

WINMAN W81-H Serisi Hidrolik Motor / W81-H Series Hydraulic Motor

Karakteristik Özellikler / Characteristic Features

W81-H series motor adapt the advanced Geroler gear set designed with shaft distribution flow, which can autinatşcakky cinoebsate şb operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

Characterstistic features

*Advanced manufacturing devices for the Gerolor gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency

* Shaft seal can bear high pressure of back and the motor can be used in parallel or series.

* Special design in the driver-linker and prolong operating life

* Special desihn for distribution system can meet the requirement of low noise of unit.

* Compact volume and easy installation.

Main Specification

Type		W81-H 200	W81-H 250	W81-H 315	W81-H 400	W81-H 500
Geometric displacement (cm ³ /rev.)		203.2	255.9	316.1	406.4	489.2
Max. speed (rpm)	rated	290	230	180	145	120
	cont.	366	290	236	183	155
	int.	439	348	282	220	184
Max. torque (N*m)	rated	400	500	600	705	670
	cont.	510	621	740	850	830
	int.	579	702	827	990	1040
	peak	651	790	980	1092	1170
Max. output (Kw)	rated	16	16	14	12.5	11
	cont.	18.5	18.5	15.5	15	14
Max. pressure drop (MPa)	rated	14	14	14	12.5	10
	cont.	17.5	17.5	17.5	15.5	12.5
	int.	20	20	20	19	16
	peak	22.5	22.5	22.5	21	18
Max. flow (L/min)	rated	60	60	60	60	60
	cont.	75	75	70	75	75
	int.	90	90	90	90	90
Weight (kg)		10.5	11	11.5	12.3	13

Type		Max. inlet pressure	Max. return with drain line
W81-H 200 - 500 (Bar)	cont.	200	175
	int.	225	100
	peak	250	225

*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.

*Technical data W81-H with 35mm cylindrical, 11/4 in splined and 35mm tapered shaft.

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Performance Data

W81-H 200[203.2cm³/rev.]

		Pressure (MPa)						
		3.5	7	10.5	14	17.5	20	
Flow (L/min)	5	98 25	194 25	284 22				
	10	101 43	204 41	301 36	391 29	482 14		
	20	99 100	201 97	304 93	402 85	509 69	576 56	
	30	97 145	197 143	300 139	402 130	510 114	579 101	
	40	90 200	190 200	292 200	399 188	507 168	578 153	
	50	82 248	183 246	284 244	392 235	500 213	571 199	
	60	73 292	174 290	274 287	384 279	493 260	563 244	
	70	63 352	163 350	264 349	374 338	481 318	554 301	
	Max.cont	75	59 366	157 365	259 363	366 355	475 335	547 319
	Max.int	80	53 381	150 381	253 380	358 371	466 352	538 338
	90	39 443	140 437	241 434	348 426	456 407	526 392	

W81-H 250[255.9cm³/rev.]

		Pressure (MPa)							
		3.5	7	9	12	14.5	17.5	20	
Flow (L/min)	5	121 19	246 19	318 18	398 14				
	10	130 34	258 33	331 31	425 29	515 23	595 12		
	20	130 78	258 77	332 76	432 73	520 65	576 56	702 42	
	30	122 115	251 113	327 111	429 105	520 96	579 101	700 75	
	40	115 157	240 157	223 156	422 150	513 139	578 153	698 114	
	50	105 196	232 195	314 192	411 185	505 173	571 199	687 147	
	60	94 232	220 230	302 226	401 218	496 206	563 244	676 180	
	70	81.4 274	209 274	288 274	389 266	484 252	554 301	666 222	
	Max.cont	75	72 290	203 289	280 287	381 279	475 266	547 319	659 236
	Max.int	80	66 303	194 302	273 298	371 290	467 279	538 338	651 249
	90	49 348	178 347	256 345	355 337	453 325	526 392	634 292	

W81-H 315[316.1cm³/rev.]

