

WINMAN W10 Serisi Hidromotor / W10 Series Hydraulic Motor



Karakteristik Özellikler / Characteristic Features

W10 series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weight.

Characteristic features:

*Advanced manufacturing devices for the Gerotor gear set, which provides small volume, high efficiency and long life.

*Shaft seal can bear high pressure of motor of which can be used in parallel or in series

*Advanced construction design, high power and low weight.

Main Specification

Type		W10-8	W10-12.5	W10-20	W10-32	W10-40	W10-50
Geometric displacement (cm ³ /rev.)		8.2	12.9	19.9	31.6	39.8	50.3
Max. speed (rpm)	rated	1537	1256	814	513	452	358
	cont.	1950	1550	1000	630	500	400
	int.	2450	1940	1250	800	630	500
Max. torque (N*m)	rated	8	13	19	31	37	33
	cont.	11	16	25	40	45	46
	int.	15	23	35	57	70	88
	peak	21	33	51	64	82	100
Max. output (Kw)	rated	1.3	1.7	1.7	1.7	1.7	1.2
	cont.	1.8	2.4	2.4	2.4	2.2	1.8
	int.	2.6	3.2	3.2	3.2	3.2	3.2
Max. pressure drop (MPa)	rated	9	9	9	9	8.5	6
	cont.	10	10	10	10	9	7
	int.	14	14	14	14	14	14
	peak	20	20	20	16	16	16
Max. flow (L/min)	rated	14	18	18	18	20	20
	cont.	16	20	20	20	20	20
	int.	20	25	25	25	25	25
Weight (kg)		1.9	2	2.1	2.2	2.3	2.4

Type		Max. inlet pressure
W10-8-50 (MPa)	rated	14
	cont.	17.5
	int.	22.5

*Continuous pressure : Max. value of operating motor continuously.

*Intermittent pressure : Max. value of operating motor in 6 second per minute.

*Peak pressure : Max. value of operating motor in 0.6 second per minute.

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Performance Data

W10-8[8.2cm³/rev.]

		Pressure (MPa)					
		3.5	5	7	10	12	14
Flow (L/min)	2	3 228	5 218	8 206	10 156	12 111	14 58
	4	3 474	5 471	7 463	11 426	13 391	15 331
	8	3 953	5 946	7 926	11 884	13 855	15 816
	12	2 1444	5 1426	7 1402	10 1360	13 1324	15 1288
Max.cont	15	4 1912	7 1900	10 1861	12 1833	14 1780	
Max.int	20		6 2395	10 2350	11 2328	14 2281	

W10-12.5[12.9cm³/rev.]

		Pressure (MPa)					
		3.5	5	7	10	12	14
Flow (L/min)	2	6 140	8 136	11 119	16 68	19 35	
	4	6 296	8 289	12 274	17 229	19 200	23 145
	8	5 605	8 596	12 583	17 543	20 514	24 469
	12	5 912	8 905	11 895	16 859	20 834	24 784
Max.cont	15	5 1152	7 1144	11 1136	16 1102	19 1078	23 1036
Max.int	20	3 1542	7 1532	10 1521	15 1500	19 1482	22 1437
	25	2 1910	6 1891	9 1878	14 1848	18 1828	22 1788

W10-20[19.9cm³/rev.]

		Pressure (MPa)						
		1.7	3.5	5	7	10	12	14
Flow (L/min)	2	3 99	9 96	14 89	19 74	26 42	30 21	
	4	4 197	9 191	14 182	19 178	26 134	31 112	36 74
	8	4 398	9 395	13 391	19 377	27 340	31 319	36 288
	12	3 596	8 594	13 588	18 579	26 545	31 523	37 493
Max.cont	15	3 745	8 741	12 738	17 728	25 695	30 684	36 660
Max.int	20	1 998	6 995	11 991	19 985	24 962	29 916	35 885
	20	4 1247	9 1245	14 1242	23 1189	28 1180	33 1176	

W10-32[31.6cm³/rev.]

