DG-EP SERIES

LARGE SIZE

SERVO MOTOR DRIVE

INJECTION MOLDING MACHINE SPECIFICATION

DG500EP – DG2600EP

✶ *Possible combinations of clamp units / injection units*

Clamp units	Injection units													
	1500	1700	2000	2400	2700	3400	4200	4800	5500	7400	9500	12000	15000	18000
500	●	●	●	●	●☆									
650			●	●	●	●☆	●							
850						●	●☆	●	●					
1050						●	●	●☆	●					
1300						●	●	●	●☆	●				
1500							●	●	●	●☆				
1800										●	●☆	●		
2200												●☆	●	
2600													●☆	●

☆ *Standard injection combination for clamp unit*

E-TECH

DER GANG MACHINERY CO., LTD. 9907C30

✶ High Performance Standard Specification for DG-EP Series.

NO.	Item	Standard	Optiona
	Clamping unit		
1	Greasless toggle bushings	○	
2	Automatic greasing	○	
3	High performance mold platen support	○	
4	Hydraulical 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 (EUROMAP 12)		●
26	Dual function (ejector during mold opening)		●
27	Dual function (screw rotation during mold opening)		●
28	Daylight extension		●
29	T-grooved plate		●
	Hydraulic unit & related equipment		
1	Servo motor for energy saving device	○	
2	Oil temperature display	○	
3	Oil filter		●
4	Oil low level alarm		●
5	Oil temperature upper and lower limits alarm	○	
6	Oil preheating circuit		●
7	"Y" strainer of cooling water		●
8	Mold cooling water with flow indicator		●
9	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 (200sets)	○	
10	History of molding conditions value (200sets)	○	

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	1~5 steps holding speed (adjust.)	○	
21	1~5 steps holding pressure (adjust.)	○	
22	1~5 steps holding time (adjust.)	○	
23	1~5 steps screw speed (adjust.)	○	
24	1~5 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	Accumlator 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-7000 controller	○	
2	200 sets memory of molding conditions	○	
3	USB for memory of molding conditions	○	
4	Configuration unit description	○	
5	Diagnose input and output status	○	
6	Execute input / output detecting	○	
7	Input and output points correction setting	○	
8	Multiple layer password setting	○	
9	5 language switching function (Chinese, English, Spain, Portugal, Turkey)	○	
10	Other language select		●

✶ *Summary of clamp units / Injection units*

DG500EP - DG2600EP / 1500 - 18000

INJECTION UNITS			CLAMP UNITS															
																DG 2600EP		
														DG 2200EP				
												DG 1800EP						
								DG 1500EP										
							DG 1300EP											
							DG 1050EP											
							DG 850EP											
					DG 650EP													
			DG 500EP															
Screw diameter		**mm**	60	65	70	75	80	85	90	95	100	105	110	120	130	140	150	160
1500	Injection pressure	bar	2310	1968	1697													
	Theoretical shot volume	cm³	1130	1327	1539													
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				2116	1860	1648										
	Theoretical shot volume	cm³				1899	2161	2440										
2700	Injection pressure	bar					1898	1681	1500									
	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

DG500EP

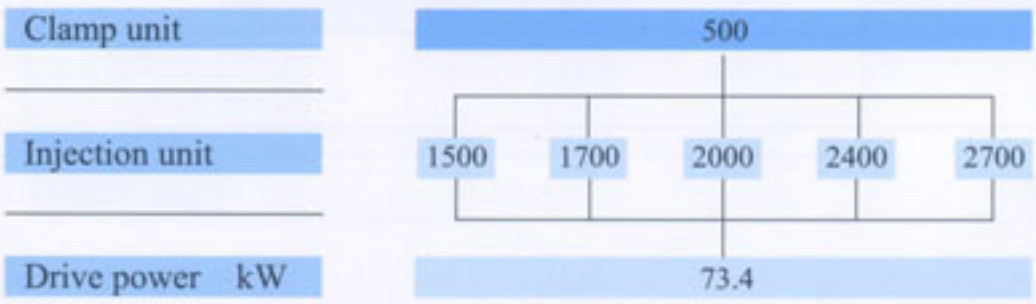
/ 1500 / 2400
/ 1700 / 2700
/ 2000

MODEL		DG500EP/1500	DG500EP/1700	DG500EP/2000	DG500EP/2400	DG500EP/2700
Clamp unit		**500**				
Clamp force	kN	5000				
Opening stroke	mm	810				
Mold height(min-max)	mm	300-950				
Maximum daylight	mm	1760				
Distance between tie-bars	mm	810 × 810				
Platen dimensions	mm	1210 × 1210				
Ejector points		17				
Ejector stroke	mm	240				
Ejector force	kN	172				
Oil tank volume	l	800				

