

DG SERIES

INJECTION MOLDING MACHINE SPECIFICATION



★ Possible combinations of clamp units/injection units **ISO 9001**

SMALL & MEDIUM SIZE

Clamp unit	Injection unit												
KN	30	70	120	170	240	360	460	620	800	1000	1700	2000	2400
250	●☆												
500		●☆	●										
900		●	●	●☆	●								
1200		●	●	●	●☆	●							
1600		●	●	●	●	●☆	●						
2000			●	●	●	●	●☆	●	●				
2400			●	●	●	●	●	●☆	●				
2800						●	●	●	●☆	●			
3200								●	●	●☆			
3500								●	●	●	●☆		
4000										●	●	●☆	
4500										●	●	●	●☆

LARGE SIZE

Clamp unit	injection unit												
KN	1700	2000	2400	2700	3400	4200	4800	5500	7400	9500	12000	15000	18000
5000	●	●	●	●☆									
6500	●	●	●	●	●☆	●							
8500					●	●☆	●	●					
10500					●	●	●☆	●					
13000					●	●	●	●☆					
15000						●	●	●	●☆				
18000									●	●☆	●		
22000											●☆	●	
26000											●	●☆	●

☆ Standard injection combination for each clamp unit



DER GANG MACHINERY CO., LTD.

★ High Performance Standard Specification for DG Series.

NO.	Item	Standard	Optional
Clamping unit			
1	Greasless toggle bushings	○	
2	Automatic greasing	○	
3	High performance mold platen support	○	
4	Hydraulic safety device for mold closing	○	
5	Electrical safety device for mold closing	○	
6	Mechanical safety device for mold closing		●
7	Hydraulic driven mold thickness adjusting system	○	
8	Automatic clamping force adjustment device	○	
9	4 stages of pressure & speed control on open mold	○	
10	4 stages of pressure & speed control on close mold	○	
11	Low pressure mold protecting device	○	
12	Ejection : Standard 、 Vibrating & Half eject	○	
13	Ejector plate return confirmation circuit		●
14	Ejection mode change		●
15	No.1 hydraulic core puller circuit	○	
16	No.2 hydraulic core puller circuit		●
17	No.3 hydraulic core puller circuit		●
18	Cores and mold sets protection		●
19	No.1 air jet		●
20	No.2 air jet		●
21	Hydraulic motor for unscrewing		●
22	Photocell type product chute confirmation		●
23	Automatic safety door opening and closing device		●
24	Drilling of product take-out robot mounting holes		●
25	Circuit for product take-out robot		●
26	Dual function (ejector during mold opening)		●
27	Dual function(screw rotation during mold opening & closing)		●
28	Daylight extension		●
29	T-grooved plate		●
Hydraulic unit & related equipment			
1	Variable pump for energy saving device		●
2	Oil temperature display	○	
3	Oil temperature stabilizer		●
4	Oil filter		●
5	Oil low level alarm		●
6	Oil temperature upper and lower limits alarm	○	
7	Oil preheating circuit	○	
8	"Y" strainer of cooling water		●
9	Mold cooling water with flow indicator		●
10	Mold cooling water with flow controller	○	
Monitor			
1	Cylinder temperature upper and lower alarm	○	
2	Production quantity control	○	
3	Packaging quantity control	○	
4	Abnormal alarm buzzer	○	
5	Abnormal flashlight	○	
6	Upper and lower limit for molding conditions	○	
7	Cycle monitor display	○	
8	Machine process monitor	○	
9	History of alarm (100sets)	○	
10	History of molding conditions value (100sets)	○	

