]	[0.218] 6,17	5 to 25	[23 to 167]	[29.5] 13,40
WK3000-70-6-1	3	[2.76] 70	30	6*	85	[0.252] 7,13	3 10 23	- 5 to +75	[31.5] 14,30
WK3000-120-6-1		[4.72] 120				[0.337] 9,54			[36.6] 16,60
WK3000-200-6-1		[7.87] 200				[0.473] 13,40			[44.5] 20,20
WK4500-15-6-1		[0.59] 15				[0.218] 6,18			[29.3] 13,30
WK4500-30-6-1		[1.18] 30				[0.253] 7,17			[30.9] 14,00
WK4500-50-6-1	[944]	[1.97] 50	[10120lbf]	[0.24]	[3.94]	[0.300] 8,50	5 to 25	[23 to 167]	[33.1] 15,00
WK4500-70-6-1	4,2	[2.76] 70	45	6*	100	[0.347] 9,83	3 10 23	- 5 to +75	[34.8] 15,80
WK4500-120-6-1		[4.72] 120				[0.466] 13,20			[37.9] 18,10
WK4500-200-6-1		[7.87] 200				[0.653] 18,50			[47.8] 21,70
WK6000-30-6		[1.18] 30				[0.367] 10,40			[52.9] 24,00
WK6000-50-6	[1350]	[1.97] 50	[13490lbf]	[0.24]	[4.92]	[0.454] 12,85	5 to 25	[23 to 167]	[54.0] 24,50
WK6000-70-6	6,0	[2.76] 70	60,0	6*	] [4.92]   125,0	[0.536] 15,17	5 to 25	- 5 to +75	[55.1] 25,00
WK6000-120-6		[4.72] 120				[0.747] 21,15			[58.4] 26,50

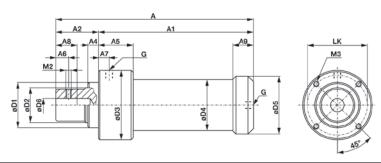
<sup>\*</sup> Power strokes up to 12 mm and other forward strokes upon request



# **TYPE WK SERIES**

# Pneumatic Power Cylinders | Technical Information

# Type WK in standard version



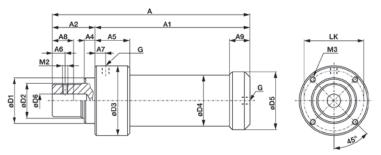
Model			Differer	nces of	dimens	Dir sions fo	mension or cylino	ns for s der with	tandar 1 magn	d versic et pisto	on of ty on rings	pe WK s see ch	nart on	page A	۸C-PPC	C-10		
	A	A <sub>1</sub>	A <sub>2</sub>	A <sub>4</sub>	A <sub>5</sub>	A <sub>7</sub>	A8**	A9	ø D <sub>1</sub>	ø d <sub>2</sub>	ø D <sub>3</sub>	Ø D <sub>4</sub>	Ø D <sub>5</sub>	ø d <sub>6</sub>	M <sub>2</sub>	Мз	LK	G
WK400-15-6-1	[7.32] 186	[5.71] 145																
WK400-30-6-1	[7.91] 201	[6.30] 160																
WK400-50-6-1	[8.70] 221	[7.09] 180	[1.61]	[0.47]	[1.54]	[0.39]	[0.98]	[0.93]	[1.57]	[0.98]	[2.48]	[1.73]	[1.93]	10 <sup>H7</sup>	117	[0.06] M5,	[2.13]	C1 /0
WK400-70-6-1	[9.49] 241	[7.87] 200	41	12	39	10	25	23,5	40 <sub>h8</sub>	25 <sub>h7</sub>	63	44	49	10"	M6	10mm deep	54	G1/8
WK400-120-6-1	[11.46] 291	[9.84] 250																
WK400-200-6-1	[14.61] 371	[12.99] 330																
WK600-15-6-1	[7.91] 201	[6.30] 160																
WK600-30-6-1	[8.50] 216	[6.89] 175																
WK600-50-6-1	[9.29] 236	[7.68] 195	[1.61]	[0.47]	[1.54]	[0.39]	[0.98]				[2.87]	[2.13]	[2.32]	10 <sup>H7</sup>	M6	[0.06] M6,	[2.52]	G1/8
WK600-70-6-1	[10.08] 256	[8.46] 215	41	12	39	10	25	23,5	<sup>40</sup> h8	25 <sub>h7</sub>	73	54	59	10	7410	10mm deep	64	01/8
WK600-120-6-1	[12.05] 306	[10.43] 265																
WK600-200-6-1	[15.20] 386	[13.58] 345																
WK1000-15-7-1	[9.57] 243	[7.36] 187																
WK1000-30-7-1	[10.16] 258	[7.95] 202																
WK1000-50-7-1	[10.94] 278	[8.74] 222			[2.05]				[2.48]	[1.57]	[3.92]	[2.68]		20 <sup>H7</sup>	M8	[0.98] M8,	[3.35]	G1/8
WK1000-70-7-1	[11.73] 298	[9.53] 242	56	15	52	10	40	29	63 <sub>h8</sub>	40 <sub>h7</sub>	99,5	68	74,5	20	7410	12mm deep	85	31/0
WK1000-120-7-1	[13.70] 348	[11.50] 292																
WK1000-200-7-1	[16.85] 428	[14.65] 372																