Injection unit		**1500**			**1700**			**2000**			**2400**			**☆ 2700**		
Screw symbol		H	A	B	H	A	B	A	B	C	A	B	C	A	B	C
Screw diameter	mm	60	65	70	65	70	75	70	75	80	75	80	85	80	85	90
Injection pressure	bar	2310	1968	1697	2226	1920	1672	1920	1672	1470	2116	1860	1648	1898	1681	1500
Theoretical shot volume	cm^3	1130	1327	1539	1327	1539	1767	1539	1767	2010	1899	2161	2440	2186	2468	2767
Shot weight(PS)	g	1017	1194	1385	1194	1385	1590	1385	1590	1809	1709	1944	2196	1967	2221	2490
Screw L/D ratio		21.6	20	18.6	21.5	20	18.6	22	20.5	19.3	21.3	20	18.8	21.4	20.1	19
Injection rate	cm^3/s	321	378	438	372	431	494	431	494	563	481	548	618	440	497	558
Plasticizing capacity(PS)	kg/hr	231	286	349	268	327	376	272	313	372	245	335	379	298	337	397
Screw revolution	rpm	256			240			200			180			160		
Temperature control zones		1+5			1+5			1+5			1+5			1+5		
General																
Drive power	kW	73.4			73.4			73.4			73.4			73.4		
Barrel heating	kW	20.27			20.27			26.51			26.51			28.91		
Machine weight	kg	21500			21500			22300			22300			23000		
Machine dimensions	m	8.8 × 2.17 × 2.22			8.8 × 2.17 × 2.22			9.1 × 2.17 × 2.22			9.1 × 2.17 × 2.22			9.2 × 2.17 × 2.22		

☆ *Standard injection combination for clamp unit*

Selection scheme for injection unit



DG650EP

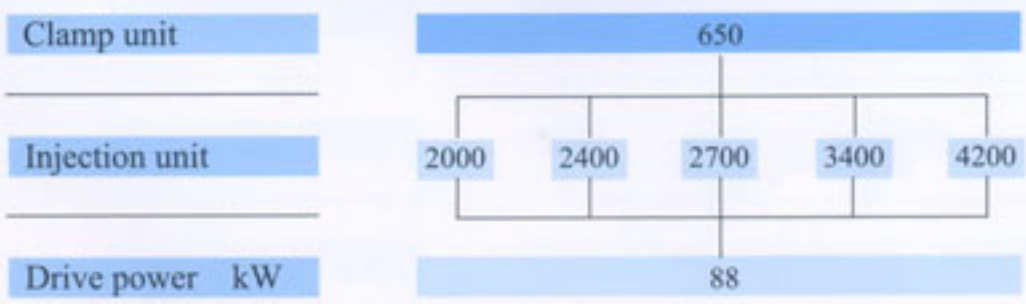
/ 2000 / 2400 / 2700 / 3400 / 4200

MODEL		DG650EP/2000	DG650EP/2400	DG650EP/2700	DG650EP/3400	DG650EP/4200
Clamp unit		**650**				
Clamp force	kN	6500				
Opening stroke	mm	920				
Mold height(min-max)	mm	350-1000				
Maximum daylight	mm	1920				
Distance between tie-bars	mm	910 × 900				
Platen dimensions	mm	1370 × 1360				
Ejector points		21				
Ejector stroke	mm	300				
Ejector force	kN	280				
Oil tank volume	l	1000				

