

## Düşük Hızlı Yüksek Torklu Hidrolik Motorlar, W11 ve W61 Serileri

### Low Speed High Torque Hydraulic Motors, W11-W61 Series



#### W11 - W61 Serisi Orbit Hidrolik Motorlar / W11-W61 Series Orbit Hydraulic Motor

Oil Distributor	Series	Displacement cc/r [in <sup>3</sup> /r]	Max. Pressure MPa [PSI]	Speed Rpm	Max. Torque Nm [lbf-in]
Spool Valve	W11	50-400 [3.1-24.4]	14 [2030]	145-858	521 [4611]
	W21	50-500 [3.1-30.5]	17 [2465]	110-863	500 [4425]
	W31	100-400 [6.1-24.4]	16 [2320]	121-540	660 [5841]
	W41	245-800 [15.0-48.8]	15 [2175]	106-390	1380 [12214]
Disc Valve	W51	80-500 [4.9-30.5]	28 [4060]	142-856	860 [7612]
	W61	195-985 [11.9-60.1]	31 [4495]	155-865	1877 [16613]

#### Model Correspondance to Other Brands

WINMAN	Sauer Danfoss	Eaton Charlynn	Parker	M+S	SAM
W11	OMP	H Series	OMP	MP / MLHP	BG, BH
W21	OMR	S Series	TC; TB; TE; TH	MR / MLHR	BR, BS, AR
W31	OMH	--	--	--	--
W41	--	--	TF; TL; TG	MH / MLHH	--
W51	OMS	2000 Series	OMS	MS / MLHS	HR
W61	OMT;OMV	6000 Series	OMT	MT / MLHT; MV / MLHV	HT

## Düşük Hızlı Yüksek Torklu Hidrolik Motorlar, W11 Serisi

### Low Speed High Torque Hydraulic Motor, W11 Series

#### Performans Bilgileri

#### Performance Data

- Sürekli
- Aralıklı
- Continuous
- Intermittent

**W11-50 50ml/r**

Flow (LPM)	$\Delta P$ (Mpa)							
	Max. cont. Max. Int.							
	3	6	7	8	10	11	12,5	16,5
8	18	36	42	50	60	72	79	102
15	150	147	144	140	137	127	122	90
	290	285	283	276	275	265	256	230
20	17	37	42	50	62	72	80	107
30	388	385	381	375	372	365	352	332
	15	36	42	50	63	70	81	108
35	584	578	570	566	560	555	546	516
	15	35	42	50	63	68	80	106
45	680	675	670	662	654	646	640	610
	14	34	40	48	62	70	80	
50	878	868	863	856	849	840	830	
	13	35	40	48	63			
	970	960	955	950	942			

**W11-63 63ml/r**

Flow (LPM)	$\Delta P$ (Mpa)							
	Max. cont. Max. Int.							
	3	6	7	8	10	11	12,5	16,5
8	22	46	54	62	76	91	98	126
15	125	124	123	121	118	116	113	72
	22	46	54	60	76	91	104	132
20	233	231	229	227	224	222	219	185
	20	46	54	63	78	90	100	134
30	310	309	307	305	301	298	294	263
	20	45	53	63	79	88	102	135
35	465	463	462	460	457	455	451	409
	19	44	53	63	79	84	100	133
45	543	540	539	537	533	531	528	484
	18	42	50	60	78	88	100	
50	705	702	700	698	695	693	689	
	16	44	50	60	79			
	781	778	776	774	770			

**W11-80 80ml/r**

Flow (LPM)	$\Delta P$ (Mpa)							
	Max. cont. Max. Int.							
	3	6	7	8	10	11	12,5	16,5
8	28	60	70	80	100	110	128	168
15	97	93	92	89	84	80	75	50
	28	61	70	80	100	114	128	170
20	184	181	178	174	169	166	160	140
	27	60	70	80	100	112	129	170
30	246	243	240	238	234	230	223	205
	26	60	69	79	100	110	128	170
35	370	366	363	360	354	350	345	323
	25	58	67	77	100	110	126	170
45	432	426	424	420	415	411	405	385
	23	53	65	77	95	108	124	168
50	554	550	546	541	536	530	524	503
	20	55	65	75	95	105	123	168
60	616	608	606	603	599	593	585	560
	19	53	62	75	95	108		
75	741	732	727	722	717	712		
	16	47	60	70	90			
	825	820	815	810	808			

