

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

W10-12.5[12.9cm³/rev.]

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

W10-20[19.9cm³/rev.]

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

W10-32[31.6cm³/rev.]

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

W10-40[39.8cm³/rev.]

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

W10-50[50.3cm³/rev.]

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

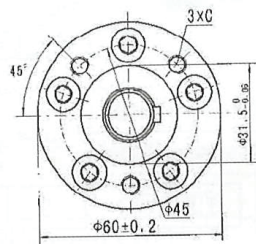
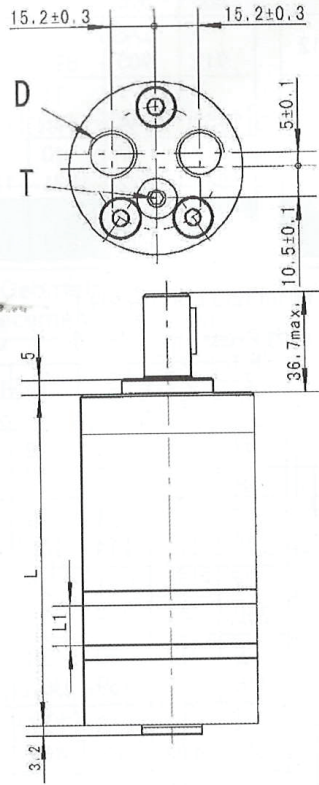
Torque (N.m)37
Speed (rpm)607

cont.
int.

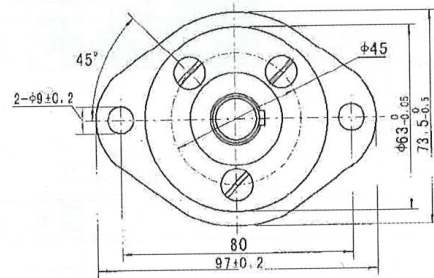
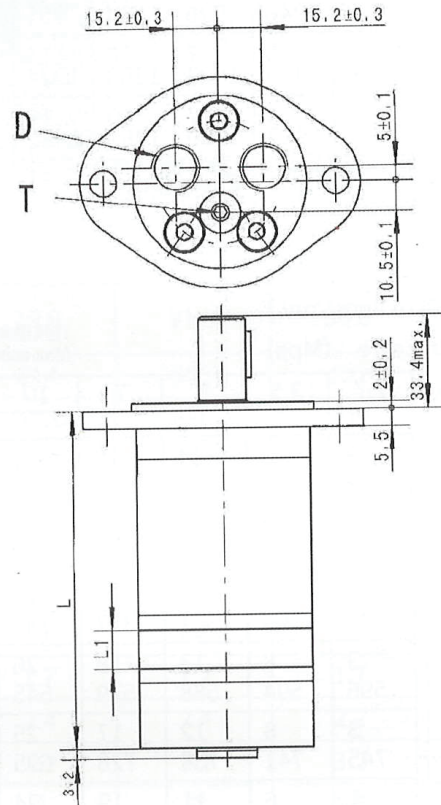
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W10 End Port Dimensions And Mounting Data

M, U Flange



F Flange



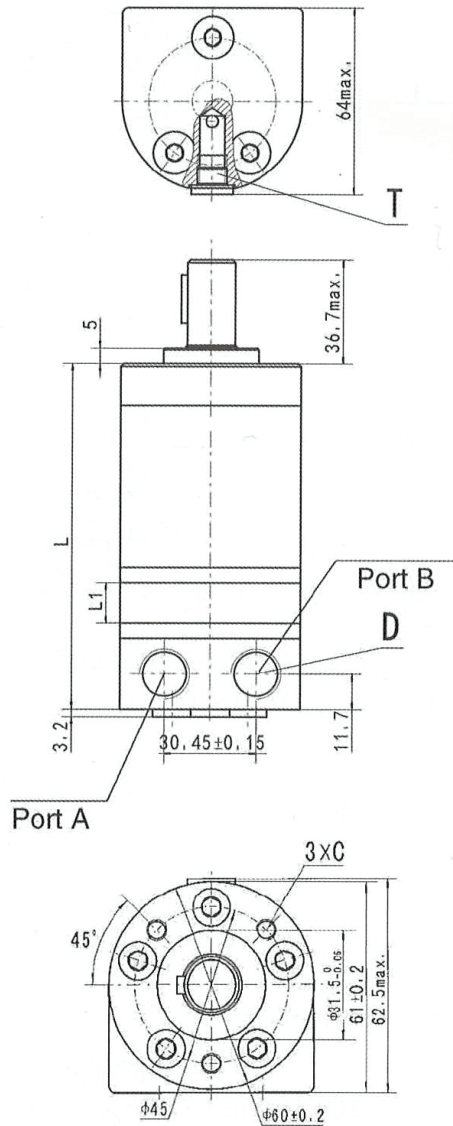
	M, U Flange		F Flange	
Model	L	L1	L	L1
W10-8	104	3.5	107.5	3.5
W10-12.5	106	5.5	109.5	5.5
W10-20	109	8.5	112.5	8.5
W10-32	114	13.5	117.5	13.5
W10-40	117.5	17	121	17
W10-50	122	21.5	125.5	21.5