Injection unit		2000			2400			2700			☆ 3400			4200	
Screw symbol		A	B	C	A	B	C	A	B	C	A	B	C	A	B
Screw diameter	mm	70	75	80	75	80	85	80	85	90	85	90	95	90	100
Injection pressure	bar	1920	1672	1470	2116	1860	1648	1898	1681	1500	1936	1726	1549	1726	1398
Theoretical shot volume	cm^3	1539	1767	2010	1899	2161	2440	2186	2468	2767	2723	3053	3402	3371	4162
Shot weight(PS)	g	1385	1590	1809	1709	1944	2196	1967	2221	2490	2450	2747	3061	3034	3746
Screw L/D ratio		22	20.5	19.3	21.3	20	18.8	21.4	20.1	19	21.2	20	19	22.2	20
Injection rate	cm^3/s	526	603	688	588	670	755	538	607	682	528	591	659	591	730
Plasticizing capacity(PS)	kg/hr	327	376	448	344	410	465	364	412	484	331	390	434	340	439
Screw revolution	rpm	240			220			195			157			137	
Temperature control zones		1+5			1+5			1+5			1+5			1+6	
General															
Drive power	kW	88			88			88			88			88	
Barrel heating	kW	26.51			26.51			28.91			30.11			34.41	
Machine weight	kg	32000			32000			32700			33700			35000	
Machine dimensions	m	9.5 × 2.18 × 2.35			9.6 × 2.18 × 2.35			9.6 × 2.18 × 2.35			10.2 × 2.18 × 2.35			10.2 × 2.2 × 2.46	

☆ *Standard injection combination for clamp unit*

Selection scheme for injection unit



DG850EP

/ 3400 / 5500
/ 4200
/ 4800

MODEL		DG850EP/3400			DG850EP/4200		DG850EP/4800		DG850EP/5500	
Clamp unit		**850**								
Clamp force	kN	8500								
Opening stroke	mm	1030								
Mold height(min-max)	mm	400-1100								
Maximum daylight	mm	2130								
Distance between tie-bars	mm	1010 × 1010								
Platen dimensions	mm	1530 × 1530								
Ejector points		21								
Ejector stroke	mm	300								
Ejector force	kN	280								
Oil tank volume	l	1100								
Injection unit		**3400**			**☆ 4200**		**4800**		**5500**	
Screw symbol		A	B	C	A	B	A	B	A	B
Screw diameter	mm	85	90	95	90	100	95	105	100	110
Injection pressure	bar	1936	1726	1549	1726	1398	1947	1594	1843	1523
Theoretical shot volume	cm^3	2723	3053	3402	3371	4162	3969	4849	4555	5512
Shot weight(PS)	g	2450	2747	3061	3034	3746	3572	4364	4100	4961
Screw L/D ratio		21.2	20	19	22.2	20	22.1	20	22	20
Injection rate	cm^3/s	528	591	659	591	730	630	770	667	808
Plasticizing capacity(PS)	kg/hr	331	390	434	340	439	415	530	480	606
Screw revolution	rpm	157			137		150		150	
Temperature control zones		1+5			1+6		1+6		1+6	
General										
Drive power	kW	88			88		112		112	
Barrel heating	kW	30.11			34.41		34.41		39.48	
Machine weight	kg	40000			41000		42000		42500	
Machine dimensions	m	10.8 × 2.30 × 2.46			10.8 × 2.30 × 2.46		10.8 × 2.30 × 2.46		10.8 × 2.30 × 2.46	