		Pressure (MPa)						
		2	3.5	5	7	10	12	14
Flow (L/min)	2	7 61	15 27	21 52	28 47	40 16		
	4	7 126	15 121	21 114	29 106	41 82	48 67	57 49
	8	7 250	15 244	21 239	29 231	41 207	49 194	58 167
	12	6 378	13 374	20 369	28 362	40 338	48 322	58 297
Max.cont	15	4 476	12 472	18 468	27 462	39 441	47 429	57 406
Max.cont	20	3 633	10 630	17 627	25 619	37 601	46 585	55 566
Max.int	25	1 791	8 789	15 787	23 783	35 766	43 753	52 732

W10-40[39.8cm³/rev.]

		Pressure (MPa)					
		3	5	7	8.5	10	12
Flow (L/min)	2	16 45	27 40	36 34	44 28	51 17	
	4	16 96	27 93	37 85	44 79	52 65	62 52
	8	15 197	26 195	36 182	44 176	52 166	63 154
	12	14 293	25 287	35 282	43 277	51 268	62 257
Max.cont	15	13 371	24 365	34 360	42 355	50 347	62 338
Max.int	20	10 497	21 492	31 487	39 480	48 472	59 463
	20	7 622	19 617	29 612	37 607	44 600	56 591

W10-50[50.3cm³/rev.]

		Pressure (MPa)				
		1.5	3	5	7	10
Flow (L/min)	2	11 37	23 33	36 27	50 22	
	4	11 76	22 73	36 68	50 63	70 55
	8	11 157	21 154	35 149	50 145	71 137
	12	11 237	20 234	33 231	49 226	71 218
Max.cont	15	10 296	18 295	32 294	47 288	69 282
Max.cont	20	8 395	14 395	29 393	44 390	64 381
Max.int	25	4 498	10 496	25 494	40 490	59 484

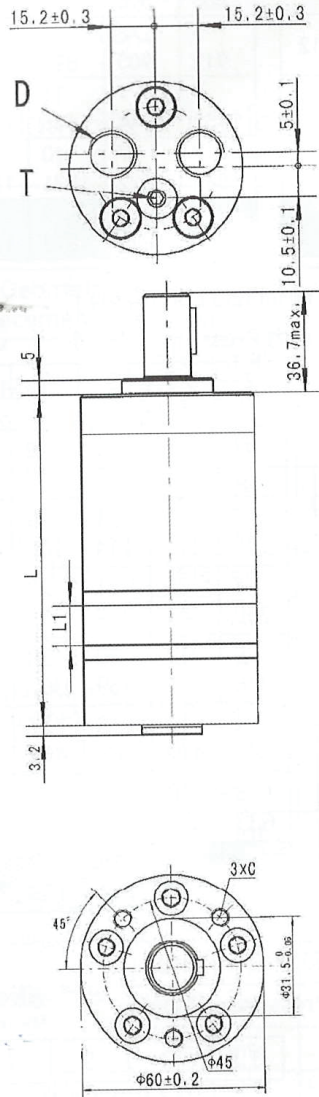
cont.
int.

Torque (N.m)37
Speed (rpm)607

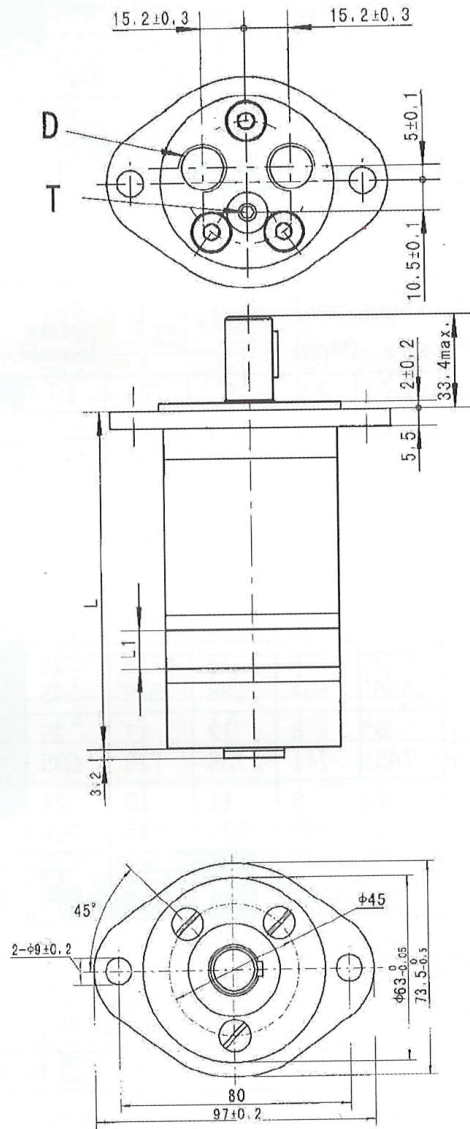
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W10 End Port Dimensions And Mounting Data