NO.	Item	Standard	Optional
Injection unit			
1	Screw cylinder (one set of H 、 A 、 B or C)	○	
2	Back flow preventing ring	○	
3	Open nozzle	○	
4	Open long nozzle		●
5	Bi-metal cylinder for abrasion		●
6	Bi-metal screw for abrasion		●
7	Screw for rigid PVC		●
8	Shut-off nozzle (Hydraulic)		●
9	Cold start-up prevention	○	
10	Swivel for injection unit	○	
11	Barrel temperature pause changeover function	○	
12	24 hours warm keeping and temperature control	○	
13	PID control on temperature control	○	
14	Automatic purging circuit	○	
15	Retraction select for injection unit	○	
16	Screw suck-back device	○	
17	Automatic residual material (cushion) adjustment	○	
18	1~6 steps injection speed (adjust.)	○	
19	1~6 steps injection pressure (adjust.)	○	
20	1~4 steps holding speed (adjust.)	○	
21	1~4 steps holding pressure (adjust.)	○	
22	1~4 steps holding time (adjust.)	○	
23	1~3 steps screw speed (adjust.)	○	
24	1~3 steps screw back pressure (adjust.)	○	
25	Transfer to holding pressure by sensing injection position	○	
26	Transfer to holding pressure by sensing injection time	○	
27	Transfer to holding pressure by pressure sensor		●
28	Screw revolution display		●
29	Purge cover (with interlock)		●
30	Accumulator circuit for injection		●
31	Servo circuit for injection		●
32	Gas injection circuit		●
33	Flow molding circuit	○	
34	Injection pressure and speed curve display immediately		●
Controller			
1	Color LCD for C-6000 controller	○	
2	80 sets memory of molding conditions	○	
3	200 sets memory of molding conditions		●
4	Data card		●
5	Information printing		●
6	Configuration unit description	○	
7	Panel brightness adjustment	○	
8	Diagnose input and output status	○	
9	Execute input / output detecting	○	
10	Input and output points correction setting	○	
11	Multiple layer password setting	○	
12	Protection key lock parameter setting key board lock up	○	
13	Column setting with cursor	○	
14	Setting changes through panel key	○	
15	4 language switching function (Chinese, English, Spain, Italy)	○	
16	Other language select		●

★DG2400

Clamp unit DG2400/...		
Clamp force	kN	2400
Opening stroke	mm	530
Mold height(min-max)	mm	200-630
Maximum daylight	mm	1160
Distance between tie-bars	mm	530×530
Platen dimensions	mm	800×800
Ejector points		9
Ejector stroke	mm	160
Ejector force	kN	53.8
Oil tank volume	l	450



Injection unit		DG2400/120				DG2400/170			DG2400/240			DG2400/360			DG2400/460			DG2400/620			DG2400/800		
International size		120				170			240			360			460			620			800		
Screw symbol		H	A	B	C	H	A	B	H	A	B	H	A	B	H	A	B	H	A	B	H	A	B
Screw diameter	mm	26	28	30	34	30	34	38	34	38	42	38	42	48	42	48	52	48	52	55	52	55	60
Injection pressure	bar	2702	2330	2030	1580	2333	1816	1454	2325	1861	1523	2421	1982	1517	2332	1786	1522	2138	1822	1629	2143	1915	1610
Theoretical shot volume	cm ³	66	77	88	113	106	136	170	154	192	235	226	277	362	304	398	467	470	552	617	594	665	792
Shot weight(PS)	g	60	69	79	102	95	122	153	138	172	211	203	249	325	273	358	420	423	496	555	534	598	712
Screw L/D ratio		23	21.4	20	17.6	23	20.3	18.2	22.4	20	18.1	22.9	20.7	18.1	22.4	19.6	18.1	22.4	19.6	18.1	20.8	19.6	18
Injection rate	cm ³ /s	96	112	128	163	107	139	172	112	141	172	106	129	169	130	170	200	190	223	250	191	214	254
Plasticizing capacity(PS)	kg/hr	22	30	38	46	38	46	58	50	64	80	70	78	100	84	100	120	110	130	150	130	150	170
Screw revolution	rpm	270				220			300			275			220			220			175		
Temperature control zones		1+3				1+3			1+3			1+3			1+3			1+3			1+3		
Pump driving motor	kW	18.5				18.5			18.5			18.5			22			30			30		
Barrel heating	kW	5.5				6.7			7.2			7.96			8.8			11.2			12.4		
Machine weight	kg	7300				8400			8500			8600			8600			9000			9000		
Machine dimensions	m	5.1×1.36×1.8				5.3×1.42×1.86			5.3×1.42×1.86			5.5×1.42×1.86			5.5×1.42×1.86			5.9×1.42×1.86			5.9×1.42×1.86		

★Standard injection combination for each clamp unit

Selection scheme for injection unit

Clamp unit	2400						
Injection unit	120	170	240	360	460	620	800
Drive power kW(HP)	18.5(25)				22(30)	30(40)	

★DG2800

Clamp unit DG2800/...		
Clamp force	kN	2800
Opening stroke	mm	570
Mold height(min-max)	mm	200-680
Maximum daylight	mm	1250
Distance between tie-bars	mm	560×560
Platen dimensions	mm	830×830
Ejector points		9
Ejector stroke	mm	160
Ejector force	kN	53.8
Oil tank volume	l	500



