

Conical Twin Screw Extruder Specifications

	TC35		TC50		TC55		TC65		TC80		TC80/84		TC86		TC92		TC96		
	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	
Screws	Number of Screws:	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	Screw Dia., Front/Rear (in) (mm):	1.38/2.95	35/75	2.16/4.29	55/109	2.16/4.49	55/114	2.56/5.20	65/132	3.14/6.13	80/156	3.31/6.13	84/156	3.38/6.90	86/176	3.67/7.24	92/184	3.78/7.95	96/202
	Length to Front Dia. Ratio:	23D	23D	22D	22D	22D	22D	22D	22D	23D	23D	22D	22D	27D	27D	27D	30D	30D	
	Direction of Rotation:	Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating		Counter-Rotating	
	Speed Range (rpm) (min-1):	10 to 50	10 to 50	7 to 30	7 to 30	7 to 42	7 to 42	7 to 35	7 to 35	7 to 33	7 to 33	7 to 33	7 to 33	7 to 33	7 to 33	7 to 34	7 to 34	7 to 34	7 to 34
	Available Torque per Screw Maximum (ft/lbs) (Nm):	640	820	2,490	3,380	2,490	3,380	3,710	5,030	5,900	8,000	5,900	8,000	9,957	13,500	11,250	15,250	14,390	19,510
Total Available Torque Maximum (ft/lbs) (Nm):	1,302	1,740	4,980	6,760	4,980	6,760	7,420	10,060	11,800	16,000	11,800	16,000	19,914	27,000	22,500	30,500	28,780	39,020	
Drive Train	Motor Rating (HP) (kW):	12.7	9	25	18.6	40	30	50	37	75	56	75	56	125	93	150 or 700	1125 or 150	200	150
	Motor Base Speed (rpm) (min-1):	1,600	1,600	1,750	1,750	2,500	2,500	2,100	2,100	2,500	2,500	2,500	2,500	1,750	1,750	1,750	1,750	1,750	1,750
	Total Gear Reduction:	1:32	1:32	1:59	1:59	1:59	1:59	1:59	1:59	1:76	1:76	1:76	1:76	1:53	1:53	1:50	1:50	1:50	1:50
	Continuous Maximum Load (lbs) (kN):	13,900	62	34,000	153	34,000	153	48,000	214	73,000	324	73,000	324	84,530	376	92,000	409	92,000	409
	Short Term Maximum Load (lbs) (kN):	17,400	77	43,000	191	43,000	191	60,000	267	91,000	404	91,000	404	105,660	470	115,000	512	115,000	512
	Dynamic Bearing Load Rating (lbs) (kN):	27,000	120	227,000	1,010	277,000	1,010	227,000	1,010	183,000	815	183,000	815	247,290	1,100	275,000	1,200	275,000	1,200
Screw Thrust Measuring Device:	NA		Electric		Electric		Electric		Electric		Electric		Electric		Electric		Electric		
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	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:	230/3/60	230/3/60	230/3/60	230/3/60	230/3/60	230/3/60	730/3/60	730/3/60	230/3/60	230/3/60	230/3/60	230/3/60	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	730/3/60	730/3/60	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	230/3/60
	Main Drive Motor (460V/3 Phase/60Hz) (Amps):	30	30	42	42	64	64	74	74	113	113	113	113	256(2)(3)	256(2)(3)	202/262	202/262	262	262
	Barrel, Die & Scrw Oil Heaters (230V/3Phase/60Hz) (Amps):	75	75	128	128	128	178	174	174	233	233	733	233	108(3)	108(3)	188(3)(4)	188(3)(4)	210(3)(4)	210(3)(4)
	Isolation Transformer for AC Drive & Motor (1) (kVA):	27	27	34	34	51	51	63	63	93	93	93	93	145	145	175/220	75/220	220	220
Stepdown Transformer 460/230V, 3 Phase, 60Hz (kVA):	34	34	51	51	51	51	75	75	93	93	93	93	51	51	51	51	51	51	
Heating & Cooling	Number of Barrel Heating Zones:	3	3	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	
	Total Barrel Heating Capacity (kW):	11	11	19.5	19.5	19.5	19.5	285	285	43	43	43	43	54	54	86	86	100	100
	Number of Barrel Cooling Zones:	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4
	Barrel Cooling Medium:	HTF or Air		HTF, Water, Air		HTF, Water, Air		HTF, Water, Air		HTF, Water, Air		HTF, Water, Air		HTF, Water, Air		HTF, Water, Air		HTF, Water, Air	
	Number of Screw Temperature Control Zones:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total Screw Heating Capacity (kW):	9	9	9	9	9	9	9	9	9	9	9	9	12	12	12	12	18	18
Number of Die Zones Including Entry Adapter:	5	5	4	4	6	6	6	6	8	8	B	B	8	8	8	8	8	8	
Total Die Heating Capacity - Standard No. Die Zones (kW):	16	16	225	225	225	225	375	375	41	41	41	41	51	51	51	51	51	51	
Vacuum	Vacuum Pump (HP) (kW):	15	1.1	2	15	2	15	2	15	3	2.2	3	22	3	25	5	3.7	10	75
