

Parallel Twin Screw Extruder Specifications

		TP75-26		TP75-33		TP93-26		TP93-33		TP115-26		TP115-33		TP140-26		TP140-33		TP172-26		TP172-33		
		English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English
Screws	Number of Screws:	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Screw Dia., (in) (mm):	2.95	75	2.95	75	3.66	93	3.66	93	4.53	115	4.53	115	5.51	140	5.51	140	6.77	172	6.77	172	
	L/D (From Downstream Edge of Feed Throat):	26:1	26:1	33:1	33:1	26:1	26:1	33:1	33:1	26:1	26:1	33:1	33:1	26:1	26:1	33:1	33:1	26:1	26:1	33:1	33:1	
Drive Train	Direction of Rotation:	Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		
	Speed Range (rpm) (min-1):	0 to 50	0 to 50	0 to 50	0 to 50	0 to 40	0 to 40	0 to 40	0 to 40	0 to 30	0 to 30	0 to 30	0 to 30	0 to 26	0 to 26	0 to 26	0 to 26	0 to 20	0 to 20	0 to 20	0 to 20	
	Total Available Torque Maximum (ft/lbs) (Nm):	6000	8135	6000	8135	12,342	16,734	12,342	16,734	24,684	33,468	24,684	33,468					74,053	100,403	74,053	100,403	
	Motor Rating (HP) (kW):	60	45	60	45	100	75	100	75	150	112	150	112	200/250	150/187	200/250	150/187	300	225	300	225	
	Motor Base Speed (rpm) (min-1):	1750	1750	1750	1750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750
	Total Gear Reduction:	35.00:1	35.00:1	35.00:1	35.00:1	43.75:1	43.75:1	43.75:1	43.75:1	58.3:1	58.3:1	58.3:1	58.3:1	67.3:1	67.3:1	67.3:1	67.3:1	88.0:1	88.0:1	88.0:1	88.0:1	
	Continuous Maximum Load (1) (lbs) (kN):	42,700	190	42,700	190	73,368	326	73,368	326	89,639	399	89,639	399	165,803	738	165,803	738	103,412	460	103,412	460	
Short Term Maximum Load (1) (lbs) (kN):	50,200	223	50,200	223	102,715	457	102,715	457	112,048	498	112,048	498	232,124	1,033	232,124	1,033	136,009	605	136,009	605		
Electrical	Extruder Drive:	460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		
	Barrel Heat Zones:	460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		460/3/60		
	Die Heat Zones:	230/3/60		230/3/60		230/3/60		230/3/60		230/3/60		230/3/60		230/3/60		230/3/60		230/3/60		230/3/60		
	Main Drive Motor (460V/3 Phase/60Hz) Amps:	72		72		234 (I)		260 (I)		198		198		268		268		362		362		
	Die Zones (230V/3 Phase/60Hz) Amps:	125		125		125		125		125		125		125/175		125/175		125/175		125/175		
	Isolation Transformer for AC Drive & Motor (3) (kVA):	63		63		118		118		175		175		220		220		330		330		
Stepdown Transformer 460/230V, 3 Phase, 60Hz (kVA):	51/75		51/75		51		51		51		51		51/75		51/75		51/75		51/75			
Heating & Cooling	Number of Barrel Heating Zones:	5		6		5		6		5		6		5		6		7		8		
	Total Barrel Heating Capacity (kW):	28		36		59		79		93		120		142		179		197		235		
	Number of Barrel Cooling Zones:	3		4		3		4		3		4		3		4		5		6		
	Barrel Cooling Medium:	Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		
	Number of Screw Temperature Control Zones:	1		1		1		1		1		1		1		1		1		1		
	Total Screw Heating Capacity (kW/gpm) (4):	9/6		9/6		9/6		9/6		12/10		12/10		12/10		12/10		21/20		21/20		
	Number of Die Zones Including Entry Adapter (5):	8		8		8		8		8		8		8		8		8		8		
Total Die Heating Capacity - Standard No. Die Zones (kW):	51		51		51		51		51		51		51/75		51/75		51/75		51/75			
Vacuum	Vacuum Pump (HP) (kW) (6):	3		2.25	3		2.25	3		2.25	5		3.75	5		3.75	5		3.75	10		7.5
	Type:	Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		
Air & Water	Dual Vent Capability:	No		Yes		No		Yes		No		Yes		No		Yes		No		Yes		
	Minimum Water Pressure (psi) (bar):	50		3.5	50		3.5	50		3.5	50		3.5	50		3.5	50		3.5	50		3.5
	Maximum Water Temperature (deg. F) (deg. C):	68		20	68		20	68		20	68		20	68		20	68		20	68		20
	Average Water Consumption (gpm) (m³/h):	15		3.4	15		3.4	17		3.9	17		3.9	20		4.5	24		5.5	24		5.5