Injection unit		DG 2800/360		
International size		360		
Screw symbol		H	A	B
Screw diameter	mm	38	42	48
Injection pressure	bar	2421	1982	1517
Theoretical shot volume	cm ³	226	277	362
Shot weight(PS)	g	203	249	325
Screw L/D ratio		22.9	20.7	18.1
Injection rate	cm ³ /s	132	161	211
Plasticizing capacity(PS)	kg/hr	70	84	100
Screw revolution	rpm	275		
Temperature control zones		1+3		
Pump driving motor	kW	22		
Barrel heating	kW	7.96		
Machine weight	kg	9600		
Machine dimensions	m	5.8×1.44×1.89		

DG 2800/460		
460		
H	A	B
42	48	52
2332	1786	1522
304	398	467
273	358	420
22.4	19.6	18.1
130	170	200
84	100	120
220		
1+3		
22		
8.8		
9600		
5.8×1.44×1.89		

DG 2800/620		
620		
H	A	B
48	52	55
2138	1822	1629
470	552	617
423	496	555
22.4	19.6	18.1
190	223	250
110	130	150
220		
1+3		
30		
11.2		
10000		
6.2×1.44×1.89		

DG 2800/800		
800		
H	A	B
52	55	60
2143	1915	1610
594	665	792
534	598	712
20.8	19.6	18
191	241	254
130	150	170
175		
1+3		
30		
12.4		
10000		
6.2×1.44×1.89		

DG 2800/1000		
1000		
H	A	B
55	60	65
2341	1967	1676
760	904	1061
684	813	954
22.5	20.7	19.1
230	274	321
135	160	180
175		
1+4		
37		
16.8		
11000		
6.35×1.44×1.89		

☆Standard injection combination for each clamp unit

Selection scheme for injection unit	
Clamp unit	2800
Injection unit	360 460 620 800 1000
Drive power kW(HP)	22(30) 30(40) 37(50)

★DG3200

Clamp unit DG 3200/...		
Clamp force	kN	3200
Opening stroke	mm	620
Mold height(min-max)	mm	250-750
Maximum daylight	mm	1370
Distance between tie-bars	mm	620×620
Platen dimensions	mm	930×930
Ejector points		13
Ejector stroke	mm	200
Ejector force	kN	110
Oil tank volume	l	550

★DG3500

Clamp unit DG 3500/...		
Clamp force	kN	3500
Opening stroke	mm	650
Mold height(min-max)	mm	300-800
Maximum daylight	mm	1450
Distance between tie-bars	mm	660×660
Platen dimensions	mm	960×960
Ejector points		13
Ejector stroke	mm	240
Ejector force	kN	110
Oil tank volume	l	650

☆

Injection unit		DG 3200/620			DG 3200/800			DG 3200/1000		
International size		620			800			1000		
Screw symbol		H	A	B	H	A	B	H	A	B
Screw diameter	mm	48	52	55	52	55	60	55	60	65
Injection pressure	bar	2138	1822	1629	2143	1915	1610	2341	1967	1676
Theoretical shot volume	cm ³	470	552	617	594	665	792	760	904	1061
Shot weight(PS)	g	423	496	555	534	598	712	684	813	954
Screw L/D ratio		22.4	19.6	18.1	20.8	19.6	18	22.5	20.7	19.1
Injection rate	cm ³ /s	190	223	250	191	214	254	230	274	321
Plasticizing capacity(PS)	kg/hr	110	130	150	130	150	170	135	160	180
Screw revolution	rpm	220			175			175		
Temperature control zones		1+3			1+3			1+4		
Pump driving motor	kW	30			30			37		
Barrel heating	kW	11.2			12.4			16.8		
Machine weight	kg	14000			14000			14500		
Machine dimensions	m	6.4×1.6×2			6.4×1.6×2			6.6×1.6×2		