☆ *Standard injection combination for clamp unit*

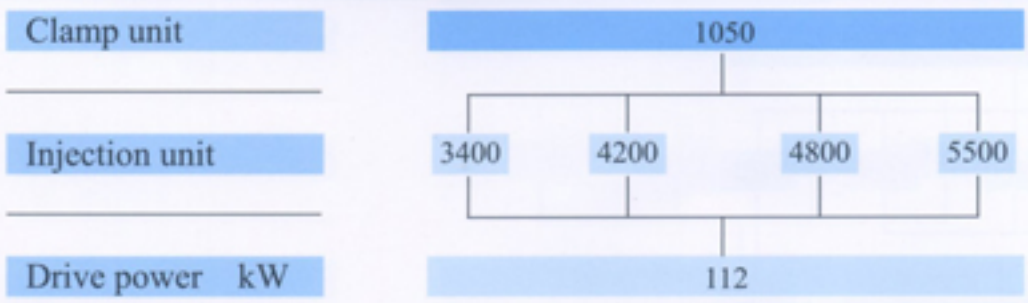
Selection scheme for injection unit

DG1050EP / 3400 / 4200 / 4800 / 5500

MODEL		DG1050EP/3400			DG1050EP/4200		DG1050EP/4800		DG1050EP/5500	
Clamp unit		**1050**								
Clamp force	kN	10500								
Opening stroke	mm	1030								
Mold height(min-max)	mm	500-1200								
Maximum daylight	mm	2230								
Distance between tie-bars	mm	1115 × 1010								
Platen dimensions	mm	1600 × 1540								
Ejector points		21								
Ejector stroke	mm	300								
Ejector force	kN	280								
Oil tank volume	l	1200								
Injection unit		**3400**			**4200**		**☆ 4800**		**5500**	
Screw symbol		A	B	C	A	B	A	B	A	B
Screw diameter	mm	85	90	95	90	100	95	105	100	110
Injection pressure	bar	1936	1726	1549	1726	1398	1947	1594	1843	1523
Theoretical shot volume	cm^3	2723	3053	3402	3371	4162	3969	4849	4555	5512
Shot weight(PS)	g	2450	2747	3061	3034	3746	3572	4364	4100	4961
Screw L/D ratio		21.2	20	19	22.2	20	22.1	20	22	20
Injection rate	cm^3/s	630	705	786	705	871	630	770	667	808
Plasticizing capacity(PS)	kg/hr	394	464	517	407	525	415	530	480	606
Screw revolution	rpm	187			164		150		150	
Temperature control zones		1+5			1+6		1+6		1+6	
General										
Drive power	kW	112			112		112		112	
Barrel heating	kW	30.11			34.41		34.41		39.48	
Machine weight	kg	44000			44500		44500		45500	
Machine dimensions	m	11 × 2.4 × 2.6			11 × 2.4 × 2.6		11 × 2.4 × 2.6		11 × 2.4 × 2.6	

☆ *Standard injection combination for clamp unit*

Selection scheme for injection unit



DG1300EP

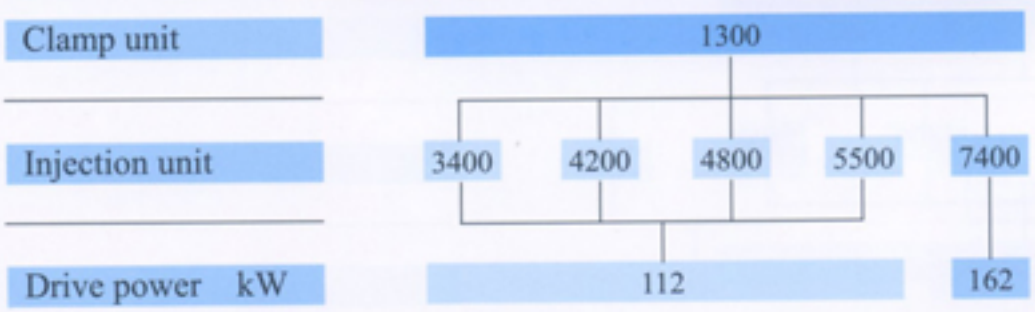
/ 3400 / 5500
/ 4200 / 7400
/ 4800

MODEL		DG1300EP/3400	DG1300EP/4200	DG1300EP/4800	DG1300EP/5500	DG1300EP/7400
Clamp unit		**1300**				
Clamp force	kN	13000				
Opening stroke	mm	1250				
Mold height(min-max)	mm	500-1300				
Maximum daylight	mm	2550				
Distance between tie-bars	mm	1210 × 1150				
Platen dimensions	mm	1760 × 1700				
Ejector points		29				
Ejector stroke	mm	300				
Ejector force	kN	356				
Oil tank volume	l	1400				

Injection unit		**3400**			**4200**		**4800**		**☆ 5500**		**7400**	
Screw symbol		A	B	C	A	B	A	B	A	B	A	B
Screw diameter	mm	85	90	95	90	100	95	105	100	110	110	120
Injection pressure	bar	1936	1726	1549	1726	1398	1947	1594	1843	1523	1792	1506
Theoretical shot volume	cm^3	2723	3053	3402	3371	4162	3969	4849	4555	5512	6272	7464
Shot weight(PS)	g	2450	2747	3061	3034	3746	3572	4364	4100	4961	5645	6718
Screw L/D ratio		21.2	20	19	22.2	20	22.1	20	22	20	21.8	20
Injection rate	cm^3/s	660	738	823	738	912	660	806	698	846	836	995
Plasticizing capacity(PS)	kg/hr	413	486	541	421	544	434	554	502	634	565	730
Screw revolution	rpm	196			170		157		157		140	
Temperature control zones		1+5			1+6		1+6		1+6		1+6	
General												
Drive power	kW	112			112		112		112		162	
Barrel heating	kW	30.11			34.41		34.41		39.48		48.98	
Machine weight	kg	57000			58000		59000		60000		63000	
Machine dimensions	m	11.8 × 2.62 × 2.8			11.8 × 2.62 × 2.8		11.8 × 2.62 × 2.8		11.8 × 2.62 × 2.8		12.2 × 2.62 × 2.8	

