

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		●

★DG250

Clamp unit DG250/...		
Clamp force	kN	250
Opening stroke	mm	220
Mold height(min-max)	mm	100-250
Maximum daylight	mm	470
Distance between tie-bars	mm	270×270
Platen dimensions	mm	410×410
Ejector points		1
Ejector stroke	mm	60
Ejector force	kN	13.4
Oil tank volume	l	100

★DG500

Clamp unit DG500/...		
Clamp force	kN	500
Opening stroke	mm	260
Mold height(min-max)	mm	100-300
Maximum daylight	mm	560
Distance between tie-bars	mm	310×310
Platen dimensions	mm	460×460
Ejector points		5
Ejector stroke	mm	60
Ejector force	kN	27.4
Oil tank volume	l	130

☆

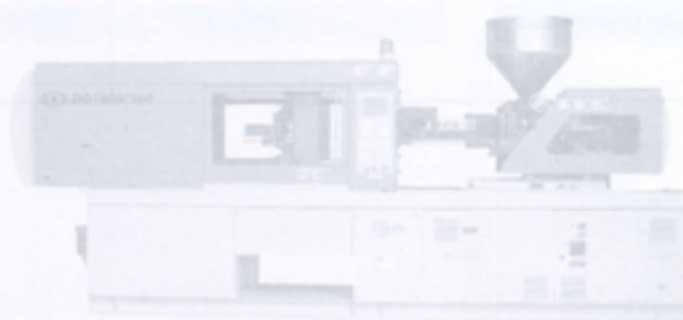
Injection unit		DG250/30		
International size		30		
Screw symbol		H	A	B
Screw diameter	mm	18	20	22
Injection pressure	bar	2593	2100	1735
Theoretical shot volume	cm ³	20	25	30
Shot weight(PS)	g	18	22	27
Screw L/D ratio		22.2	20	18.2
Injection rate	cm ³ /s	43	53	64
Plasticizing capacity(PS)	kg/hr	13	16	21
Screw revolution	rpm	335		
Temperature control zones		1+3		
Pump driving motor	kW	7.5		
Barrel heating	kW	3.2		
Machine weight	kg	1900		
Machine dimensions	m	2.8×1.1×1.75		

☆

DG500/70				DG500/120			
70				120			
H	A	B	C	H	A	B	C
24	26	28	30	26	28	30	34
2722	2319	2000	1742	2702	2330	2030	1580
45	53	61	70	66	77	88	113
40	47	54	63	60	69	79	102
22.1	20.4	18.9	17.7	23	21.4	20	17.6
57	27	78	89	58	68	77	99
20	22	25	28	22	30	38	46
335				270			
1+3				1+3			
11				11			
5.04				5.5			
2900				2900			
3.66×1×1.51				3.66×1×1.51			

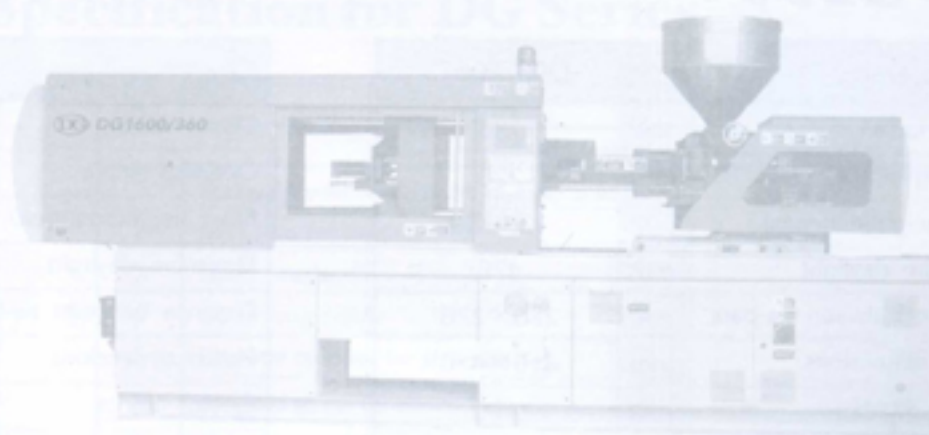
☆Standard injection combination for each clamp unit

Selection scheme for injection unit			
Clamp unit	250	500	
Injection unit	30	70	120
Drive power kW(HP)	7.5(10)	11(15)	



★DG900

Clamp unit		DG 900/...
Clamp force	kN	900
Opening stroke	mm	330
Mold height(min-max)	mm	100-350
Maximum daylight	mm	680
Distance between tie-bars	mm	360×360
Platen dimensions	mm	560×560
Ejector points		5
Ejector stroke	mm	80
Ejector force	kN	39.5
Oil tank volume	l	200