	Water Supply Connection Pipe Size (in):	0.5		0.5		0.5		0.5		0.5		0.5		0.5		0.5		0.5		0.5		
	Water Drain Connection Pipe Size (in):	0.5		0.5		0.5		0.5		0.5		0.5		0.5		0.5		0.5		0.5		
	Vacuum Pump Exhaust Pipe Size (in):	1.625		1.625		1.625		1.625		1.625		1.625		1.625		1.625		1.625		1.625		
Machine Dimensions	Average Cooling Tower Load (tons) (kW):	6		21	6		21	6		21	6		21	9		32	9		32	12		43
	Total Length without Entry Adapter (in) (mm):	150.5		3823	0		0	200.8		5,101	226.5		5,752	243.8		6,192	276		6,997	284.8		7,233
	Width (in) (mm):	56.8		1443	0		0	61.4		1,560	61.4		1,560	70.4		1,788	70.4		1,788	83.2		2,113
	Height with Doser Feeder & Hopper (in) (mm):	102.5		2604	102.5		2604	104.5		2,655	104.5		2,655	106.3		2,700	106.3		2,700	114.2		2,900
	Extrusion Height Center Line (in) (mm):	43.3		1100	43.3		1100	43.3		1,100	43.3		1,100	43.3		1,100	43.3		1,100	43		1,100
	Extruder Weight, Approximate (lbs) (kg):	11,600		5262	0		0	14,500		6,590	15,500		7,045	19,000		8,635	20,750		9,435	26,000		11,820
Application Throughput Rates	Rigid PVC Pipe (lbs/hr) (kg/hr):	to 1,000		to 450	to 1,100		to 500	to 1,200		to 545	to 1,200		to 545	to 2,200		to 1,000	to 2,200		to 1,000	to 3,600		to 1,636
	Rigid PVC Profile (lbs/hr) (kg/hr):	to 720		to 325	to 775		to 350	250-1,000		114-455	250-1,000		114-455	400-1,400		182-636	400-1,400		182-636	TBD		TBD
	Rigid PVC Siding (lbs/hr) (kg/hr):	to 720		to 325	to 775		to 350	to 1,000		to 455	to 1,000		to 455	to 1,800		to 818	to 1,800		to 818	to 3,000		to 1,364
	Rigid PVC Sheet-Solid (lbs/hr) (kg/hr):	to 720		to 325	to 775		to 350	to 1,000		to 455	to 1,000		to 455	to 1,800		to 818	to 1,800		to 818	to 3,000		to 1,364
	Rigid PVC Pelletizing (lbs/hr) (kg/hr):	to 1,150		to 520	to 1,200		to 545	to 1,200		to 545	to 1,200		to 545	to 2,200		to 1,000	to 2,200		to 1,000	to 3,600		to 1,636
	Flexible PVC Pelletizing (7 & 8) (lbs/hr) (kg/hr):	to 1,200		to 545	to 1,290		to 585	to 1,400		to 636	to 1,400		to 636	to 2,600		to 1,180	to 2,600		to 1,180	to 4,000		to 1,818
	Wood (Natural) Fiber Plastic Composite (9) (lbs/hr) (kg/hr):	NA		NA	to 700		to 315	NA		NA	to 900		to 409	NA		NA	to 1,600		to 727	NA		NA

Rigid PVC output rates are based on average formulations with a bulk density of 40 lbs/ft³ or 640 g/L. All throughput rates are dependent on formulation, tooling, and downstream. Laboratory trials should be conducted to determine specific throughput range for a given application.

Notes: 1) Per screw.
 2) Main drive motor load also includes barrel and screw oil zones at 460/3/60.
 3) Isolation transformer highly recommended for protection of extruder drive.
 4) On TP115 and larger, for WPC applications, a 21 kW/20 gpm Screw Oil Unit is used.
 5) A maximum of 16 die zones is available with standard panel and control.
 6) On TP115 and larger, for high fill pipe, vacuum pump should be upgraded one size larger. For WPC applications, vacuum pump should be 10 HP.
 7) Crammer feeder required to meet rated throughput.
 8) As Shore A Durometers increase, output rates drop accordingly.
 9) WPC output rates are based on 60% wood-fiber 40-60 mesh + 40% HDPE.
 All specifications reflect average values based on typical machine layouts. Actual figures will vary depending on final machine configuration. If you require more specific data, consult a Certified Installation Print for your particular machine.
 Performance specifications are based on theoretical data. Shipping weights reflect average historical values. Due to continued improvements, specifications are subject to change without notice.

