
**Teknik Özellikler / Technical Specifications**

- 1- Minyatür lineer yataklı silindir
- 2- Dönmez mil ve mükemmel doğrusallıkla yüksek hassasiyete sahiptir. Hassas montaj için uygundur.
- 3- Montajı 4yüzeyinden olabilmektedir.
- 4- Hortum girişi 3 yönden olabilmektedir.

- 1- Miniature roller ball linear bearing integrated wise cylinder;
- 2- It has the excellent straightness and non rotation precision, and is more suitable for using in the condition of precision assembly;
- 3- Mounting is possible from 4 directions;
- 4- Piping is possible from 3 directions.

<b>Çap Ölçüsü</b>	Bore Size (mm)	6	10	16	20
<b>Klavuz ray genişliği</b>	Guide rail width (mm)	5	7	9	12
<b>Hareket tipi</b>	Acting type	<b>Çift etkili tip</b>		Double acting type	
<b>Akışkan</b>	Fluid	<b>Hava ( 40 mikron filtre elemanı ile filtrelenmelidir.)</b>		Air (to be filtered by 40um filter element)	
<b>Çalışma basıncı</b>	Operating pressure	0.06 or 0.15 (Ø6) ~ 0.7 MPa (9 or 22 ~ 100 psi)			
<b>Patlama basıncı</b>	Proof pressure	1.05 MPa (150 psi)			
<b>Yastıklama</b>	Cushion	<b>Her iki sonda kauçuk sönümleyici (tampon)</b>		Rubber bumpers at both ends	
<b>Sıcaklık</b>	Temperature	-20 ~ 70°C			
<b>Hız sınırları</b>	Speed range	50 ~ 500mm/sec			
<b>İzin verilebilir kinetik enerji</b>	Allowable kinetic energy (J)	0.008	0.025	0.05	0.1
<b>Sensör</b>	Auto switches	WT 07-R			
<b>Giriş portu</b>	Port size	M5 x 0.8			


**1- Silindirin gerçek yükleme ve momenti izin verileden az olmalıdır.**

**1.1- Silindirin izin verilebilir momentleri**

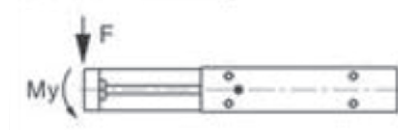
1- The actual loading and moment of cylinder must be less than its allowable loading and moment:

1.1- The allowable moment of cylinder

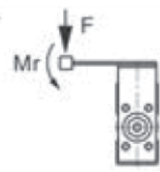
**Yatay eksen etrafında dönme hareketine neden olabilecek moment**  
Pitch moment  $M_p$



**Dikey eksen etrafında dönme hareketine neden olabilecek moment**  
Yaw moment  $M_y$



**Döndürme momenti**  
Roll moment  $M_r$



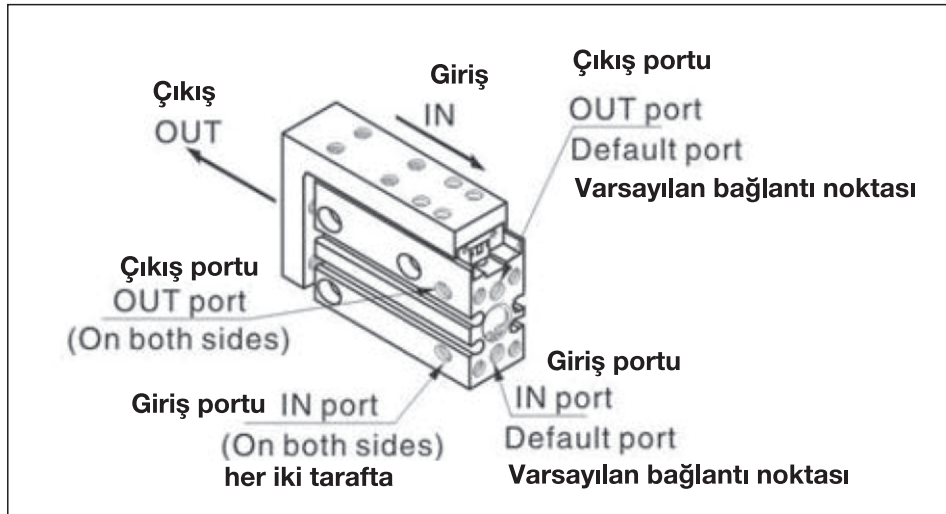
Model	İzin Verilebilir Tork Değeri Allowable Torque (N.m)		
	Pitch moment $M_p$	Yaw moment $M_y$	Döndürme Momenti Roll moment $M_r$
HLH6	0.25	0.25	0.41
HLH10	0.77	0.79	1.17
HLH16	1.62	1.62	3.03
HLH20	2.84	2.95	4.80