		Pressure (MPa)							
		3.5	7	10	13,5	15.5	17.5	20	
Flow (L/min)	5	155 16	325 13						
	10	163 27	342 24	454 18	556 14				
	20	169 63	349 61	469 55	582 48	664 40	733 32	809 19	
	30	165 93	344 89	470 82	580 77	669 67	740 59	824 46	
	40	154 126	337 126	465 119	577 111	663 99	737 88	827 73	
	50	141 159	325 155	455 148	568 139	656 126	728 115	824 98	
	60	121 187	312 186	440 179	555 169	643 154	715 143	812 124	
	70	103 222	298 222	425 215	541 205	631 187	703 176	800 157	
	Max.cont	75	94 236	287 233	417 224	529 215	623 196	696 184	792 166
	Max.int	80	82 246	277 244	406 236	518 228	611 210	688 197	784 174
	90	62 282	256 280	386 275	496 266	593 248	669 234	767 209	

W81-H 400[406.4cm³/rev.]

		Pressure (MPa)						
		3.5	6	10.5	12.5	15.5	19	
Flow (L/min)	5	196 13	348 13	516 10				
	10	205 22	363 21	546 21	702 17	859 11		
	20	209 50	366 49	543 46	708 41	874 36	988 31	
	30	201 73	357 72	542 70	706 63	864 56	984 51	
	40	195 99	346 98	532 96	701 86	858 77	973 71	
	50	173 123	332 122	518 118	687 107	848 97	958 90	
	60	154 146	319 144	501 141	668 128	833 115	944 106	
	70	138 174	305 173	480 169	649 156	814 141	925 130	
	Max.cont	75	128 183	294 181	466 177	637 163	802 149	911 138
	Max.int	80	113 192	277 191	451 188	621 174	786 158	899 144
	90	90 220	256 220	433 215	595 202	767 183	881 165	

Torque (N-m) 593
Speed (rpm) 248

cont
int

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Performance Data

W81-H 500[489.2 cm³/rev.]

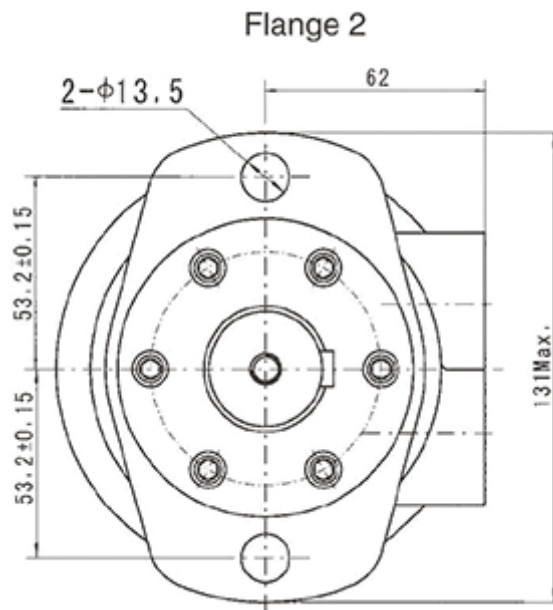
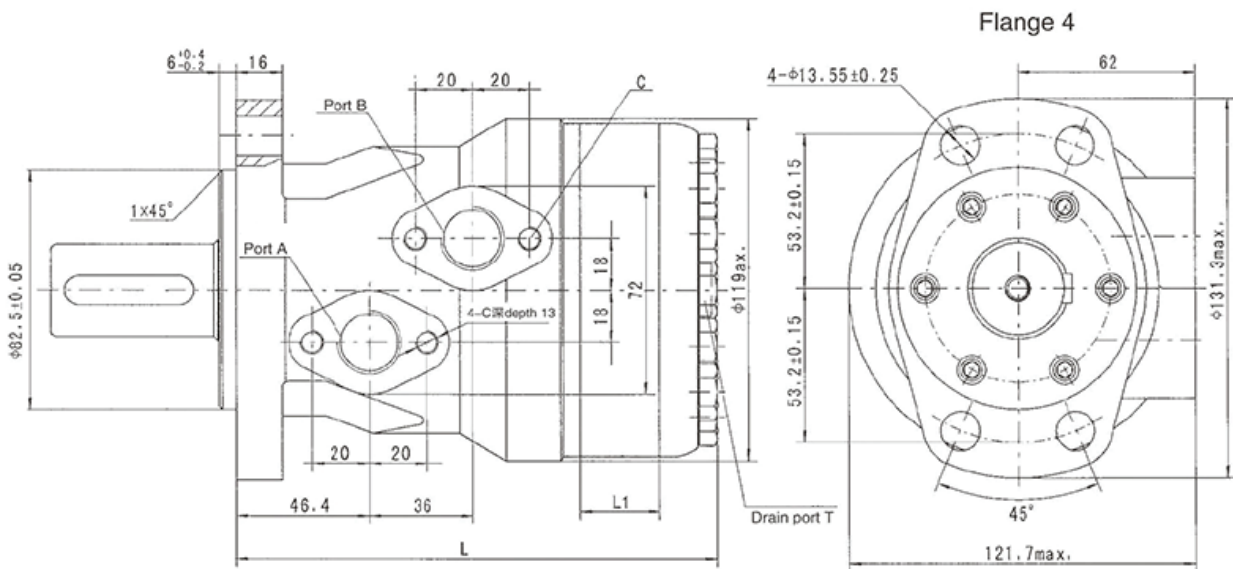
		Pressure (MPa)						
		2.5	5	8.5	10	12.5	16	
Flow (L/min)	5	165 11	317 11	516 8				
	10	178 20	335 19	555 17	669 15	791 13	969 9	
	20	177 42	331 42	559 41	673 38	799 36	988 29	
	30	172 64	320 63	553 61	663 57	792 53	983 47	
	40	163 85	309 85	541 83	654 79	783 75	971 67	
	50	146 103	296 103	523 103	635 97	768 93	954 85	
	60	121 124	275 124	502 123	614 117	747 113	934 103	
	70	97 148	256 148	482 148	597 140	729 134	917 122	
	Max.cont	75	79 155	240 155	469 155	582 152	714 144	902 130
	Max.int	80	60 166	226 166	453 166	570 159	701 153	884 139
	90	34 184	201 183	421 182	550 177	673 166	869 155	