Injection unit		DG 900/70			
International size		70			
Screw symbol		H	A	B	C
Screw diameter	mm	24	26	28	30
Injection pressure	bar	2722	2319	2000	1742
Theoretical shot volume	cm ³	45	53	61	70
Shot weight(PS)	g	40	47	54	63
Screw L/D ratio		22.1	20.4	18.9	17.7
Injection rate	cm ³ /s	57	67	78	89
Plasticizing capacity(PS)	kg/hr	20	22	25	28
Screw revolution	rpm	335			
Temperature control zones		1+3			
Pump driving motor	kW	11			
Barrel heating	kW	5.04			
Machine weight	kg	4200			
Machine dimensions	m	4.2×1.18×1.6			

DG 900/120			
120			
H	A	B	C
26	28	30	34
2702	2330	2030	1580
66	77	88	113
60	69	79	102
23	21.4	20	17.6
58	68	77	99
22	30	38	46
270			
1+3			
11			
5.5			
4200			
4.2×1.18×1.6			

DG 900/170		
170		
H	A	B
30	34	38
2333	1816	1454
106	136	170
95	122	153
23	20.3	18.2
65	84	104
38	46	58
220		
1+3		
11		
6.7		
4300		
4.2×1.18×1.6		

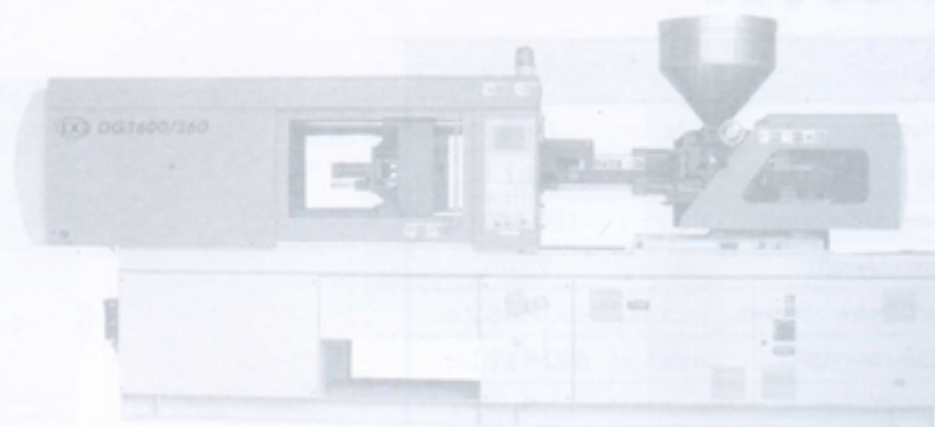
DG 900/240		
240		
H	A	B
34	38	42
2325	1861	1523
154	192	235
138	172	211
22.4	20	18.1
90	113	138
50	64	80
300		
1+3		
15		
7.2		
4300		
4.2×1.18×1.6		

☆ Standard injection combination for each clamp unit

Selection scheme for injection unit	
Clamp unit	900
Injection unit	70 120 170 240
Drive power kW(HP)	11(15) 15(20)

★DG1200

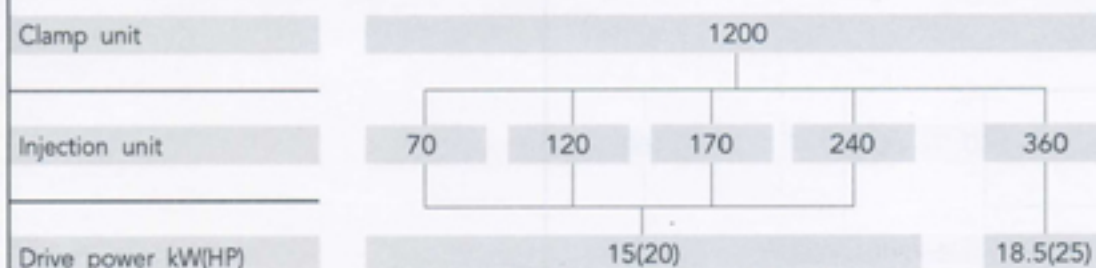
Clamp unit			DG 1200/...
Clamp force	kN		1200
Opening stroke	mm		410
Mold height(min-max)	mm		150-450
Maximum daylight	mm		860
Distance between tie-bars	mm		410×410
Platen dimensions	mm		640×640
Ejector points			5
Ejector stroke	mm		130
Ejector force	kN		39.5
Oil tank volume	l		250