**1.2- Silindire farklı yönlerde uygulanan moment, yük kapasitesinde farklılık gösterecektir.**

**2- Hortum girişi 3 yönden yapılabilir, aşağıdaki resimden kontrol ediniz.**

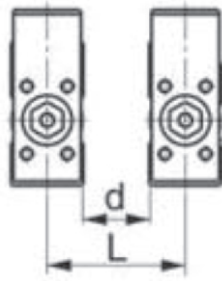
1.2- When the cylinder is subjected to different type of moment, there will be different degree of shift in performance.

2- The compact slide can be piped from 3 directions. Confirm the pressure ports and operating direction. (See drawing right)



**3- İki silindir yan yana kullanılacaksa aralarındaki mesafe tabloda belirtilen ölçülerden fazla olmalı aksi halde sensörlerin hatalı sinyal alma problemi doğabilir.**

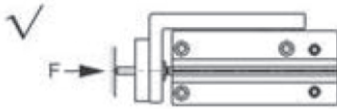
3- In compact slides with sensor switch, there is a danger of sensor switch malfunction if the mounting pitch is less than the dimensions shown in table. Be sure to allow at least the indicated interval.



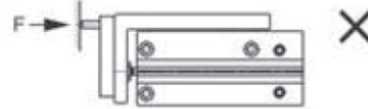
Model	Aralarında en az olması gerekli mesafe (mm) At least the indicated	
	d	L
WLH6	5	21
WLH10	5	25
WLH16	10	35
WLH20	15	47

**4- Kuvvet silindirin miline dik ve karsıdan uygulanmalı. Aşağıdaki çizime bakınız.**

4- When the output of the compact slide will be directly applied to the table, it should be applied along the rod axis. (See drawing below.)



**Kuvvet piston miline dik.**  
The loading and piston rod are coaxial



**Kuvvet piston milinden farklı uzaklıkta**  
The loading and piston rod are offset

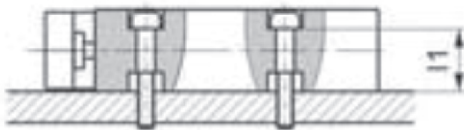
**5- Silindir hızının 500 mm/s ve altında ayarlanmış olmasına dikkat edin.**
**6- Silindir 4 yönde montaj edilebilir. Montaj esnasında civataları sıkma torku tablodaki değerleri geçmemelidir.**

5- Be sure to use a flow control valve, and adjust the speed to 500mm/s or less.

6- A compact slide can be mounted from 4 directions. Don't exceed the max. fastening torque then fighting the mounting bolts.

**Yanal Bağlantı**

Lateral Mounting (Through Holes)



Model	Civata	Max. Bağlanma Torku	L1
	Bolts	Max. Fastening Torque	
WLH6	M3 x 0.5	1.1 (N.m)	12.7
WLH10	M4 x 0.7	2.5 (N.m)	15.6
WLH16	M4 x 0.7	2.5 (N.m)	20.6
WLH20	M5 x 0.8	5.1 (N.m)	24.0

**Dikey Bağlantı**

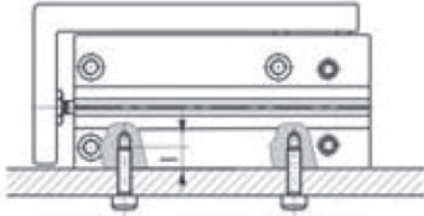
Lateral Mounting (Tapped Holes)