M, U Flange



F Flange

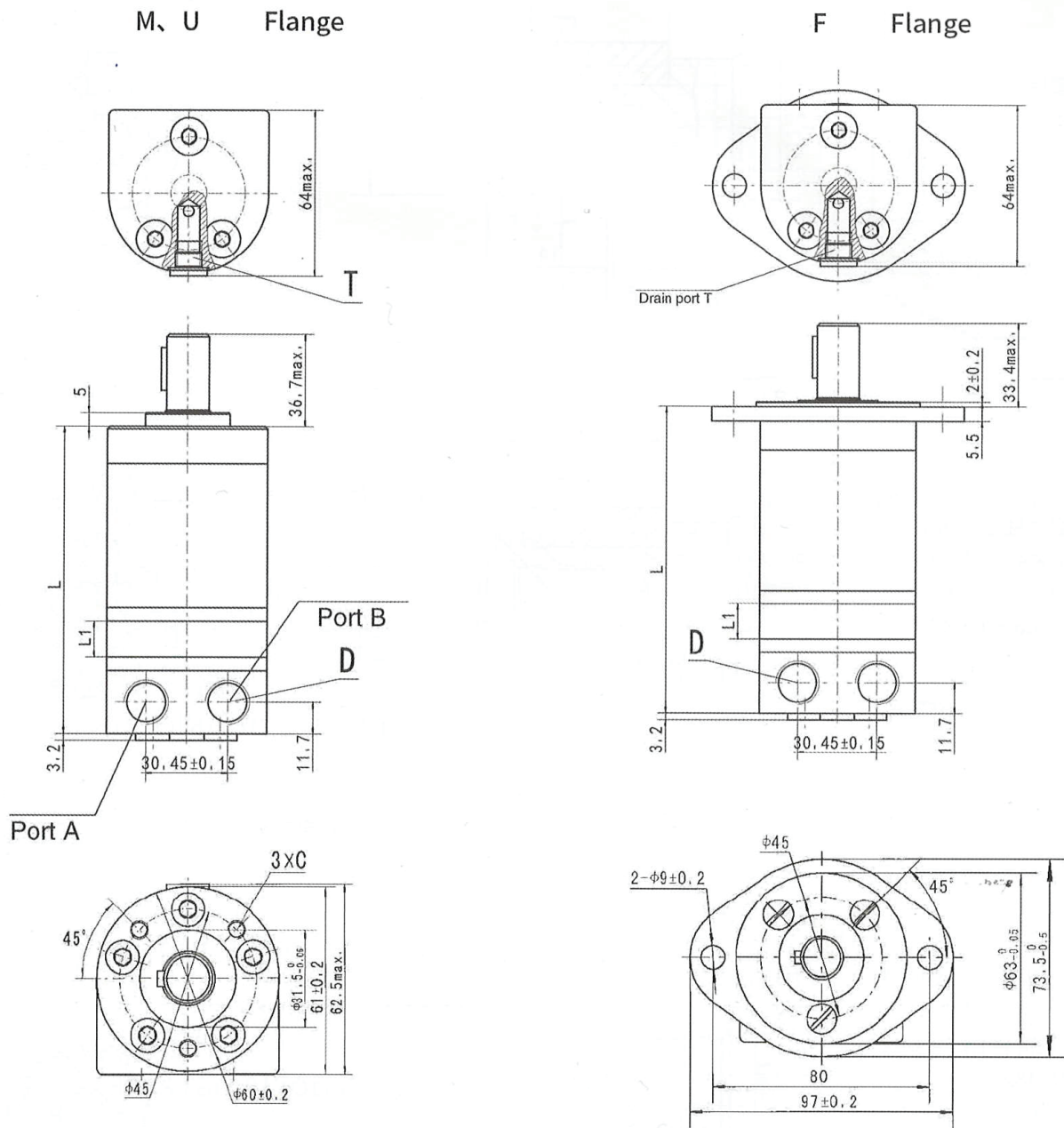


Model	M, U Flange		F Flange	
	L	L1	L	L1
W10-8	104	3.5	107.5	3.5
W10-12.5	106	5.5	109.5	5.5
W10-20	109	8.5	112.5	8.5
W10-32	114	13.5	117.5	13.5
W10-40	117.5	17	121	17
W10-50	122	21.5	125.5	21.5

Code Mounting	M, U Range		F Flange	
	IE (depth)	IU (depth)	IE (depth)	IU (depth)
C	[M] 3-M6 (10)	[U]3-1/4-28UNF-2B(10)	[M]-	[U]-
D	G3/8 (12)	9/16-18UNF(12)	G3/8(12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF (8)	G1/8(8)	3/8-24UNF (8)

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W10 Side Port Dimensions and Mounting Data



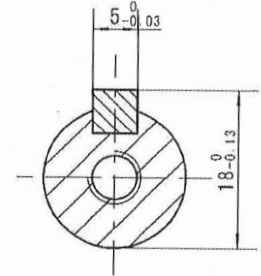
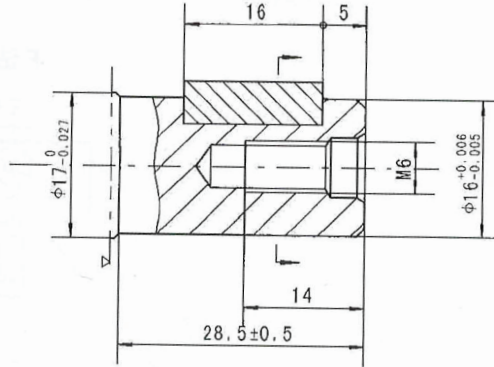
Model	M, U Flange		F Flange	
	L	L1	L	L1