☆

DG 3500/620			DG 3500/800			DG 3500/1000			DG 3500/1700		
620			800			1000			1700		
H	A	B	H	A	B	H	A	B	H	A	B
48	52	55	52	55	60	55	60	65	65	70	75
2138	1822	1629	2143	1915	1610	2341	1967	1676	2226	1920	1672
470	552	617	594	665	792	760	904	1061	1327	1539	1767
423	496	555	534	598	712	684	813	954	1194	1385	1590
22.4	19.6	18.1	20.8	19.6	18	22.5	20.7	19.1	20.9	19.4	18.1
190	223	250	191	214	254	230	274	321	272	315	362
110	130	150	130	150	170	135	160	180	170	190	220
220			175			175			175		
1+3			1+3			1+4			1+4		
30			30			37			45		
11.2			12.4			16.8			20.1		
15000			15000			15500			16000		
6.65×1.7×2			6.65×1.7×2			6.8×1.7×2			7.5×1.7×2		

☆ Standard injection combination for each clamp unit

Selection scheme for injection unit				
Clamp unit	3200 620 800 1000 30(40) 37(50) 3500 620 800 1000 1700 30(40) 37(50) 45(60)			
Injection unit				
Drive power kW(HP)				

★DG4000

Clamp unit DG 4000/...		
Clamp force	kN	4000
Opening stroke	mm	720
Mold height(min-max)	mm	300-800
Maximum daylight	mm	1520
Distance between tie-bars	mm	710×710
Platen dimensions	mm	1060×1060
Ejector points		13
Ejector stroke	mm	240
Ejector force	kN	110
Oil tank volume	l	650

★DG4500

Clamp unit DG 4500/...		
Clamp force	kN	4500
Opening stroke	mm	770
Mold height(min-max)	mm	300-850
Maximum daylight	mm	1620
Distance between tie-bars	mm	760×760
Platen dimensions	mm	1130×1130
Ejector points		17
Ejector stroke	mm	240
Ejector force	kN	172
Oil tank volume	l	700

Injection unit		DG4000/1000			DG4000/1700			DG4000/2000		
International size		1000			1700			2000		
Screw symbol		H	A	B	H	A	B	H	A	B
Screw diameter	mm	55	60	65	65	70	75	70	75	80
Injection pressure	bar	2341	1967	1676	2226	1920	1672	1920	1672	1470
Theoretical shot volume	cm ³	760	904	1061	1327	1539	1767	1539	1767	2010
Shot weight(PS)	g	684	813	954	1194	1385	1590	1385	1590	1809
Screw L/D ratio		22.5	20.7	19.1	20.9	19.4	18.1	22	20.5	19.3
Injection rate	cm ³ /s	230	274	321	232	315	362	315	362	412
Plasticizing capacity(PS)	kg/hr	135	160	180	170	190	220	190	220	250
Screw revolution	rpm	175			175			140		
Temperature control zones		1+4			1+4			1+4		
Pump driving motor	kW	37			45			45		
Barrel heating	kW	16.8			20.1			24.74		
Machine weight	kg	17500			18000			18500		
Machine dimensions	m	7×1.77×2			7×1.77×2			8×1.77×2		

Injection unit		DG4500/1000			DG4500/1700			DG4500/2000			DG4500/2400		
International size		1000			1700			2000			2400		
Screw symbol		H	A	B	H	A	B	A	B	C	A	B	C
Screw diameter	mm	55	60	65	65	70	75	70	75	80	75	80	85
Injection pressure	bar	2341	1967	1676	2226	1920	1672	1920	1672	1470	2116	1860	1648
Theoretical shot volume	cm ³	760	904	1061	1327	1539	1767	1539	1767	2010	1899	2161	2440
Shot weight(PS)	g	684	813	954	1194	1385	1590	1385	1590	1809	1709	1944	2196
Screw L/D ratio		22.5	20.7	19.1	20.9	19.4	18.1	22	20.5	19.3	20.5	19.3	18.1
Injection rate	cm ³ /s	230	274	321	272	315	362	315	362	412	441	502	567
Plasticizing capacity(PS)	kg/hr	135	160	180	170	190	220	190	220	250	220	250	280
Screw revolution	rpm	175			175			140			145		
Temperature control zones		1+4			1+4			1+4			1+4		
Pump driving motor	kW	37			45			45			55		
Barrel heating	kW	16.8			20.1			24.74			26.54		
Machine weight	kg	20000			20000			21000			21000		
Machine dimensions	m	7.3×1.84×2.1			8×1.84×2.1			8.3×1.84×2.1			8.3×1.84×2.1		

★Standard injection combination for each clamp unit

Selection scheme for injection unit				
Clamp unit	4000		4500	
Injection unit	1000	1700	1000	1700
Drive power kW(HP)	37(50)	45(60)	37(50)	45(60)