# **TYPE WK SERIES**

# Pneumatic Power Cylinders | Technical Information

# Type WK in standard version



Modell		D	ifferen	ces of o	dimens		nensior r cylind							page :	MC-PP	C-10		
	A	Α1	A <sub>2</sub>	A <sub>4</sub>	A <sub>5</sub>	A <sub>7</sub>	A8**	A9	ø D <sub>1</sub>	Ø D <sub>2</sub>	ØD <sub>3</sub>	Ø D <sub>4</sub>	Ø D <sub>5</sub>	ø d <sub>6</sub>	M <sub>2</sub>	М3	LK	G
WK3000-15-6-1	[12.40] 315	[9.25] 235																
WK3000-30-6-1	[12.99] 330	[9.84] 250																
WK3000-50-6-1	[13.78] 350	[10.63] 270	[3.15]	[0.79]	[2.76]	[0.79]	[1.57]	[1.77]	[3.35]	[2.56]	[5.12]	[3.74]	[4.25]	0.5117		[16] M10,	[4.41]	7/4
WK3000-70-6-1	[14.57] 370	[11.42] 290	80 1	20	70	20	40	45	85 <sub>h8</sub>		130	95	108	25 <sup>H7</sup>	M10	16mm deep	112	1/4
WK3000-120-6-1	[16.54] 420	[13.39] 340																
WK3000-200-6-1	[19.69] 500	[16.54] 420																
WK4500-15-6-1	[12.40] 315	[9.25] 235																
WK4500-30-6-1	[12.99] 330	[9.84] 250																
WK4500-50-6-1	[13.78] 350	[10.63] 270	[3,15]	[0.79]	[2.76]	[0.79]	[1.57]	[1.77]	[3.35]	[2.56]	[5.71]	[4.33]	[4.84]			[1.65] M10,	[5.00]	
WK4500-70-6-1	[14.57] 370	[11.42] 290	80	20	70	20	40	45	85 <sub>h8</sub>	65 <sub>h7</sub>	145		123	25 <sup>H7</sup>	M10	16mm deep	127	1/4
WK4500-120-6-1	[16.54] 420	[13.39] 340																
WK4500-200-6-1	[19.69] 500	[16.54] 420																
WK6000-30-6	[14.37] 365	[11.22] 285																
WK6000-50-6	[15.16] 385	[12.01] 305	[3.15]	[0.79]	[3.3]	[0.87]	[1.57]	[2.09]	[3.35]	[2.56]	[7.01]	[5.31]	[5.83]			M12,	[5.91]	
WK6000-70-6	[15.94] 405	[12.80] 325	80	20	84	22	40	53	85 <sub>h8</sub>	65 <sub>h7</sub>	178	135	148	25 <sup>H7</sup>	M10	18mm deep	150	1/2
WK6000-120-6	[17.91] 455	[14.76] 375																