**W11-100 100ml/r**

Flow (LPM)	$\Delta P$ (Mpa)							
	Max. cont. Max. Int.							
	3	6	7	8	10	11	12,5	16,5
8	35	74	88	100	126	140	160	210
15	78	75	73	70	64	68	56	35
	35	74	85	100	126	140	160	212
20	150	145	144	141	137	133	129	110
	34	74	88	100	125	145	161	212
30	197	195	193	190	189	183	178	160
	33	71	85	95	123	138	158	212
35	295	294	293	290	288	283	279	259
	29	70	81	95	120	135	155	212
45	347	345	344	342	337	335	330	310
	30	66	80	93	120	133	155	208
50	445	443	442	439	435	432	426	405
	25	66	79	93	118	134	152	
60	498	495	493	491	485	480	476	
	22	65	75	93	116	132		
75	599	594	589	587	584	577		
	20	58	75	88	113			
	674	666	663	660	655			

**W11-315 315ml/r**

Flow (LPM)	$\Delta P$ (Mpa)					
	Max. cont. Max. Int.					
	3	6	7	8	10	12,5
8	115	244	282	312	388	
15	25	24	22	17	13	
	116	243	284	324	406	503
20	46	46	45	43	40	20
	114	242	282	325	405	505
30	62	62	61	57	56	44
	109	238	276	320	400	500
35	93	93	92	90	88	76
	105	232	273	314	398	498
45	109	108	107	105	103	93
	100	225	268	310	390	490
50	140	140	138	136	135	125
	92	218	262	306	384	486
60	156	155	154	153	150	140
	89	215	258	300	378	
75	188	187	186	184	180	
	69	195	236	278		
	236	235	233	232		

**W11-400 400ml/r**

Flow (LPM)	$\Delta P$ (Mpa)					
	Max. cont. Max. Int.					
	3	6	7	8	8,5	12,5
8	147	305	355			
15	19	18	17			
	147	308	359	406	435	531
20	38	37	35	33	32	26
	144	305	358	408	435	510
30	49	49	47	45	43	37
	137	300	352	400	433	528
35	73	73	72	70	68	63
	135	294	345	395	425	525
45	85	85	84	82	81	73
	130	286	339	390	420	515
50	110	110	108	106	105	100
	117	278	330	382	410	
60	124	124	122	120	119	
	112	274	326	378	402	
75	148	148	147	146	145	
	88	246	298	350		
	185	185	184	182		

**Not:** Tüm testler hidrolik ya ve 50°C de yapılmıştır. Çalışma şartlarına göre değerler farklılık gösterebilir.

**Note:** All the data are tested at 50°C with N68 anti-wear hydraulic oil. Actual data may vary slightly from unit to unit in production.

## Düşük Hızlı Yüksek Torklu Hidrolik Motorlar, W11 Serisi

### Low Speed High Torque Hydraulic Motor, W11 Series

#### Özellikler / Specifications

Depasman Displacement cm <sup>3</sup> /r [in <sup>3</sup> /r]		50 [3.1]	63 [3.8]	80 [4.9]	100 [6.1]	125 [7.6]	160 [9.8]	200 [12.2]	250 [15.3]	315 [19.2]	400 [24.4]
Akış Flow LPM [GPM]	Cont.	38 [8]	45 [10]	58 [13]	58 [13]	58 [13]	58 [13]	58 [13]	58 [13]	58 [13]	58 [13]
	Int.	45 [11]	53 [12]	69 [15]	69 [15]	69 [15]	69 [15]	69 [15]	69 [15]	69 [15]	69 [15]
Max. Hız Max. Speed (RPM)	Cont.	698	663	685	560	456	356	285	236	179	145
	Int.	858	775	820	671	548	426	341	282	210	173
Basınç Pressure ^ Bar [ ^ PSI]	Cont.	125 [1813]	125 [1813]	125 [1813]	125 [1813]	125 [1813]	125 [1813]	110 [1595]	100 [1450]	90 [1305]	90 [1305]
	Int.	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	125 [1813]	125 [1813]	125 [1813]	125 [1813]	110 [1595]
Tork Torque Nm [lbf-in]	Cont.	74 [655]	87 [770]	124 [1097]	155 [1372]	194 [1717]	227 [2009]	282 [2496]	302 [2673]	365 [3230]	456 [4036]
	Int.	86 [761]	98 [867]	141 [1248]	176 [1558]	221 [1956]	260 [2301]	318 [2814]	383 [3390]	406 [3593]	521 [4611]