☆ *Standard injection combination for clamp unit*

Selection scheme for injection unit



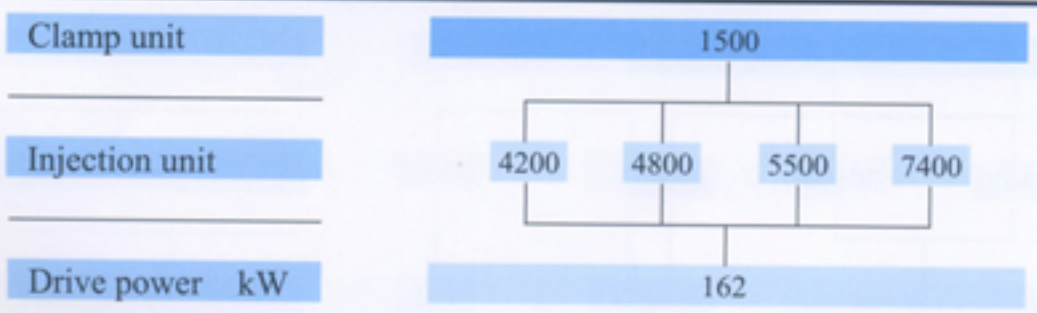
DG1500EP

/ 4200 / 7400
/ 4800
/ 5500

MODEL		DG1500EP/4200		DG1500EP/4800		DG1500EP/5500		DG1500EP/7400	
Clamp unit		**1500**							
Clamp force	kN	15000							
Opening stroke	mm	1500							
Mold height(min-max)	mm	500-1400							
Maximum daylight	mm	2900							
Distance between tie-bars	mm	1410 × 1310							
Platen dimensions	mm	2020 × 1920							
Ejector points		29							
Ejector stroke	mm	300							
Ejector force	kN	356							
Oil tank volume	l	1600							
Injection unit		**4200**		**4800**		**5500**		**☆ 7400**	
Screw symbol		A	B	A	B	A	B	A	B
Screw diameter	mm	90	100	95	105	100	110	110	120
Injection pressure	bar	1726	1398	1947	1594	1843	1523	1792	1506
Theoretical shot volume	cm^3	3371	4162	3969	4849	4555	5512	6272	7464
Shot weight(PS)	g	3034	3746	3572	4364	4100	4961	5645	6718
Screw L/D ratio		22.2	20	22.1	20	22	20	21.8	20
Injection rate	cm^3/s	945	1168	845	1032	894	1083	912	1086
Plasticizing capacity(PS)	kg/hr	495	640	552	705	639	807	565	730
Screw revolution	rpm	200		200		200		140	
Temperature control zones		1+6		1+6		1+6		1+6	
General									
Drive power	kW	162		162		162		162	
Barrel heating	kW	34.41		34.41		39.48		48.98	
Machine weight	kg	73000		74000		74000		75000	
Machine dimensions	m	12.8 × 2.87 × 2.94		12.8 × 2.87 × 2.94		12.8 × 2.87 × 2.94		13.2 × 2.87 × 2.94	