Model	Civata	Max. Bağlanma Torku	L1	L
	Bolts	Max. Fastening Torque		
WLH6	M4 x 0.7	2.5 (N.m)	12.7	9.4
WLH10	M5 x 0.8	5.1 (N.m)	15.6	11.2
WLH16	M5 x 0.8	5.1 (N.m)	20.6	16.2
WLH20	M6 x 1.0	8.1 (N.m)	24.0	16.0

**Dikey Bağlantı**

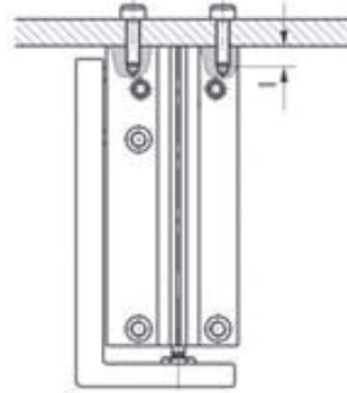
Vertical Mounting (Tapped Holes)



Model	Civata	Max. Bağlanma Torku	L
	Bolts	Max. Fastening Torque	
WLH6	M3 x 0.5	1.1 (N.m)	5
WLH10	M4 x 0.7	2.5 (N.m)	6
WLH16	M4 x 0.7	2.5 (N.m)	6
WLH20	M5 x 0.8	5.1 (N.m)	8

**Eksen Bağlantı**

Axial Mounting (Tapped Holes)



**7- Parça montajlama**

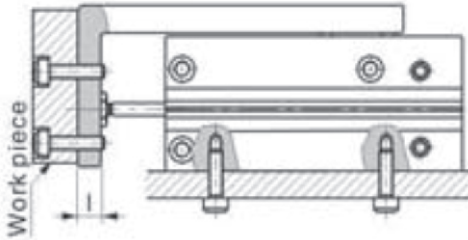
7- Work Piece Mounting

**7.1- Silindire 2 ayrı şekilde parça bağlanabilir. Parça montaj edilirken belirlenen sıkma torklarını geçmeyiniz.**

7.1- Work pieces can be mounted on 2 surfaces of the compact slide. When mounting a work piece, tighten the bolts properly at a torque value within the limiting range.

**Ön Bağlantı**

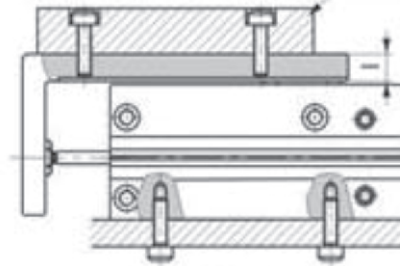
Front Mounting



Model	Civata	Max. Bağlanma Torku	L
	Bolts	Max. Fastening Torque	
WLH6	M3 x 0.5	1.1 (N.m)	5.5
WLH10	M4 x 0.7	2.5 (N.m)	7.5
WLH16	M4 x 0.7	2.5 (N.m)	10
WLH20	M5 x 0.8	5.1 (N.m)	11

**Üst Bağlantı**

Top Mounting



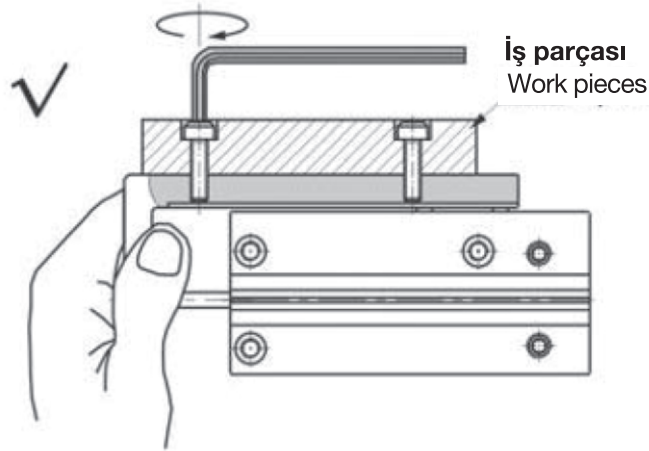
Model	Civata	Max. Bağlanma Torku	L
	Bolts	Max. Fastening Torque	
WLH6	M3 x 0.5	1.1 (N.m)	6.5
WLH10	M4 x 0.7	2.5 (N.m)	8
WLH16	M4 x 0.7	2.5 (N.m)	9
WLH20	M5 x 0.8	5.1 (N.m)	9.5