W10-8	105	3.5	108.5	3.5
W10-12.5	107	5.5	110.5	5.5
W10-20	110	8.5	113.5	8.5
W10-32	115	13.5	118.5	13.5
W10-40	118.5	17	122	17
W10-50	123	21.5	126.5	21.5

Code Mounting	M, U Range		F Flange	
	E (depth)	U (depth)	E (depth)	U (depth)
C	[M] 3-M6 (10)	[U]3-1/4-28UNF-2B(10)	[M]-	[U]-
D	G3/8 (12)	9/16-18UNF(12)	G3/8(12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF (8)	G1/8(8)	3/8-24UNF (8)

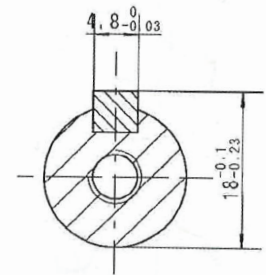
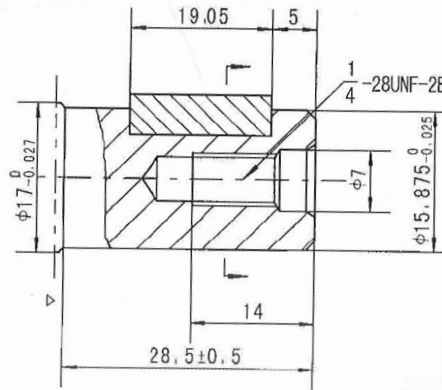
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W10 Shaft Extensions For W10 Motors

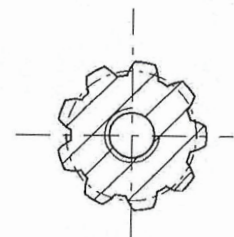
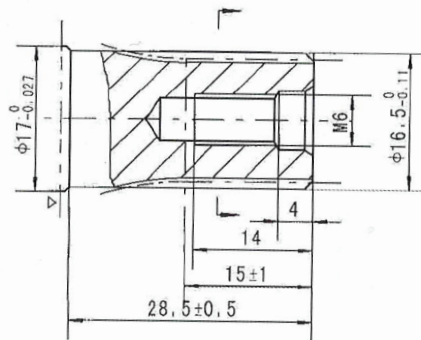
Shaft A: Cylindrical shaft $\phi 16$
Parallel key $5 \times 5 \times 16$