#### Not:

1. Intermittent (aralıklı) hidromotor aralıklı olarak pik basınca çıkış de eridir. Continuous (sürekli) hidromotor sürekli belirtilen basınçlarda çalışabilir.
2. Motorda yüksek basınç ve maksimum hız altında çalışma olmamalıdır.
3. Çalışma süresi pik basınçta normal sürenin %10'unu geçmemelidir.
4. Önerilen hidrolik ya ı, viskozite 37-73 cSt, temizlik ISO18/13 olmalıdır.
5. Maksimum çalışma sıcaklı ı 80 °C'dir.
6. Maksimum çalışma basıncı %40 altında bir saat tam kapasite ile çalışması tavsiye edilir.
7. İzin verilen maksimum geri basıncı 100 bar, ancak önerilen geri basınç olmamalıdır. Sızıntı hattına 50 bar kapasiteli boru gerekmektedir.

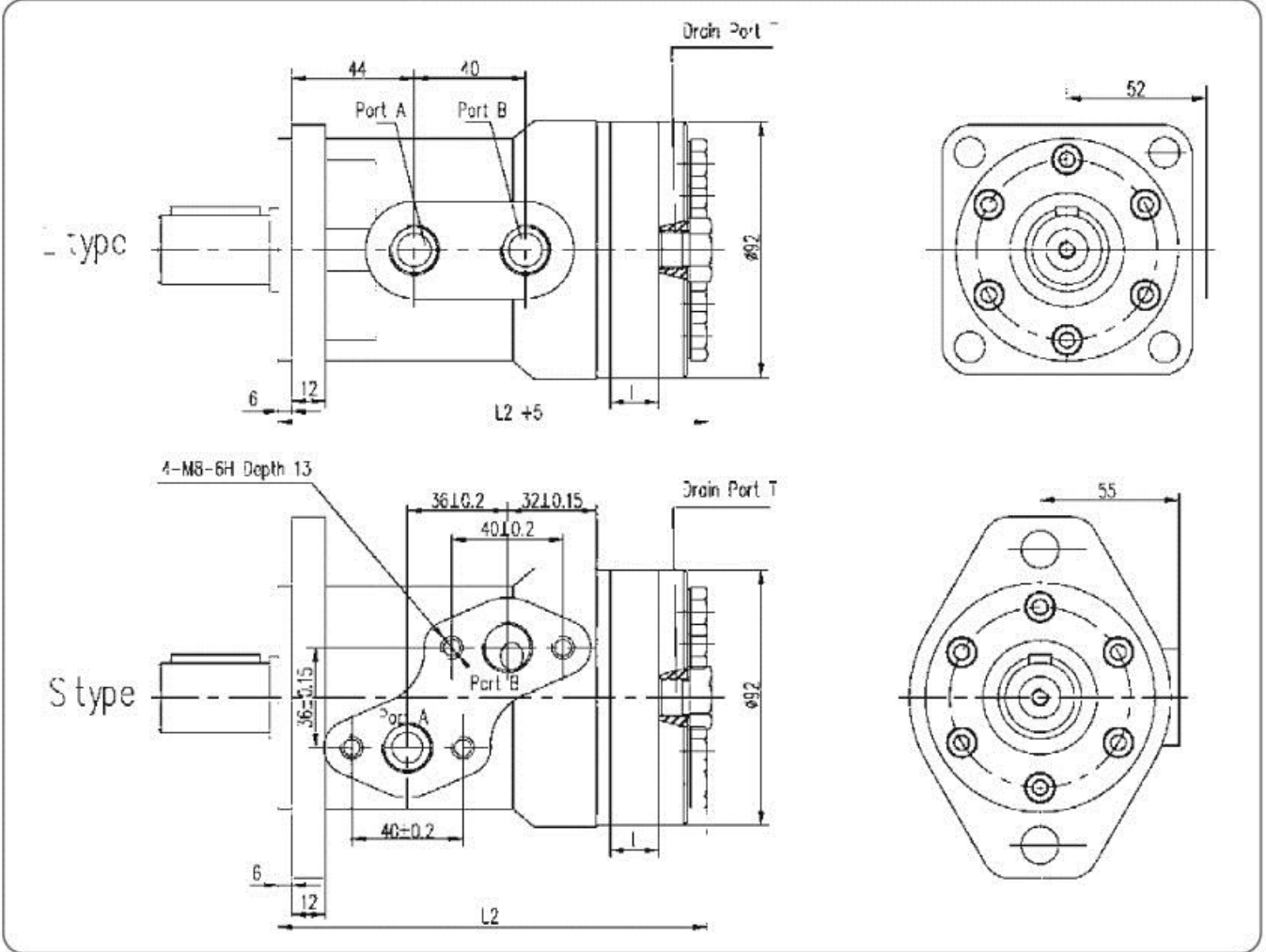
#### Note:

