



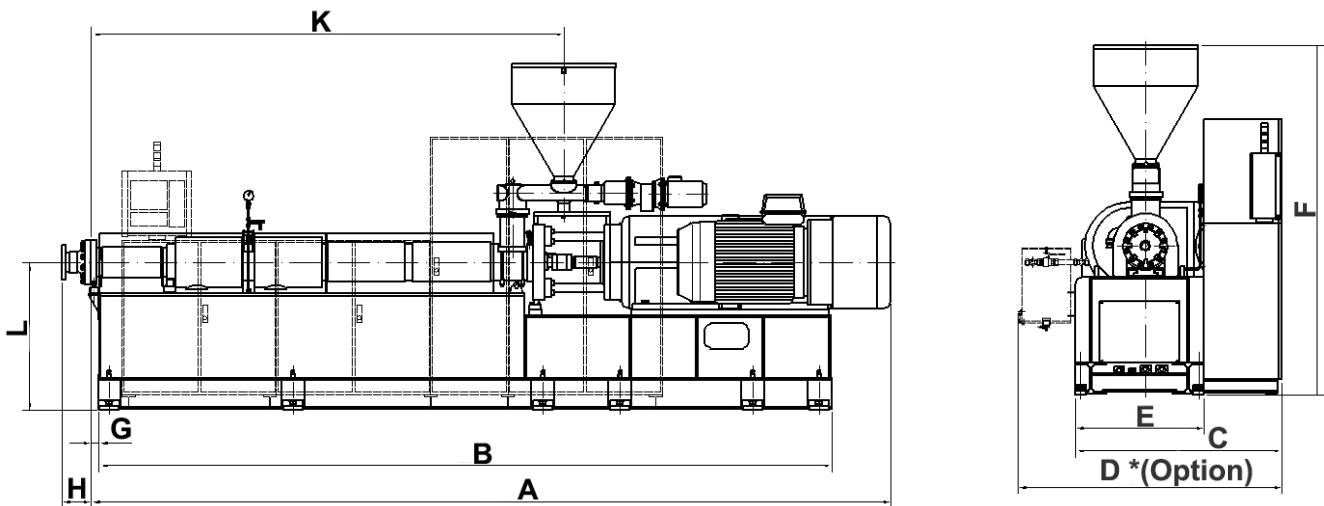
PERFECT COMPONENTS.  
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# Theysohn® Torque Master

## Parallel Twin-Screw Extruders for PVC-Sheet and Siding

The Theysohn Torque Master series represents the newest technology in parallel twin-screw extrusion. Especially, but not only developed for PVC Sheet and Siding extrusion, the TTM series meets increased customer demands on higher torque. Highest output is achieved with proven and reliable 34D processing units. In spite of the increased maximum torque load of the 4-shaft gearbox (up to 50 % compared with a regular 3-shaft gearbox), a higher safety factor of more than 1.63 has been achieved. This ensures trouble-free production over a long time.



[mm]	A	B	C	D	E	F	G	H	K	L
TTM 98PL-28	5231	4800	1440	1902	840	2504	50	200	3080	1100
TTM 98PL-32	5623	5192	1440	1902	840	2504	50	200	3080	1100
TTM 118PL-28	6222	5701	1590	2032	990	2696	60	230	3677	1150
TTM 118PL-32	6694	6173	1590	2032	990	2696	60	230	3677	1150
TTM 138PL-28	7213	6640	1675	2117	1075	2741	50	290	4185	1150
TTM 138PL-32	7765	7192	1675	2117	1075	2741	50	290	4185	1150