	M, U Range		F Flange	
Code	IE (depth)	IU (depth)	IE (depth)	IU (depth)
Mounting				
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)

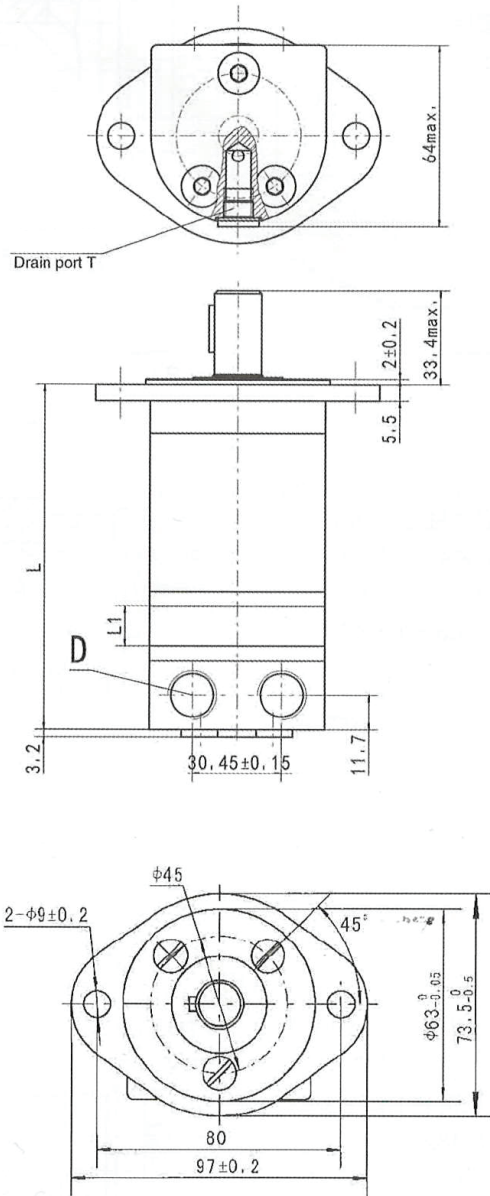
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W10 Side Port Dimsenions and Mounting Data

M, U Flange



F Flange



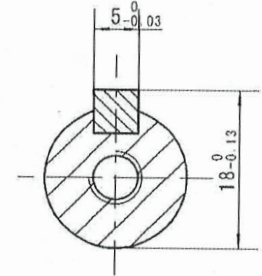
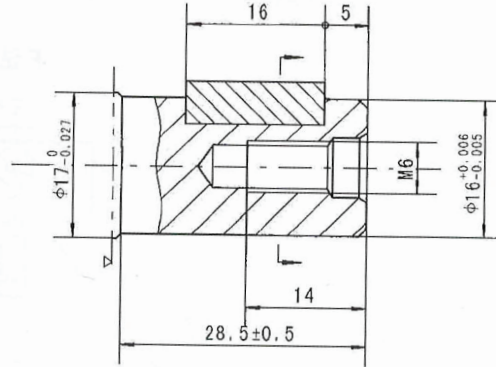
	M, U Flange		F Flange	
Model	L	L1	L	L1
W10-8	105	3.5	108.5	3.5
W10-12.5	107	5.5	110.5	5.5
W10-20	110	8.5	113.5	8.5
W10-32	115	13.5	118.5	13.5
W10-40	118.5	17	122	17
W10-50	123	21.5	126.5	21.5

	M, U Range		F Flange	
Code	E (depth)	U (depth)	E (depth)	U (depth)
Mounting				
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)