1. Intermittent means the entrance of the maximum pressure; continuous working pressure means the differential pressure.
2. Motor should not work under the highest pressure and the maximum speed.
3. The running time should not exceed 10% under intermittent working conditions.
4. Recommending N68 anti-wear hydraulic oil, viscosity 37-73cSt, cleanliness ISO18/13.
5. The Maximum working temperature is 80°É.
6. One hour running time under 40% of maximum working pressure is recommended before full capacity working.
7. The maximum allowable back pressure is 10MPa, but the recommended back pressure should not exceed 5MPa.a leaking pipes is needed when exceeding.

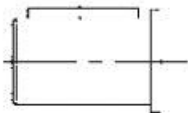
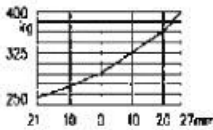


**Düşük Hızlı Yüksek Torklu Hidrolik Motorlar, W11 Serisi**  
**Low Speed High Torque Hydraulic Motor, W11 Series**

**Ölçme ve montaj bilgileri / Dimensions and mounting data**



**Şaft yük kapasitesi**  
**Shaft Load Capacity**  
 Radial Load: 400Kg Max.  
 Axis load: 200 Kg max.

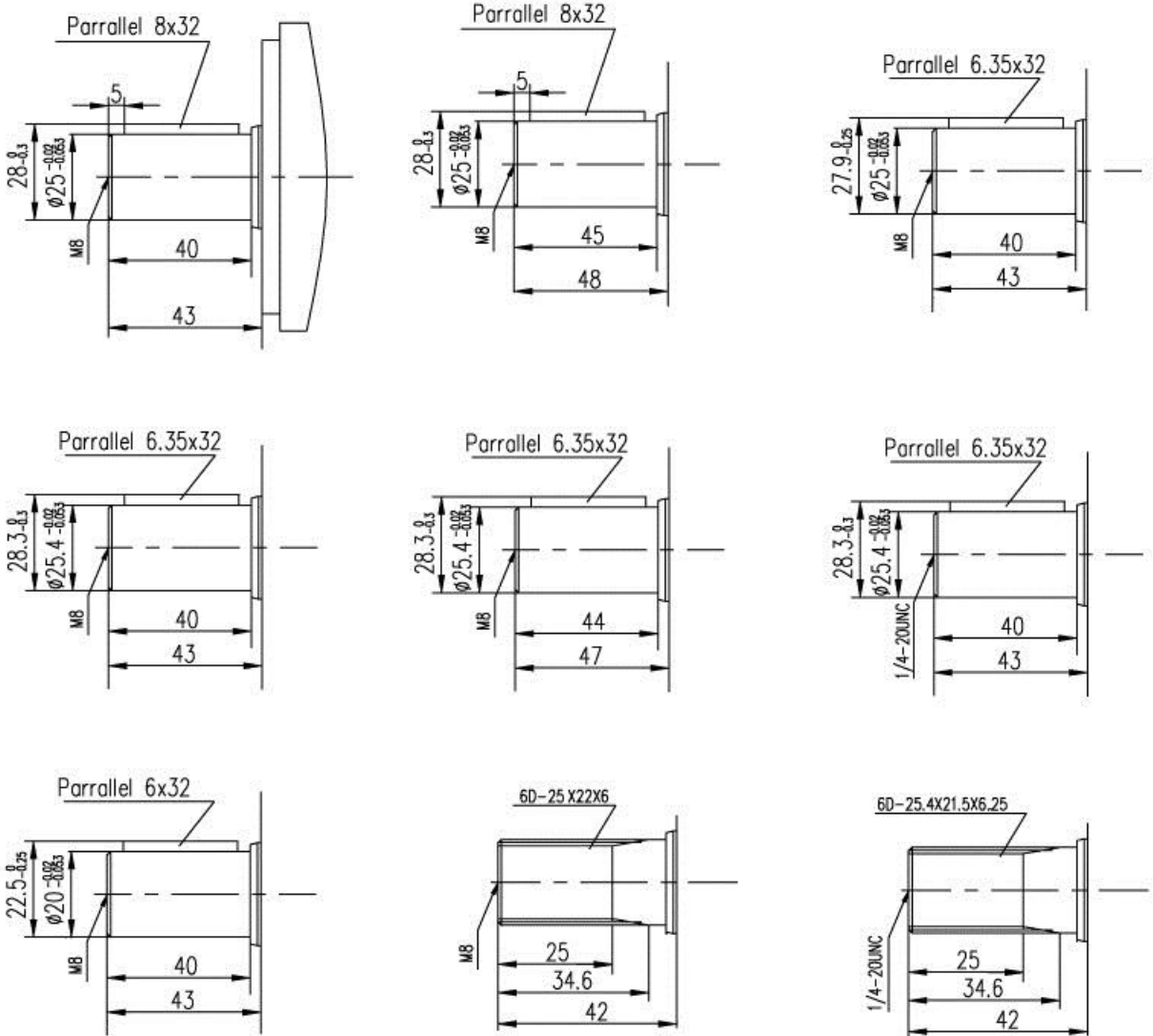


Displacement	50	63	80	100	125	160	200	250	315	400
L	9	11.5	14.5	17.8	23	29	37	46	57	72
L1	143	146	147.5	151	156	162	170	179.5	190.5	205
L2	148	151	152.5	158	161	167	175	184.5	184.5	210

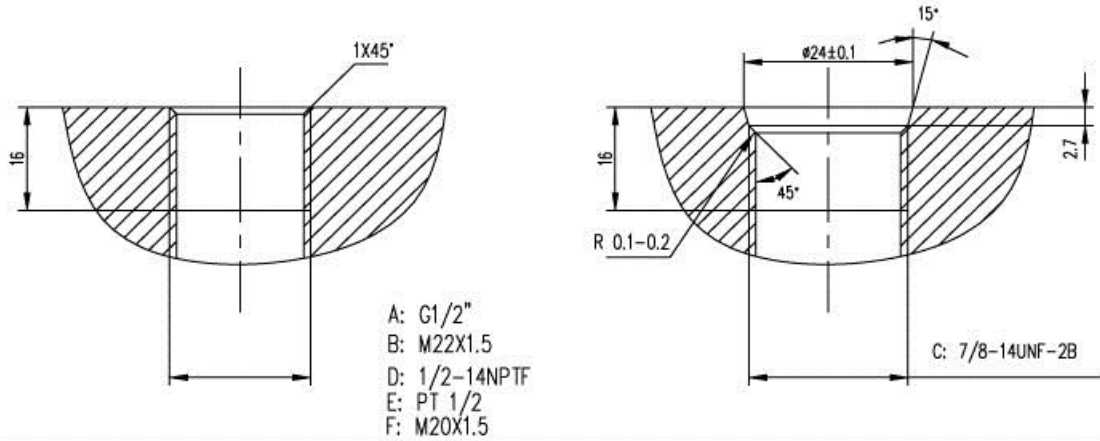
**Milinin dönme yönü: standart şaftın dönüşü, motor mili ucu bakarak,**  
**"A" portu saat yönünde "B" portu saat yönü tersi**  
 Direction of shaft rotation: standart when facing shaft end of motor, shaft rotation  
 Clockwise when port "A" is pressurized, Counter-clockwise port "B" is pressurized