## Technical data

			TTM 98PL-28	TTM 98PL-32	TTM 118PL-28	TTM 118PL-32	TTM 138PL-28	TTM 138PL-32
Output rate (dep. on formulation and tool)	Gelification capacity	kg/h	760	835	1140	1250	1500	1700
	Output guarantee for PVC sheet/siding	kg/h	200 - 450	250 - 550	300 - 700	400 - 800	500 - 1000	600 - 1100
Screws	Diameter	mm	98	98	118	118	138	138
	L/D ratio/total		28/30	32/34	28/30	32/34	28/30	32/34
	Screw speed max.	rpm	35.9	39.5	29.8	32.8	25.4	27.9
	Total torque	Nm	19500	19500	35300	35300	56500	56500
	Heating/cooling unit by oil, heating/cooling cap.	kW	15/20	15/20	15/20	15/20	15/20	15/20
Drive	Main drive (AC)	kW	78	86	117	129	160	175
	Drive speed max.	rpm	1750	1925	1750	1925	1917	2100
	Melt pressure (short time/max.)	bar	500/600	500/600	500/600	500/600	500/600	500/600
Gearbox	Application factor		1.69	1.69	1.64	1.64	1.63	1.63
Barrel	Installed heating capacity	kW	44	44	64	64	89	89
	No. of heating/cooling zones		5/3	5/3	5/3	5/3	5/3	5/3
	Vacuum pump	kW	3.0	3.0	3.0	3.0	4.0	4.0
Adapter	Heating zones (no./installed cap.)	kW	1 x 1.1	1 x 1.1	1 x 1.1	1 x 1.1	1 x 1.1	1 x 1.1
Tool zones (option)	Max. tool zones 230V 1-phase (no./installed cap.)	kW	18 x 3.5	18 x 3.5	18 x 3.5	18 x 3.5	24 x 3.5	24 x 3.5
Feeding (option)	Starve feeder (AC)	kW	1.1/-	1.1/-	2.2/3.0	2.2/3.0	2.2/3.0	2.2/3.0
General data	Total connection (stand./max. tooling zones), max.	kVA	150/297	158/305	208/323	208/323	275/466	290/481
	Water consumption (at 10° C water temperature)	m³/h	2.3	2.3	2.3	2.3	2.3	2.3
	Center Line	mm	1100	1100	1150	1150	1150	1150
	Weight (incl. control cabinet) approx.	kg	9000	10000	16000	17000	20000	21000

## Standard

- Main drive maintenance-free AC-motor
- TEC 4s control with 19" color TFT display with touchscreen
- Windows XP embedded operating system
- 1 Compact Flash Card, 4 GByte min.
- Saving and calling of formulas and process parameters
- Full recording of all alarms
- On-line shifting between languages
- Production logs (stored or printed)
- Trend graphs
- Voltage loss protection (up to 3 sec.)
- Back pressure monitoring in gearbox with emergency cut-off
- Synchronization of up to 12 drives
- Self-tuning temperature controllers
- Timer for barrel and tool heating zones
- Deep nitrided screws, molybdenum coating of screw flights chromium-plated screw flanks in venting and metering zone
- Passive screw temperature control (water-filled screw)
- Barrel with 5 heating zones, 2 zones air-cooled and metering zone oil-cooled with speed controlled oil-pump, elliptical barrel design in metering zone
- Barrel heating with ceramic heater bands, Zone 1, 2
- Barrel covers
- Vacuum pump and vacuum canister with filter and bypass
- Adapter double chromium-plated incl. heating zone (Sheet)
- Adapter stainless steel incl. heating zone (Siding)

- Bore holes incl. plugs for melt pressure and temperature sensors in adapter
- Colour: blue RAL 5015/doors grey RAL 7036
- Voltage: 3 x 400V + 0, 50 Hz
- Electric CE-conform

## Options

- 12/18/24 tool zones 230V 1-phase
- Heat current control for tool zones and for barrel heating zones
- Single-screw starve feeder with maintenance-free AC motor and full screw TTM 98PL
- Twin-screw starve feeder with maintenance-free AC motor, TTM 118PL and 138PL
- Melt temperature monitoring and data storage
- Melt pressure monitoring and data storage
- Active screw temperature control by oil incl. oil blocks
- Adapter: customized design, air-cooled
- Adapter/barrel with central clamping
- Adapter with turned flow channel
- Saw cut control integrated in TEC control
- Remote maintenance via LAN and/or Internet
- Interface cards for network link (Ethernet card)
- Acoustic alarm (horn)
- Air conditioning for: control cabinet, computer and screen (electrical type)
- Air-water heatexchanger for cooling of control cabinet

- Machine subframe for customized extrusion center height
- Machine subframe on wheels with rails (+ 50 mm)
- Hopper level indicator
- Stainless steel hopper
- Side-mounted vacuum canister
- Up to 6 gravimetric feeding units integrated in TEC control
- Second side-mounted vacuum canister
- Additional 2 single dosing feeders for pigments and additives
- K-Tron twin-screw side dosing feeders
- Screws deep nitrided, without molybdenum-coating, without chromium
- X-800 barrel together with tungsten-carbide coated screws
- Special voltage and electrical standards
- Customized colour