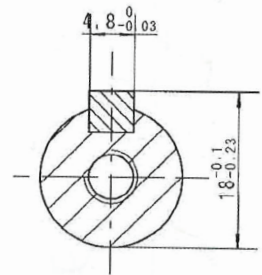
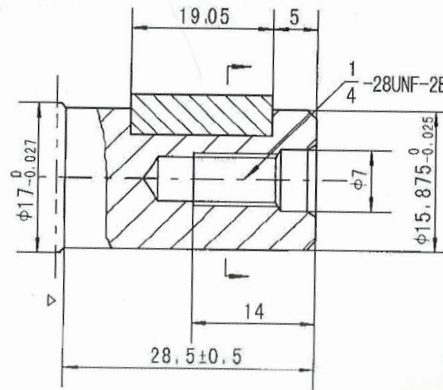
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W10 Shaft Extensions For W10 Motors

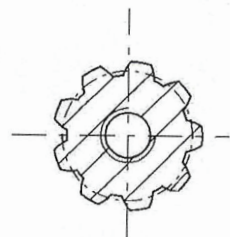
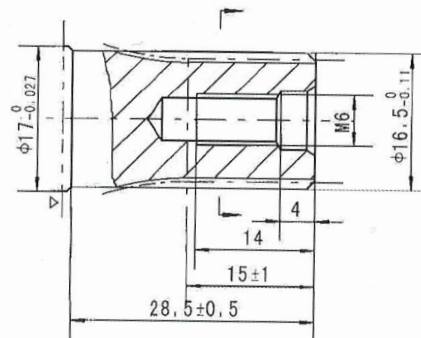
Shaft A: Cylindrical shaft $\phi 16$
Parallel key $5 \times 5 \times 16$



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



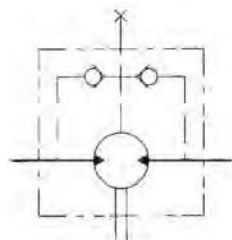
Shaft C: Involute splind shaft
B17 × 14 DIN 5482



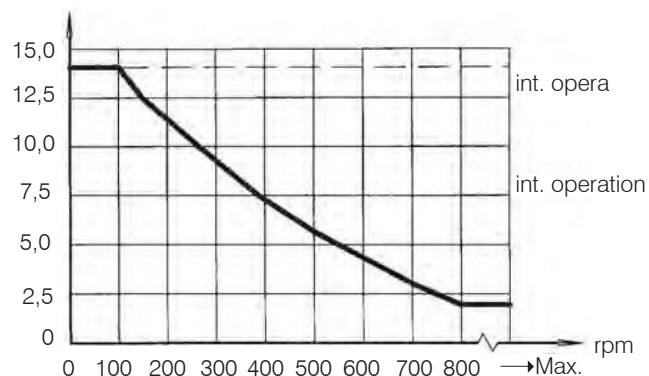
Motor Mounting Surface

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Permissible Shaft Seal Pressure



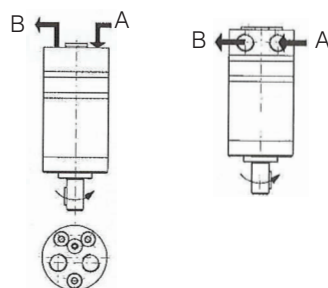
motor illustrative diagram



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 prezzurized.
 Counter-clockwise port "B" is prezzurized.

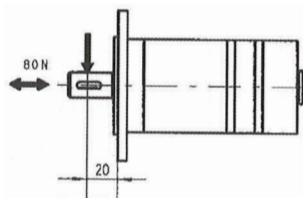


W10 End Port

W10 Side Port

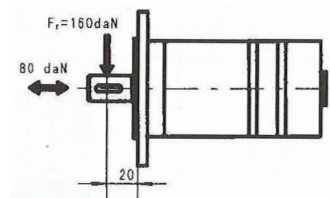
Status of the shaft's radial force

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



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

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



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

1 - 2 - 3 - 4 - 5 - 6 - 7 - 8
 W10

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	No paint	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	Blue	Omit
32	F	2-Ø9 Rhomb-flange, pilot Ø63x2	C Shaft Ø16.5 involute B17X14, DIN5482	1E End port G3/8, G1/8		Black	No case drain
40				1U End port 9/16-18UNF, 3/8-24UNF		Silver grey	
50							

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.