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**Şaft / Shaft**

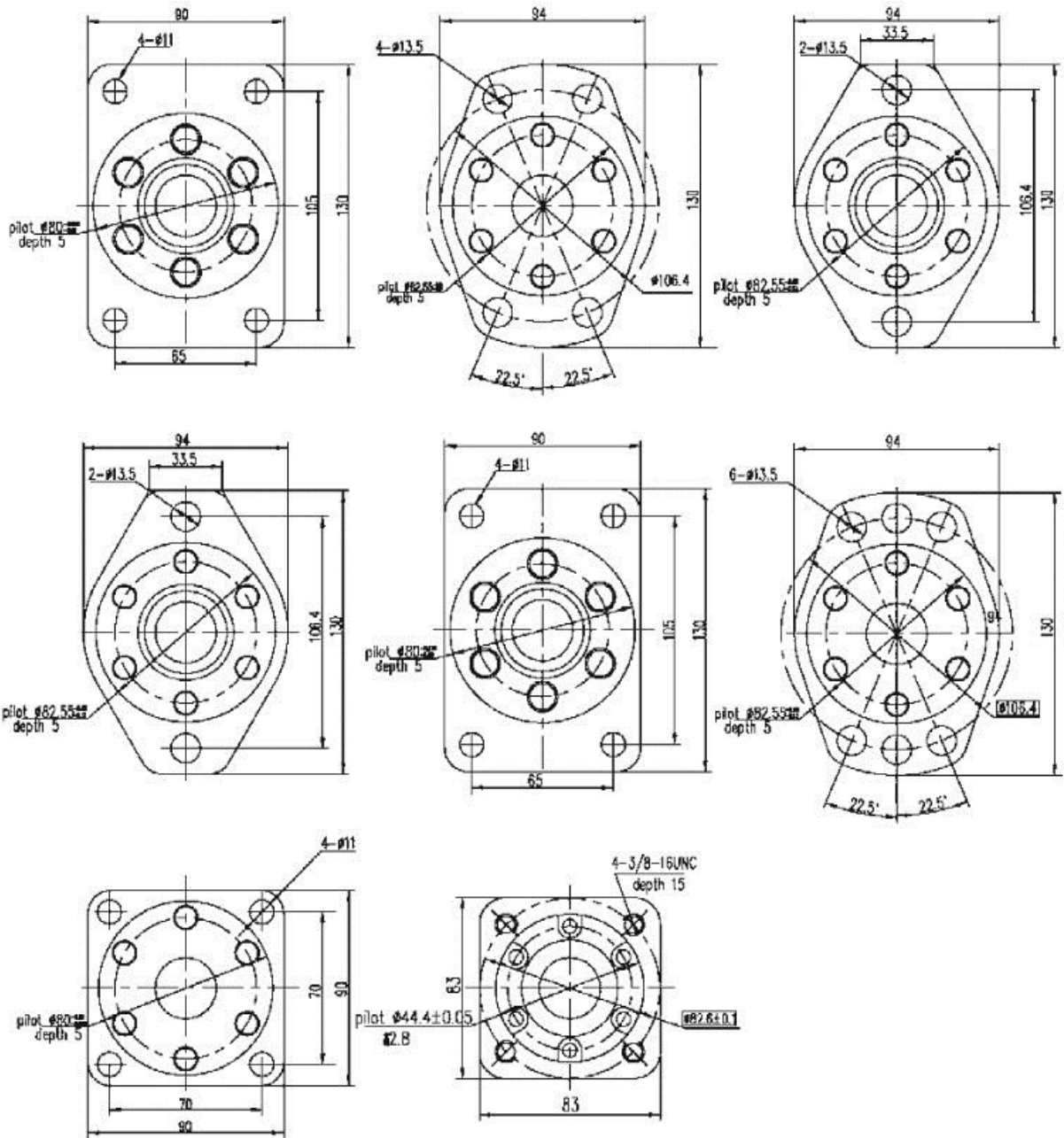


**Port**



**Düşük Hızlı Yüksek Torklu Hidrolik Motorlar, W11 Serisi**  
**Low Speed High Torque Hydraulic Motor, W11 Series**

**Montaj Flaşları / Mounting Flange**



## Düşük Hızlı Yüksek Torklu Hidrolik Motorlar, W11 Serisi

### Low Speed High Torque Hydraulic Motor, W11 Series

#### Opsiyonel Ölçüler Kod Numaraları / Code Numbers for Optional Dimensions

Descriptions			Displacement / No.									
Flange	Shaft	Oil Port	50	63	80	100	160	200	125	250	305	400
Rhomb-flange Pilot $\Phi 82.55$ with Dust Plate	$\Phi 25.$ ,parallel key:8;shaft thread:M8	G1/2" Drain port G1/4	11 - 02 80	-02 81	-02 82	-02 83	-02 84	-02 85	-02 8a	-02 86	-02 87	-02 88
Rhomb-flange Pilot $\Phi 82.55$	$\Phi 25.4$ ,parallel key:6.35;shaft thread:1/4-20 UNC	G1/2"	11 - 00 20	-00 21	-00 22	-00 23	-00 24	-00 25	-00 2a	-00 26	-00 27	-00 28
Square-flange Pilot $\Phi 80$ ,	$\Phi 25.$ ,parallel key:8;shaft thread:M8	M18X1.5 without drain port	11 - 00 30	-00 31	-00 32	-00 33	-00 34	-00 35	-00 3a	-00 36	-00 37	-00 38
Rhomb-flange Pilot $\Phi 82.55$	$\Phi 25.$ ,parallel key:8;shaft thread:M8	M18X1.5, Drain port M14X1.5	11 - 00 40	-00 41	-00 42	-00 43	-00 44	-00 45	-00 4a	-00 46	-00 47	-00 48
Rhomb-flange Pilot $\Phi 82.55$	$\Phi 25.$ ,parallel key:8;shaft thread:M8	G1/2", Drain port M14X1.5	11 - 00 80	-00 81	-00 82	-00 83	-00 84	-00 85	-00 8a	-00 86	-00 87	-00 88
Square-flange Pilot $\Phi 80$ ,	6D-25X22X6; shaft thread:M8	M18X1.5, Drain port M14X1.5	11 - 11 10	-111 1	-111 2	-111 3	-111 4	-111 5	-111 a	-111 6	-111 7	-111 8
Rectangular-flange Pilot $\Phi 85$ , with Dust Plate	6D-25X22X6; shaft thread:M8	M20X1.5, Drain port M14X1.5	11 - 11 40	-11 41	-11 42	-11 43	-11 44	-11 45	-11 4a	-11 46	-11 47	-11 48