cont
 int

Torque (N.m)673
 Speed (rpm)166

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W81-H Dimensions And Mounting Data

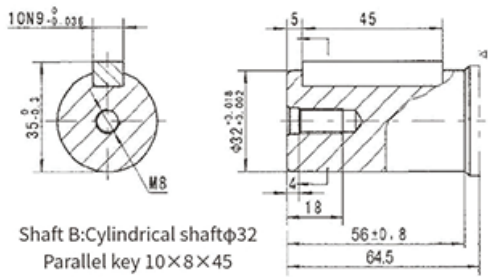


Model	L	L1
W81-H-160	162	21
W81-H-200	168	27
W81-H-250	175	34
W81-H-315	184	42
W81-H-400	195	54
W81-H-500	206	65

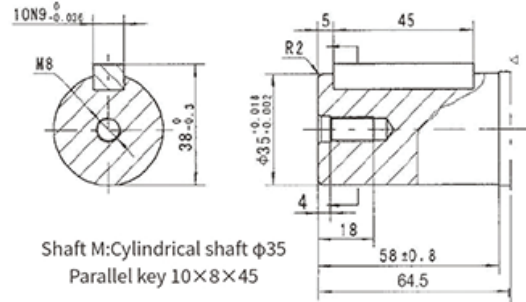
Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
Mounting					
P(A,B)	G1/2(15)	M22X1.5(15)	7/8-14 O-ring(17)	1/2-14NPTF (15)	PT (RC) 1/2 (15)
T	4-M8(13)	4-M8(13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
C	G1/4(12)	M14X1.5(12)	7/16-20UNF(12)	7/16-20UNF (12)	PT(RC) 1/4 1/4

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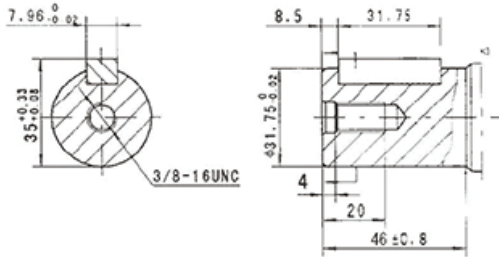
W81-H Shaft Extensions Diminsions Data