	Type:	Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring		Liquid Ring	
Air & Water	Dual Vent Capability:	No		No		No		No		No		No		Yes		Yes		Yes	
	Minimum Air Pressure (psi) (bar):	NA	NA	NA	NA	NA	NA	NA	NA	40	2.8	40	2.8	NA	NA	40	2.8	40	2.8
	Air Supply Connection Pipe Size (in):	NA	NA	NA	NA	NA	NA	NA	NA	0.25	0.25	0.25	0.25	NA	NA	0.5	0.5	0.5	0.5
	Minimum Water Pressure (psi) (bar):	50	35	50	35	50	35	50	35	50	35	50	35	50	35	50	35	50	35
	Maximum Water Temperature (deg. F) (deg. C):	68	20	68	20	68	20	68	20	68	20	68	20	68	20	68	20	68	20
	Average Water Consumption (gpm) (m3/h):	6	1.4	9	2	9	2	9	2	12	27	12	27	135	3	20	45	20	45
	Water Supply Connection Pipe Size (in):	0.75	0.75	0.5	0.5	0.5	0.5	0.5	0.5	0.75	0.75	0.75	0.75	0.75	0.75	1	1	1	1
	Water Drain Connection Pipe Size (in):	1.25	1.25	0.5	0.5	0.5	0.5	0.5	0.5	0.75	0.75	0.75	0.75	0.75	0.75	1.25	1.25	1.25	1.25
	Vacuum Pump Exhaust Pipe Size (in):	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.75	1.75	1.25	1.25	1.25
Average Cooling Tower Load (Tons) (kW):	3	10	5	18	5	18	6	21	8	28	8	28	6.7	24	10	36	10	36	
Machine Dimensions Overall	Total Length without Entry Adapter (in) (mm):	98.4	2,500	113.4	2,880	113.4	2,880	123.2	3,130	189	4,800	189	4,800	196	5,000	236	6,000	270	6,856
	Width (in) (mm):	37.8	960	55.5	1,410	55.5	1,410	55.5	1,410	41	1,036	41	1,036	55	1,400	47	1,500	56	1,421
	Height with Doser Feeder & Hopper (in) (mm):	82	2,080	103.3	2,625	103.3	2,625	103.3	2,625	91	2,312	91	2,312	104	2,650	104.2	2,647	93	2,352
	Extrusion Height Center Line (in) (mm):	39.4	1,000	40	1,015	40	1,015	40	1,015	40	1,015	40	1,015	44.8	1,140	43.3	1,100	4331	1,100
	Extruder Weight, Approximate (lbs) (kg.):	2,770	1,260	6,500	2,955	6,500	2,955	6,800	3,090	12,700	5,760	12,700	5,760	18,000	8,150	21,000	9,500	25,000	11,365
Application Throughput Rates	Rigid PVC Pipe (lbs/hr) (kg/hr):	25 to 150	11 to 68	50 to 275	23 to 125	200 to 600	90 to 270	300 to 800	135 to 365	500 to 1300	227 to 590	500 to 1600	227 to 727	500 to 2000	227 to 909	to 2200	to 1000	to 2800	to 1273
	Rigid PVC Profile (lbs/hr) (kg/hr):	25 to 125	11 to 57	50 to 200	23 to 91	80 to 450	35 to 205	200 to 650	90 to 295	300 to 900	135 to 410	300 to 1000	135 to 455	400 to 1200	182 to 550	to 1700	to 770	NA	NA
	Rigid PVC Siding (7) (lbs/hr) (kg/hr):	NA	NA	NA	NA	80 to 500	35 to 225	200 to 650	90 to 295	600 to 1200	273 to 545	600 to 1400	273 to 636	600 to 1700	273 to 770	to 2000	to 909	NA	NA
	Rigid PVC Sheet-Solid (lbs/hr) (kg/hr):	NA	NA	NA	NA	200 to 600	90 to 270	300 to 800	135 to 365	500 to 1300	227 to 590	500 to 1600	227 to 727	500 to 2000	277 to 909	to 2000	to 909	NA	NA
	Rigid PVC Pelletizing (lbs/hr) (kg/hr):	NA	NA	NA	NA	to 600	to 270	to 800	to 365	to 1300	to 590	to 1600	to 727	to 2000	to 910	to 2200	to 1000	NA	NA
	Flexible PVC Pelletizing (5 & 6) (lbs/hr) (kg/hr):	NA	NA	NA	NA	to 800	to 365	to 1000	to 455	to 1500	to 682	to 1800	to 818	to 2200	to 1000	to 2500	to 1136	NA	NA
	Wood (Natural) Fiber Plastic Composite (lbs/hr) (kg/hr):	to 100	to 45	to 165	to 75	to 350	MI 160	to 500	to 230	B50 to 1000	386 to 455	NA	NA	1000 to 1600	455 to 727	to 1700	to 773	to 2600	to 1182

Rigid PVC output rates are based on average formulations with a bulk density of 40 lbs/ft³ or 640 g/L. WPC output rates are based on 60% wood-fiber 40-60 mesh + 40% HDPE.

- Notes: 1) Isolation Transformer highly recommended for protection of extruder drive. 4) At 460/3/60. 7) TC55 and TC65 siding output rates for capstock; TC80 - TC92 siding output rates for substrates.
 2) 460V Barrel Load is included in the 460V machine power drop. 5) Crammer feeder needed to obtain rated output.
 3) Barrel & screw temp. control heaters supplied at 460V; Die heaters supplied at 230V. 6) As Shore A durometers increase, output rates drop accordingly.

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 continual improvements, specifications are subject to change without notice.