<sup>\*\*</sup> Usable depth of bore with ISO fit D6



# **TYPE WR SERIES**

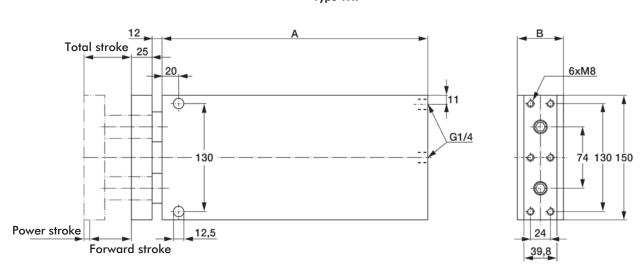
### Pneumatic Power Cylinders | Product Overview

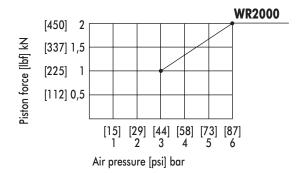


# • Piston rods prevent twisting Note:

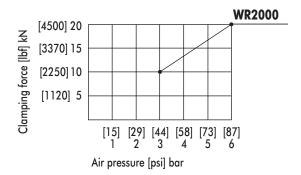
Use only clean, water- and oilfree compressed air. Force must be transmitted via the centre of the pressure plate. One-sided loading of the pressure plate should be avoided. For punching applications contact our technical support! See page MC-PPC-2 for more information.

Type WR





Return stroke force: half of piston force



Air pressure: max. [87psi] 6 bar; min. [44psi] 3 bar

Model	Piston force within forward stroke at 6 bar kN [lbf]	Forward stroke mm [in]	Clamping force within power stroke at 6 bar [lbf] kN]	Power stroke mm [in]	Piston dia. mm [in]	Air consumption per double stroke at 6 bar dm³ [ft³]	Stroke frequency depending on total stroke [min <sup>-1</sup> ]	Temperature range °C [°F]	Weight kg [lbs]	A	В
WR 2000-15-7		[0.59] 15				[0.086] 2,44			[27.6] 12,5	285	51,6
WR 2000-30-7		[1.18] 30				[0.104] 2,95			[30.9] 14,0	300	51,6
WR 2000-50-7	[450] 2	[1.97] 50	[4500] 20	[0.27] 7	[2.76] 70	[0.128] 3,62	62 5 - 25	[23 to 167] -5 to +75	[34.1] 15,5	320	55,6
WR 2000-70-7		[2.76] 70	_ 20			[0.151] 4,27			[37.9] 17,2	340	55,6
WR 2000-120-7		[4.72] 120				[0.210] 5,94			[46.3] 21,0	390	59,6



### Magnetic Field Sensing | Technical Specifications

**Pneumatic Power Cylinders Type K** and WK with end position control by magnetic field sensors.

#### For the sizes

K and WK 400...., K and WK 600..., K and WK 1000.... K and WK 3000..., K and WK 4500...

### Change of Model

Indicate "-A" at the end of Model instead of "-1" for standard version! Example: K400 - 15 - 6 - 1 change to K400 - 15 - 6 - AWK 3000 - 50 - 6 - 1 change to WK 3000 - 50 - 6 - A

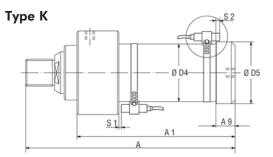
### Change in construction

Only the dimensions Ø D4, Ø D5, A/A 1 and A9 are different to the standard version.