Injection unit		DG 1200/70				DG 1200/120				DG 1200/170			DG 1200/240			DG 1200/360		
International size		70				120				170			240			360		
Screw symbol		H	A	B	C	H	A	B	C	H	A	B	H	A	B	H	A	B
Screw diameter	mm	24	26	28	30	26	28	30	34	30	34	38	34	38	42	38	42	48
Injection pressure	bar	2722	2319	2000	1742	2702	2330	2030	1580	2333	1816	1454	2325	1861	1523	2421	1982	1517
Theoretical shot volume	cm ³	45	53	61	70	66	77	88	113	106	136	170	154	192	235	226	277	362
Shot weight(PS)	g	40	47	54	63	60	69	79	102	95	122	153	138	172	211	203	249	325
Screw L/D ratio		22.1	20.4	18.9	17.7	23	21.4	20	17.6	23	20.3	18.2	22.4	20	18.1	22.9	20.7	18.1
Injection rate	cm ³ /s	76	89	103	118	77	90	102	131	86	111	138	90	113	138	106	129	169
Plasticizing capacity(PS)	kg/hr	20	22	25	28	22	30	38	46	38	46	58	50	64	80	70	78	100
Screw revolution	rpm	335				270				220			300			275		
Temperature control zones		1+3				1+3				1+3			1+3			1+3		
Pump driving motor	kW	15				15				15			15			18.5		
Barrel heating	kW	5.04				5.5				6.7			7.2			7.96		
Machine weight	kg	5350				5350				5400			5500			5770		
Machine dimensions	m	4.6×1.26×1.72				4.6×1.26×1.72				4.6×1.26×1.72			4.6×1.26×1.72			4.8×1.26×1.72		

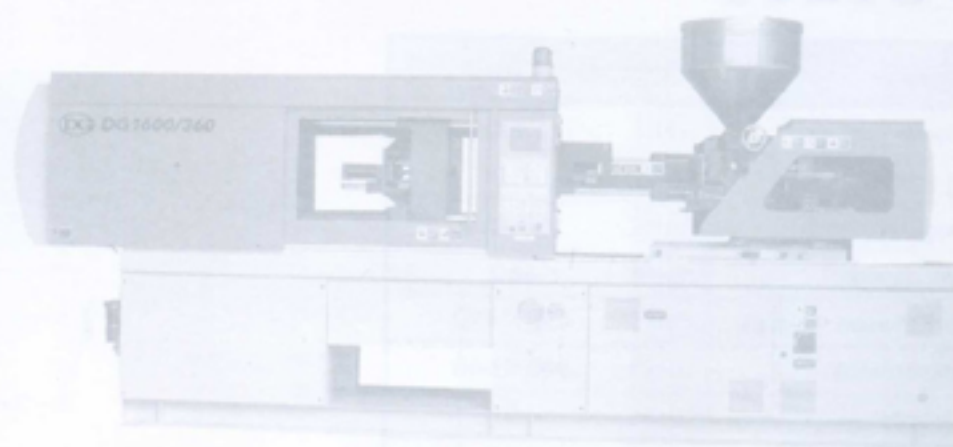
☆ Standard injection combination for each clamp unit

Selection scheme for injection unit



★DG1600

Clamp unit DG1600/...		
Clamp force	kN	1600
Opening stroke	mm	420
Mold height(min-max)	mm	150-500
Maximum daylight	mm	920
Distance between tie-bars	mm	450×450
Platen dimensions	mm	690×690
Ejector points		5
Ejector stroke	mm	130
Ejector force	kN	39.5
Oil tank volume	l	350



Injection unit		DG 1600/70				DG 1600/120				DG 1600/170			DG 1600/240			DG 1600/360			DG 1600/460		
International size		70				120				170			240			360			460		
Screw symbol		H	A	B	C	H	A	B	C	H	A	B	H	A	B	H	A	B	H	A	B
Screw diameter	mm	24	26	28	30	26	28	30	34	30	34	38	34	38	42	38	42	48	42	48	52
Injection pressure	bar	2722	2319	2000	1742	2702	2330	2030	1580	2333	1816	1454	2325	1861	1523	2421	1982	1517	2332	1786	1522
Theoretical shot volume	cm ³	45	53	61	70	66	77	88	113	106	136	170	154	192	235	226	277	362	304	398	467
Shot weight(PS)	g	40	47	54	63	60	69	79	102	95	122	153	138	172	211	203	249	325	273	358	420
Screw L/D ratio		22.1	20.4	18.9	17.7	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
Injection rate	cm ³ /s	76	89	103	118	77	90	102	131	86	111	138	90	113	138	106	129	169	130	170	200
Plasticizing capacity(PS)	kg/hr	20	22	25	28	22	30	38	46	38	46	58	50	64	80	70	78	100	84	100	120
Screw revolution	rpm	335				270				220			300			275			220		
Temperature control zones		1+3				1+3				1+3			1+3			1+3			1+3		
Pump driving motor	kW	15				15				15			15			18.5			22		
Barrel heating	kW	5.04				5.5				6.7			7.2			7.96			8.8		
Machine weight	kg	6150				6150				6200			6300			6500			6500		
Machine dimensions	m	4.72×1.3×1.76				4.72×1.3×1.76				4.72×1.3×1.76			4.72×1.3×1.76			4.72×1.3×1.76			4.72×1.3×1.76		