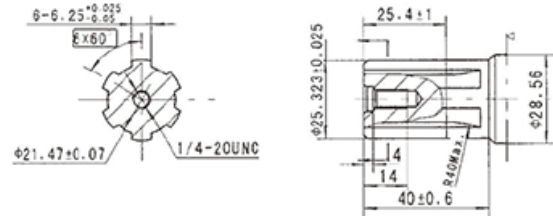
Shaft B: Cylindrical shaft $\phi 32$
Parallel key 10×8×45



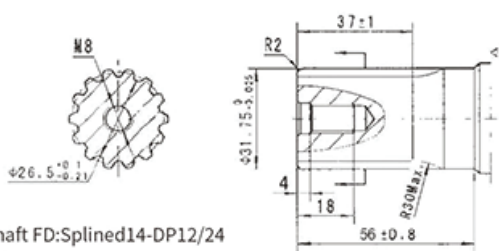
Shaft M: Cylindrical shaft $\phi 35$
Parallel key 10×8×45



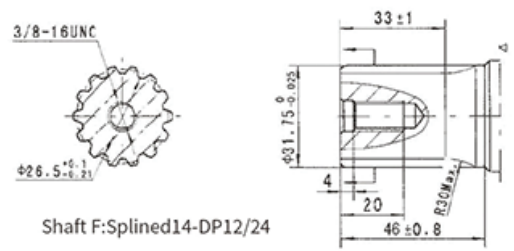
Shaft G: Cylindrical shaft $\phi 31.75$
Parallel key 7.96×7.96×31.75



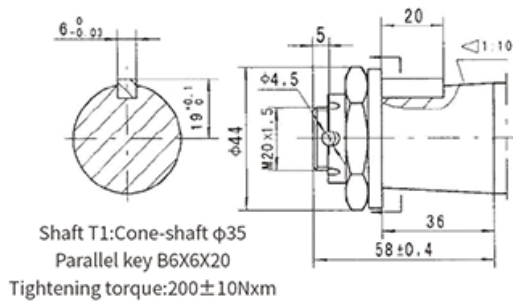
Shaft S: Splined SAE 6B



Shaft FD: Splined 14-DP12/24



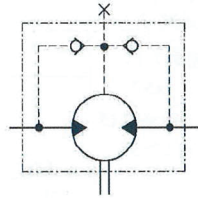
Shaft F: Splined 14-DP12/24



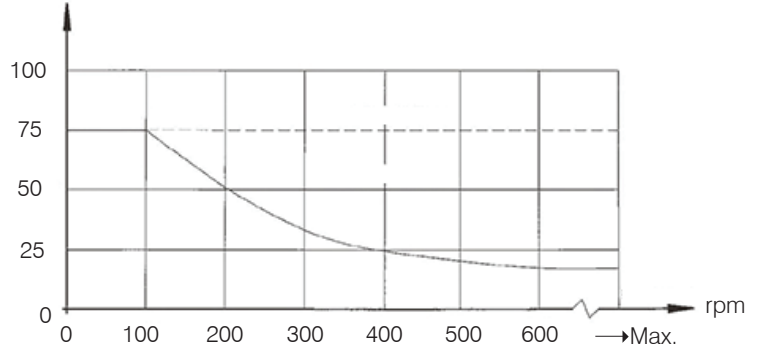
Shaft T1: Cone-shaft $\phi 35$
Parallel key B6X6X20
Tightening torque: 200±10Nxm

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Permissible Shaft Seal Pressure



motor illustrative diagram

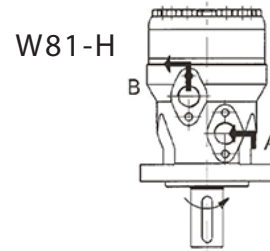


In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Direction of shaft rotation: Standard

Standard direction of shaft rotation:

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



Oil leakage flow of drain port
 The table below shows the Standard configured motor's maximum oil leakage flow of drain port when the drain return line pressure is lower than 0.5 to 1mpa.

Operating pressure difference (MPa)	Oil movement viscosity (mm ² /S)	Leakage flow of drain port (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8

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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
Omit	160	2	B	D	Omit	00	Standard
	200		M	M	Standard	Blue	No drain
	250	4	F	F	Opposite	Black	Free Running
	315		FD	S	R	Silver grey	Low Speed
	400	6	G	P			
	500		T1	S	R		
			S				

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