★ Summary of clamp units/Injection units ★

250-4500kN/.../30-.../2400

INJECTION UNITS			CLAMP UNITS																					
																		DG4500/...						
																		DG4000/...						
														DG3500/...										
														DG3200/...										
												DG2800/...												
									DG2400/...															
									DG2000/...															
									DG1600/...															
									DG1200/...															
									DG900/...															
									DG500/...															
									DG250/...															
	Screw diameter	mm	18	20	22	24	26	28	30	34	38	42	48	52	55	60	65	70	75	80	85			
.../30	Injection pressure	bar	2593	2100	1735																			
	Theoretical shot volume	cm³	20	25	30																			
.../70	Injection pressure	bar				2722	2319	2000	1742															
	Theoretical shot volume	cm³				45	53	61	70															
.../120	Injection pressure	bar				2702	2330	2030	1580															
	Theoretical shot volume	cm³				66	77	88	113															
.../170	Injection pressure	bar							2333	1861	1454													
	Theoretical shot volume	cm³							106	136	170													
.../240	Injection pressure	bar									2325	1861	1523											
	Theoretical shot volume	cm³									154	192	235											
.../360	Injection pressure	bar											2421	1982	1517									
	Theoretical shot volume	cm³											226	277	362									
.../460	Injection pressure	bar												2332	1786	1522								
	Theoretical shot volume	cm³												304	398	467								
.../620	Injection pressure	bar													2138	1822	1629							
	Theoretical shot volume	cm³													470	552	617							
.../800	Injection pressure	bar														2143	1915	1610						
	Theoretical shot volume	cm³														594	665	792						
.../1000	Injection pressure	bar															2341	1967	1676					
	Theoretical shot volume	cm³															760	904	1061					
.../1700	Injection pressure	bar																	2226	1920	1672			
	Theoretical shot volume	cm³																	1327	1539	1767			
.../2000	Injection pressure	bar																		1920	1672	1470		
	Theoretical shot volume	cm³																		1539	1767	2010		
.../2400	Injection pressure	bar																			1747	1535	1360	
	Theoretical shot volume	cm³																			1899	2161	2440	

★ Summary of clamp units/Injection units

5000-26000kN/.../1700-.../18000

INJECTION UNITS			CLAMP UNITS																	
																DG 26000/...				
																DG 22000/...				
													DG 18000/...							
										DG 15000/...										
								DG 13000/...												
								DG 10500/...												
								DG 8500/...												
			DG 6500/...																	
			DG 5000/...																	
	Screw diameter	mm	65	70	75	80	85	90	95	100	105	110	120	130	140	150	160			
.../1700	Injection pressure	bar	2226	1920	1672															
	Theoretical shot volume	cm³	1327	1539	1767															
.../2000	Injection pressure	bar		1920	1672	1470														
	Theoretical shot volume	cm³		1539	1767	2010														
.../2400	Injection pressure	bar				1747	1535	1360												
	Theoretical shot volume	cm³				1899	2161	2440												
.../2700	Injection pressure	bar				1915	1696	1513												
	Theoretical shot volume	cm³				2186	2468	2767												
.../3400	Injection pressure	bar					1936	1726	1549											
	Theoretical shot volume	cm³					2723	3053	3402											
.../4200	Injection pressure	bar							1726		1398									
	Theoretical shot volume	cm³							3371		4162									
.../4800	Injection pressure	bar									1947		1594							
	Theoretical shot volume	cm³									3969		4849							
.../5500	Injection pressure	bar										1843		1523						
	Theoretical shot volume	cm³										4555		5512						
.../7400	Injection pressure	bar												1792	1506					
	Theoretical shot volume	cm³												6272	7464					
.../9500	Injection pressure	bar													1813	1545				
	Theoretical shot volume	cm³													8143	9556				
.../12000	Injection pressure	bar														1770	1526			
	Theoretical shot volume	cm³														10353	12006			
.../15000	Injection pressure	bar															1851	1612		
	Theoretical shot volume	cm³															12930	14843		
.../18000	Injection pressure	bar																1824	1603	
	Theoretical shot volume	cm³																15903	18095	



DER GANG MACHINERY CO., LTD.

42, LANE 349, CHUNG CHENG SOUTH ROAD, YUNG KANG CITY, TAINAN HSIEN, TAIWAN
 TEL : 886-6-2536886-9.2538588 FAX : 886-6-2538587
 E-mail : der.gang@msa.hinet.net http : //www.dergang.com.tw