Rhomb-flange Pilot $\Phi 82.55$	$\Phi 25.$ ,parallel key:8;shaft thread:M8	G1/2"	11 - 01 60	-01 61	-01 62	-01 63	-01 64	-01 65	-01 6a	-01 66	-01 67	-01 68
Square-flange Pilot $\Phi 80$ ,	$\Phi 25.$ ,parallel key:8;shaft thread:M8	G1/2"	11 - 01 70	-01 71	-01 72	-01 73	-01 74	-01 75	-01 7a	-01 76	-01 77	-01 78
Square-flange Pilot $\Phi 80$ , with Dust Plate	$\Phi 25.$ ,parallel key:8;shaft thread:M10	M18X1.5 Drain port M14X1.5	11 - 05 20	-05 21	-05 22	-05 23	-05 24	-05 25	-05 2a	-05 26	-05 27	-05 28
Rhomb-flange Pilot $\Phi 82.55$	$\Phi 25.4.$ ,parallel key:6.35;shaft thread:M8	G1/2"	11 - 01 80	-01 81	-01 82	-01 83	-01 84	-01 85	-01 8a	-01 86	-01 87	-01 88
Square-flange Pilot $\Phi 80$ , with Dust Plate	$\Phi 25.$ ,parallel key:8;shaft thread:M8	M18X1.5 Drain port M14X1.5	11 - 01 20	-01 21	-01 22	-01 23	-01 24	-01 25	-01 2a	-01 26	-01 27	-01 28
Rhomb-flange Pilot $\Phi 82.55$ , with Dust Plate	$\Phi 25.$ ,parallel key:8;shaft thread:M8	M18X1.5, Drain port M14X1.5	11 - 00 50	-00 51	-00 52	-00 53	-00 54	-00 55	-00 5a	-00 56	-00 57	-00 58
Rhomb-flange Pilot $\Phi 82.55$ , with Dust	$\Phi 25.$ ,parallel key:8;shaft thread:M8	G1/2" Drain port M14X1.5	11 - 02 30	-02 31	-02 32	-02 33	-02 34	-02 35	-02 3a	-02 36	-02 37	-02 38

## Düşük Hızlı Yüksek Torklu Hidrolik Motorlar, W11 Serisi

### Low Speed High Torque Hydraulic Motor, W11 Series

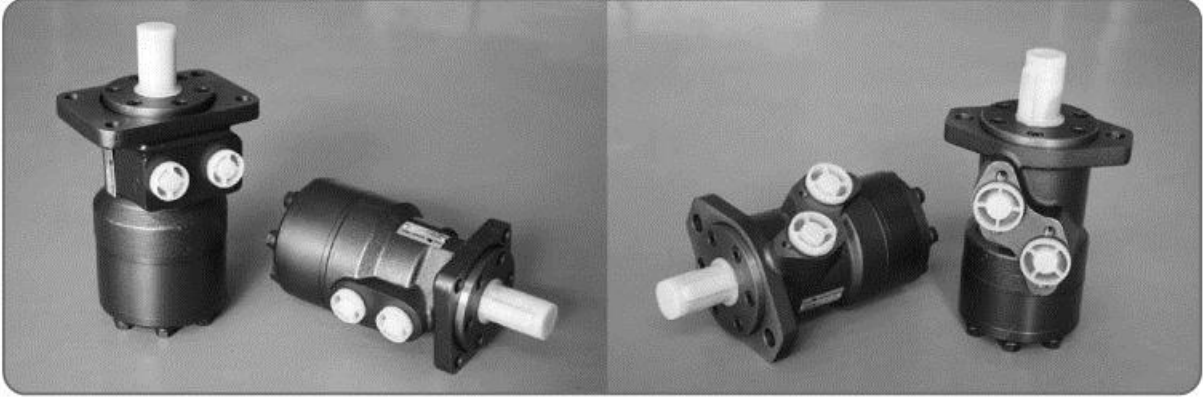
Plate													
Rhomb-flange Pilot Φ82.55, center diatance 110.5	Φ25.,parallel key:8;shaft thread:M8	G1/2"	11 - 01 90	-01 91	-01 92	-01 93	-01 94	-01 95	-01 9a	-01 96	-01 97	-01 98	
Rhomb-flange Pilot Φ82.55	Φ25.,parallel key:8;shaft thread:M8	G1/2" Drain port M14X1.5	11 - 03 50	-03 51	-03 52	-03 53	-03 54	-03 55	-03 5a	-03 56	-03 57	-03 58	
Rhomb-flange Pilot Φ82.55	Φ25.4.,parall el key:6.35;shaf t thread:M8	G1/2"	11 - 03 40	-03 41	-03 42	-03 43	-03 44	-03 45	-03 4a	-03 46	-03 47	-03 48	