Shaft B: Cylindrical shaft $\phi 15.875$
Parallel key $4.8 \times 4.8 \times 19.05$



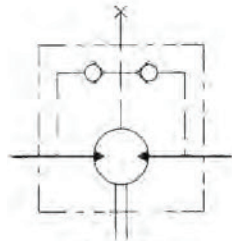
Shaft C: Involute splind shaft
B17 × 14 DIN 5482



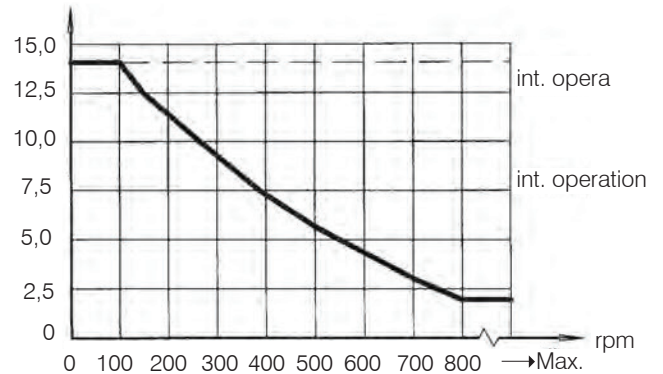
Motor Mounting Surface

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Permissible Shaft Seal Pressure



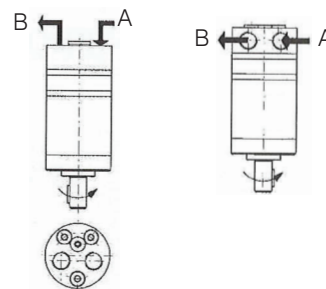
motor illustrative diagram



In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:
 Clockwise when port "A" is pressurized.
 Counter-clockwise when port "B" is pressurized.



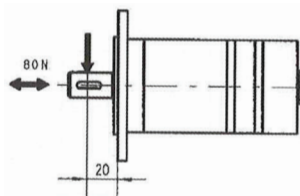
W10 End Port

W10 Side Port

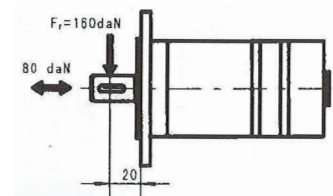
Status of the shaft's radial force

$$Fr = \frac{130400}{61,5+L} \text{ N}$$

$$Fr = \frac{13040}{61,5+L} \text{ daN}$$



Fr=(N)
 L=(mm)
 n=(rpm)
 L=15mm
 L=20mm



Fr=Radial Force(daN)
 L=Distance (mm)
 n=Speed (rpm)
 Max, force load
 Rhomb-flange L=15mm
 Square-flange L=20mm

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Order Information



Pos.1	2		3		4		5		6		7		8	
Code	Displacement	Flange		Output shaft		Ports and drain port		Rotation direction		Paint		Unusually function		
	8													
	12.5	M	3-M6 Circle-flange, pilot Ø31.5x5	A	Shaft Ø16, parallel key 5x5x16	E	G3/8, G1/8		Omit	Standard				
	20	U	3-1/4-28 UNF Circle flange, pilot Ø31.5x5	B	Shaft Ø15.875, parallel key 4.8x4.8x19.05	U	9/16-18UNF, 3/8-24UNF		R	Opposite		No paint	Omit	Standard
	32	F	2-Ø9 Rhomb-flange, pilot Ø63x2	C	Shaft Ø16.5 involute B17X14, DIN5482	1E	End port G3/8, G1/8					Blue	O	No case drain
	40					1U	End port 9/16-18UNF, 3/8-24UNF					Black	B	
	50											Silver grey	S	

Note: When the table is used, please fill the code of left rows in the table and give us, which the code information is consists of construction, displacement, mounting lange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.