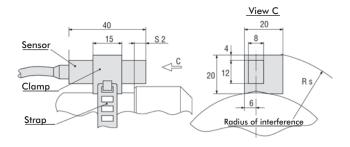
### Standard equipment (as shown above)

Pneumatic Power Cylinders with "-A" at the end of Model are completely furnished with a magnetic piston ring and with two mounted sensor sets (Model SMB-102157, consisting of magnetic field sensor with 3m cable, clamp and strap)

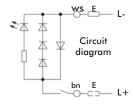


Switching po	ints of ser	isors			nces of di vith stanc		
For sizes	S1*	S2*	Ø D4	Ø D5	A/A 1	A9	Rs
K 400A	5	12	-	-	+15	-	44
K 1000A	10	18	-	-	+15	-	56
K 3000A	5	14	90	97	-	30	67
K 45000A	5	12	106	113	-	28,5	75

<sup>\*</sup> Approx. data, because of magnet field variations. \$1 refers to the max. power stroke and enlarges up to 60 mm, when smaller power strokes are used.



Circuit diagram and technical data of sensor set Model SMB-102157, consisting of magnetic field sensor with 3 m cable, clamp and strap (2 sets per cylinder are standard equipment).



Switching voltage	10250 VAC/DC
Switching current	0,5 A
Switching power	20 W/30 VA
Function	normally open contact
Protection class	IP 67 (DIN 40050)
Indicator	LED

Type WK		\$ 2
<u>S1</u>	Ø D4	A 9
•		_

Switch	ning po	ints of ser	isors				mensions lard versi	
For siz	es	S1*	S2*	Ø D4	Ø D5	A/A 1	A9	Rs
WK 400-	A	5	12	-	-	+15	-	44
WK 1000	A	10	18	-	-	+15	-	56
WK 3000	A	5	14	90	97	-	30	67
WK 45000	)A	5	12	106	113	-	28,5	75

<sup>\*</sup> Approx. data, because of magnet field variations. \$1 refers to the max. power stroke and enlarges up to 60 mm, when smaller power strokes are used.

# -K OPTION

### Magnetic Field Sensing | Technical Specifications



### Sensor cage for T-slot proximity sensor

### • For the sizes

K and WK 400.... , K and WK 600... , K and WK 1000.... , K and WK 3000..., K and WK 4500...

### Change of Model

Indicate "-K" at the end of Model instead of "-A" for standard version.

Example:

K400 - 15 - 6 - A change to K400 - 15 - 6 - KWK 3000 - 50 - 6 - A change to WK 3000 - 50 - 6 - K

#### • Benefits:

Small radii of interference. Customer specific T-slot sensors are usable.

### Standard equipment:

Pneumatic power cylinder with "-K" at the end of Model number are supplied with mounted sensor cages but without T-slot sensors.

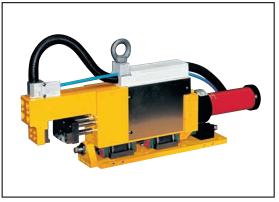


# PNEUMATIC POWER CYLINDERS

# **Application Examples**



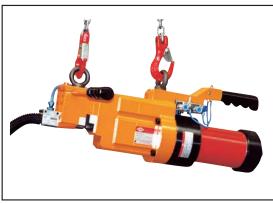
Radius clinching unit for profiled aluminium



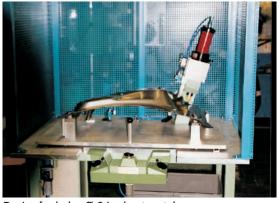
Special punching unit for 2 holes Ø 3,4 in steel 0,9 mm



Special device for 2 holes Ø 12 in steel 1,2 mm



Mobile punching unit for holes  $\emptyset$  6,2 in crossbeams



Device for holes Ø 8 in sheet metal



Stamping units placed in line



Stamping units placed in line



Welding fixture for exhaust components