## Düşük Hızlı Yüksek Torklu Hidrolik Motorlar, W11 Serisi

### Low Speed High Torque Hydraulic Motor, W11 Series

#### W11 Serisi Hidrolik Motor / W11 Series Hydraulic Motor



#### Tanımı ve Özellikleri

**W11 Serisi** orbit motorlar geroler tip ve küçük hacimli hidrolik motorlardır. Özellikleri aşağıdadır.

- Diğer hidromotorlarla karşılaştırıldığında spool valf ve geroler kartıçlarıyla kompakt ve gelişmiş bir yapıya sahiptir.
- Güvenilir tasarımıyla keçe grubu yüksek basınçta çalışabilir.
- Motor mil dönme hızı ve yönü kolayca ve sorunsuzca kontrol edilebilir.
- 15 dev/dak kadar düşük maliyetli kademeli hız değişimleri sağlanabilir.
- Hidrolik sistemlerde seri yada paralel olarak kullanılabilir.
- Düşük ataleti ve yükte başlamak kolay, pozitif ve negatif dönüşlerde durdurmaya ihtiyaç duymadan yönde işimi mümkündür.
- Ticari uygulamalar için ekonomik, yüksek verimli ve uygundur.
- Montajda çeşitli flanş, mil ve yağ girişi alternatifleri vardır.

#### Description and Features

**W11 Series** orbital hydraulic motors are small volume hydraulic motors with design of spool valve and Geroler element. They have the following product features:

- Advanced design of spool valve and Geroler element, smaller size and compacter structure compared with other type hydraulic motors.
- Credible design of shaft seal, which can bear high pressure.
- Direction of shaft, rotation and speed can be controlled easily and smoothly.
- Stepless speed variation, mini. stable speed could be 15r/m, easy to install, low costs.
- Could be used in parallel or in series connection in the hydraulic systems.
- Low rotation inertia, easy to start with load, both positive and negative rotation being allowed, and no need to stop the rotation for changing the rotation direction.
- High efficiency and economical, suitable for medium duty applications.
- A variety of connection dims. options of flange, output shaft and oil port.

**W11 Serisi** orbital hidrolik motorlar çoklukla çevirme mekanizmaları uygulanan uygulamalarda kullanılır. Tarım makineleri, hafif sanayi, kaldırma ve taşıma, madencilik ve inşaat vb.

- Tarım Makineleri: Kombine biçer döver, tohum eken, döner ekici, çim biçme makinesi, sprey makinesi, yem karıştırma makinesi ve sondaj makinesi vb.
- Balıkçılık Makine: Ağ gırgırları vb.
- Hafif Sanayi Makineleri: Sarma makinesi, tekstil makinesi, baskı makinesi ve ticari çamaşır makine vb.
- İnşaat Makineleri: Yol silindiri, çimento mikseri ve temizleme makinesi vb. gibi çalışma alanları mevcuttur.

**W11 Series** orbital hydraulic motors have wide applications, mainly applied to the slewing mechanisms of machinery in agriculture, light industry, lifting and transportation, mining and construction etc, as below,

- Agricultural machinery: Combined harvester, seed sower, rotary cultivator, lawn mower, spray machine, fodder mixing machine and drilling machine etc.
- Fishing machinery: net hauler.
- Light industrial machinery, reeling machine, textile machine, printing machine and commercial washing machine etc.
- Construction machinery: road roller, cement mixer and sweeper etc.