**7.2/Tabla lineer rayla desteklendiği için yandan güçlü etki ve moment uygulanmamalıdır.**

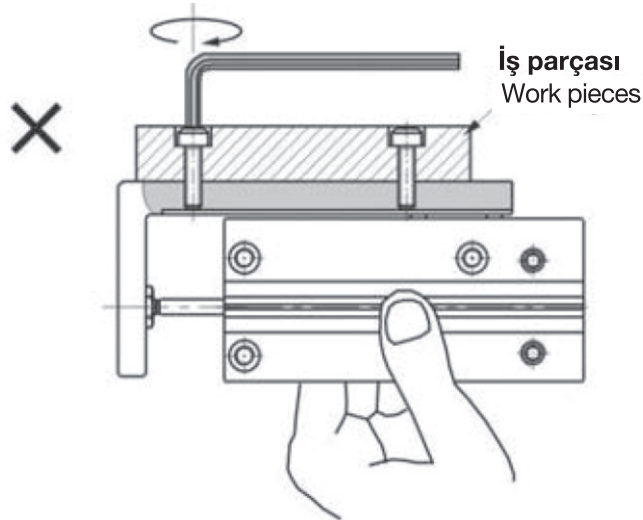
**7.3/ Tablaya iş parçası monte edilirken şekildeki gibi tabla elle tutularak desteklenmeli, gövdeden tutulup takıldığına hassas kayıplar oluşabilir.**

7.2- Since the table is supported by the linear guide, take care not to apply strong impact or large moment to the guide section.

7.3- Hold the slide when fastening work pieces to it with bolts,If the body is held while tightening bolts, the guide section will be subjected to large moment, and there may be a loss of precision.



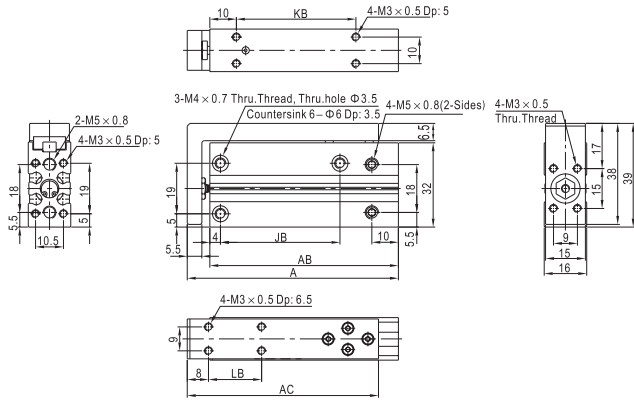
**Tablayı tutun ve civatayı sıkın.**  
Hold the slide and fasten the bolt



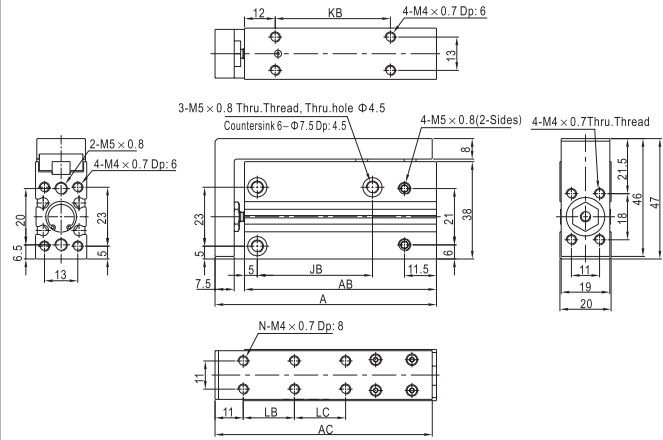
**Gövdeyi tutun ve civatayı sıkın.**  
Hold the body and fasten the bolt