☆ *Standard injection combination for clamp unit*

Selection scheme for injection unit



DG1800EP / 7400 / 9500 / 12000

MODEL		DG1800EP/7400		DG1800EP/9500		DG1800EP/12000	
Clamp unit		**1800**					
Clamp force	kN	18000					
Opening stroke	mm	1700					
Mold height(min-max)	mm	600-1600					
Maximum daylight	mm	3300					
Distance between tie-bars	mm	1610 × 1500					
Platen dimensions	mm	2270 × 2160					
Ejector points		29					
Ejector stroke	mm	300					
Ejector force	kN	356					
Oil tank volume	l	2000					
Injection unit		**7400**		**☆ 9500**		**12000**	
Screw symbol		A	B	A	B	A	B
Screw diameter	mm	110	120	120	130	130	140
Injection pressure	bar	1792	1506	1813	1545	1770	1526
Theoretical shot volume	cm^3	6272	7464	8143	9556	10353	12006
Shot weight(PS)	g	5645	6718	7329	8600	9318	10805
Screw L/D ratio		21.8	20	21.7	20	21.5	20
Injection rate	cm^3/s	912	1086	910	1068	1109	1287
Plasticizing capacity(PS)	kg/hr	565	730	677	796	735	852
Screw revolution	rpm	140		130		120	
Temperature control zones		1+6		1+6		1+7	
General							
Drive power	kW	162		162		193	
Barrel heating	kW	48.98		58.48		64.58	
Machine weight	kg	93000		96000		106000	
Machine dimensions	m	14.2 × 3 × 3.2		14.5 × 3 × 3.2		15.4 × 3 × 3.2	

☆ *Standard injection combination for clamp unit*

Selection scheme for injection unit

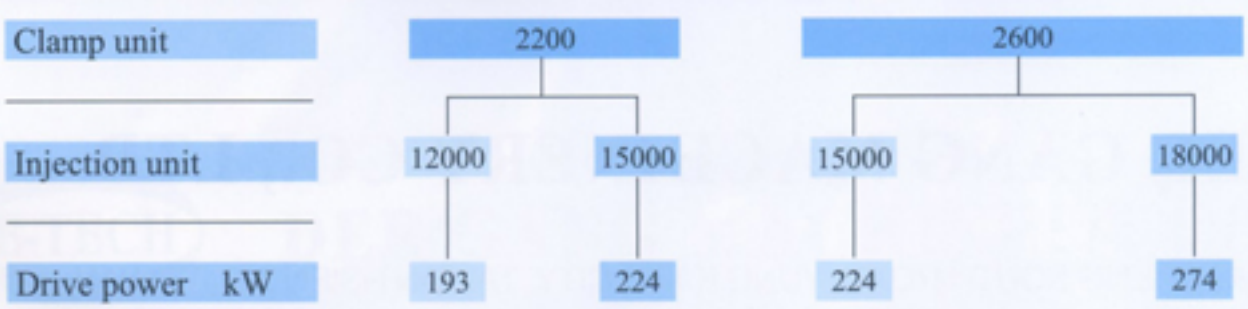
DG2200EP / 12000 / 15000

DG2600EP / 15000 / 18000

MODEL		DG2200EP/12000		DG2200EP/15000		DG2600EP/15000		DG2600EP/18000	
Clamp unit		**2200**				**2600**			
Clamp force	kN	22000				26000			
Opening stroke	mm	1800				1800			
Mold height(min-max)	mm	700-1700				700-1700			
Maximum daylight	mm	3500				3500			
Distance between tie-bars	mm	1810 × 1700				1810 × 1700			
Platen dimensions	mm	2600 × 2500				2650 × 2550			
Ejector points		37				37			
Ejector stroke	mm	350				350			
Ejector force	kN	440				440			
Oil tank volume	l	2500				2500			
Injection unit		☆ **12000**		**15000**		☆ **15000**		**18000**	
Screw symbol		A	B	A	B	A	B	A	B
Screw diameter	mm	130	140	140	150	140	150	150	160
Injection pressure	bar	1770	1526	1851	1612	1851	1612	1824	1603
Theoretical shot volume	cm^3	10353	12006	12930	14843	12930	14843	15903	18095
Shot weight(PS)	g	9318	10805	11637	13358	11637	13358	14312	16285
Screw L/D ratio		21.5	20	21.4	20	21.4	20	21.3	20
Injection rate	cm^3/s	1109	1287	1323	1520	1323	1520	1555	1769
Plasticizing capacity(PS)	kg/hr	735	852	639	790	639	790	790	898
Screw revolution	rpm	120		90		90		90	
Temperature control zones		1+7		1+7		1+7		1+7	
General									
Drive power	kW	193		224		224		274	
Barrel heating	kW	64.58		78.58		78.58		105.58	
Machine weight	kg	140000		147000		155000		180000	
Machine dimensions	m	19 × 3.5 × 3.5		20 × 3.5 × 3.5		20.5 × 3.5 × 3.5		21 × 3.5 × 3.5	

☆ *Standard injection combination for clamp unit*

Selection scheme for injection unit



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