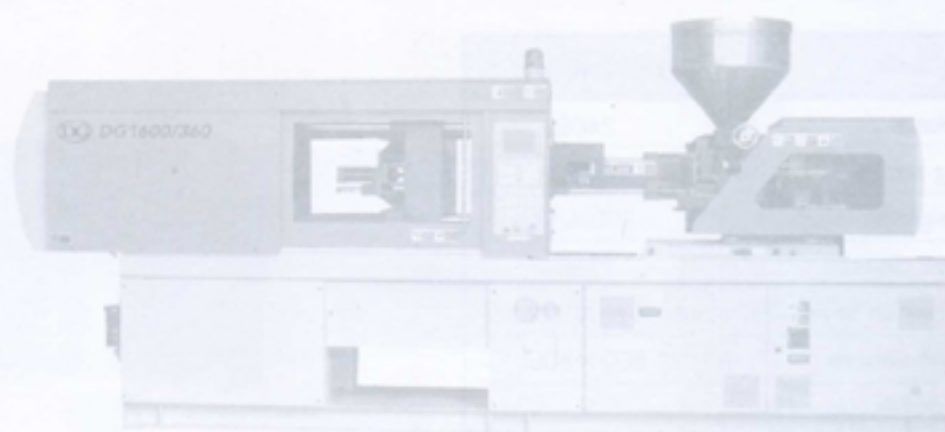
★ Standard injection combination for each clamp unit

Selection scheme for injection unit

Clamp unit	1600					
Injection unit	70	120	170	240	360	460
Drive power kW(HP)	15(20)			18.5(25)		22(30)

★DG2000

Clamp unit DG2000/...		
Clamp force	kN	2000
Opening stroke	mm	480
Mold height(min-max)	mm	150-570
Maximum daylight	mm	1050
Distance between tie-bars	mm	480×480
Platen dimensions	mm	740×740
Ejector points		9
Ejector stroke	mm	160
Ejector force	kN	53.8
Oil tank volume	l	400



Injection unit		DG2000/120				DG2000/170			DG2000/240			DG2000/360			DG2000/460			DG2000/620			DG2000/800		
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	77	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				7300			7400			7600			7600			8100			9000		
Machine dimensions	m	5.1×1.36×1.8				5.1×1.36×1.8			5.1×1.36×1.8			5.3×1.36×1.8			5.3×1.36×1.8			5.7×1.36×1.8			5.9×1.42×1.86		

☆ Standard injection combination for each clamp unit

Selection scheme for injection unit	
Clamp unit	2000
Injection unit	120 170 240 360 460 620 800
Drive power kW(HP)	18.5(25) 22(30) 30(40)

★ 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	cm ³	1327	1539	1767																
.../2000	Injection pressure	bar		1920	1672	1470															
	Theoretical shot volume	cm ³		1539	1767	2010															
.../2400	Injection pressure	bar			1747	1535	1360														
	Theoretical shot volume	cm ³			1899	2161	2440														
.../2700	Injection pressure	bar				1915	1696	1513													
	Theoretical shot volume	cm ³				2186	2468	2767													
.../3400	Injection pressure	bar					1936	1726	1549												
	Theoretical shot volume	cm ³					2723	3053	3402												
.../4200	Injection pressure	bar							1726		1398										
	Theoretical shot volume	cm ³							3371		4162										
.../4800	Injection pressure	bar									1947		1594								
	Theoretical shot volume	cm ³									3969		4849								
.../5500	Injection pressure	bar										1843		1523							
	Theoretical shot volume	cm ³										4555		5512							
.../7400	Injection pressure	bar												1792	1506						
	Theoretical shot volume	cm ³												6272	7464						
.../9500	Injection pressure	bar													1813	1545					
	Theoretical shot volume	cm ³													8143	9556					
.../12000	Injection pressure	bar														1770	1526				
	Theoretical shot volume	cm ³														10353	12006				
.../15000	Injection pressure	bar															1851	1612			
	Theoretical shot volume	cm ³															12930	14843			
.../18000	Injection pressure	bar																1824	1603		
	Theoretical shot volume	cm ³																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