## WLH - Serisi Kompakt Yataklamalı Silindirler / WLH - Series Compact Guided Cylinders

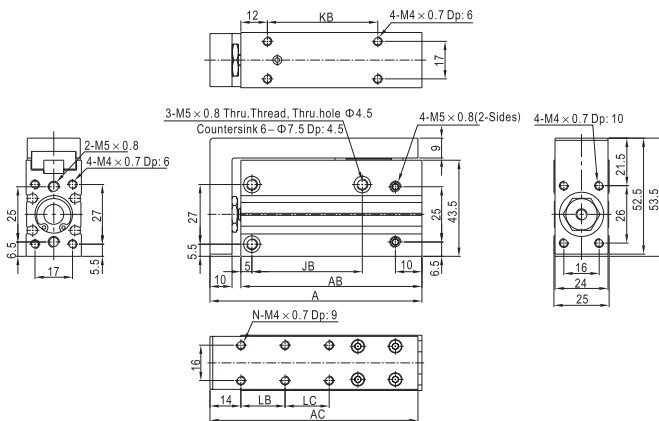
## Teknik Çizim / Technical Drawing

**WLH.006**


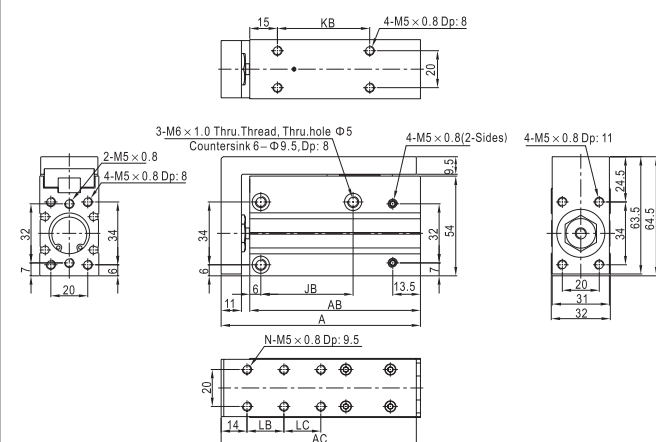
Strok Stroke	A	AB	AC	JB	KB	LB
5	44,5	36	42	14	10	10
10	49,5	41	42	14	15	10
15	54,5	46	52	24	20	20
20	59,5	51	52	24	25	20
25	64,5	56	62	30	30	30
30	69,5	61	62	30	35	30

**WLH.010**


Strok Stroke	A	AB	AC	JB	KB	LB	LC	N
5	51,5	40	50	14	10	10		4
10	56,5	45	55	14	15	10		4
15	61,5	50	60,5	24	20	20		4
20	66,5	55	63	24	25	20		4
25	71,5	60	70,5	30	30	30		4
30	76,5	65	75,5	30	35	30		4
40	86,5	75	85,5	45	45	20	20	6
50	96,5	85	93	55	55	25	25	6

**WLH.016**


Strok Stroke	A	AB	AC	JB	KB	LB	LC	N
5	61	47	60	20	15	10		4
10	66	52	64,5	20	20	10		4
15	71	57	69,5	30	25	20		4
20	76	62	75	30	30	20		4
25	81	67	80	40	35	30		4
30	86	72	84,5	40	40	30		4
40	96	82	95	50	50	20	20	6
50	106	92	104,5	60	60	25	25	6
60	116	102	114,5	60	70	30	30	6

**WLH.020**


Strok Stroke	A	AB	AC	JB	KB	LB	LC	N
5	73	57,5	72	20	15	10		4
10	78	62,5	72	20	20	10		4
15	83	67,5	82	25	25	20		4
20	88	72,5	82	25	30	20		4
25	93	77,5	92	40	35	30		4
30	98	82,5	92	40	40	30		4
40	108	92,5	100	50	50	20	20	6
50	118	102,5	113,5	70	60	25	25	6
60	128	112,5	122,5	70	70	30	30	6