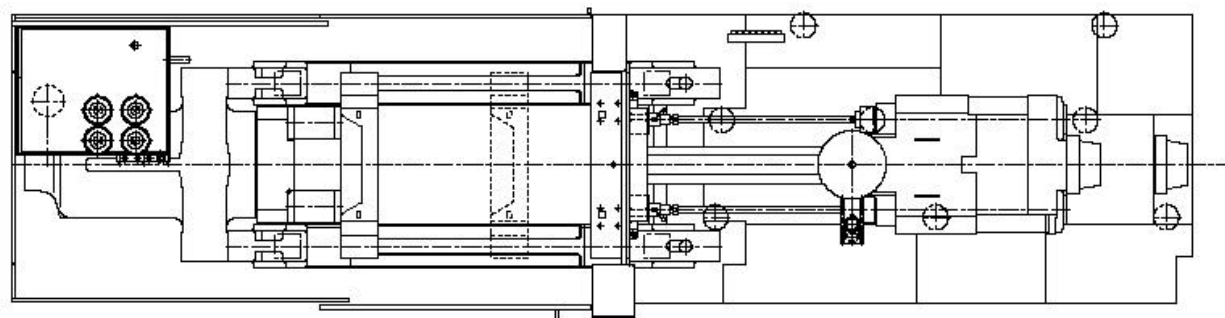
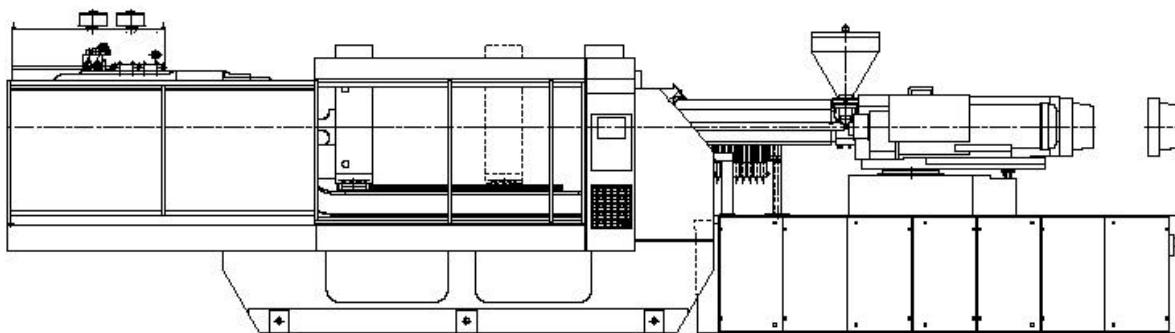


Size designation		7050/...					
		Standard			N execution		
Screw diameter	in /mm	3.54 / 90	4.13 / 105	4.72 / 120	3.54 / 90	4.13 / 105	4.72 / 120
Screw Stroke	in /mm	18.9 / 480			18.9 / 480		
Max stroke volume	in <sup>3</sup> /cm <sup>3</sup>	186.1 / 3050	253.9 / 4160	331.4 / 5430	186.1 / 3050	253.9 / 4160	331.4 / 5430
Screw speed	rpm	130			155		
Screw L/D ratio	L/D	20:1			20:1		
Plasticizing capacity	oz-sec / gram-sec	2.3 / 64	3.3 / 92	4.7 / 132	2.7 / 76	3.9 / 110	5.6 / 158
Screw L/D ratio	L/D	22:1			22:1		
Plasticizing capacity	oz-sec / gram-sec	3.5 / 100	5.2 / 147	7.3 / 206	4.2 / 119	6.2 / 175	8.7 / 246
Injection rate at max. press.	in <sup>3</sup> /sec / cm <sup>3</sup> /sec	35.7 / 585	48.8 / 800	63.5 / 1040	42.4 / 695	57.7 / 945	75.4 / 1235
Injection rate regenerative	in <sup>3</sup> /sec / cm <sup>3</sup> /sec	28.1 / 460	38.4 / 630	50.0 / 820	33.6 / 550	45.5 / 745	59.5 / 975
Injection pressure at max. press.	psi / bar	32635 / 2250	23930 / 1650	18275 / 1260	32635 / 2250	23930 / 1650	18275 / 1260
Injection pressure regenerative	psi / bar	33360 / 2300	30315 / 2090	23205 / 1600	33360 / 2300	30315 / 2090	23205 / 1600
Nozzle stroke	in /mm	37.4 / 950			37.4 / 950		
Nozzle contact force	ton/kN	16.8 / 150			16.8 / 150		
Heating capacity	kW	56	68	80	56	68	80
Number of heat zones		6			6		
Horsepower	HP/kW	150 / 110			175 / 130		
Hopper volume	lbs	300			300		



### Possible combinations of the injection unit

Machine designation	Oil Capacity	HP		Connected Power / Amp	
		Standard	N execution	Standard	N execution
	Gallons / liters	hp/kW	hp/kW	hp/kW	hp/kW
ES 7050 / 550 - 660	650 / 2450	150 / 110	175 / 130	200 / 330	220 / 370

The equipment features are valid for the following machines

### Tie-barless Machines:

ES 7050 / 550 TL CC100 A03  
ES 7050 / 660 TL CC100 A03

### Standard Equipment

- 10 – stage injection speed
- 10 – stage holding pressure profile
- 5 – stage screw speed
- 5 – stage back pressure profile
- Display of the screw speed
- Injection time monitoring
- Automatic cushion monitoring
- Transfer from boost to hold by time, stroke or hydraulic pressure
- Increased injection pressure can be switched over
- Contact pressure relief
- Injection unit swivel
- Wear resistant bi metallic cylinder
- Manual quick change barrel
- Ceramic heater bands
- Direct drive of the screw with hydraulic motor
- M3 Bi metallic barrel
- S1 Nitrided steel tempered ionitrided

### Control system and electric system

- Microcomputer CC 100 closed loop controlled with integrated diskette drive
- TFT color flat display incl. MICRO-GRAPH PLUS
- All functions on the injection unit closed loop control
- Malfunction message record
- Patented linearization program
- Graphic-supported set value setting
- Automatic barrel heat-up with start up
- Self –optimizing temperature control circuits
- Monitoring of process-critical functions with alarms
- Connection for PC keyboard and printer (V24)
- Graphic cycle time analysis with part time monitoring
- Access management system via pass-word input
- Regulator and emergency service for temperature control circuits
- QUICK SET- UP with action display
- Info package (help package, 2<sup>nd</sup> language, storage of data sets on CPU)

### Machine safety

- Current ANSI B151 regulations

### Additional Options Available

- Electric screw drive
- Increased torque of the screw
- Thermoset equipment
- Elastomer equipment
- PVC equipment
- GASMELT equipment
- Multi-component and multi-color equipment
- Needle shut off nozzle spring actuated
- Insulating mats for heaterbands
- Extremely wear resistant and corrosion resistant plasticizing units
- Holding pressure switch over as a function of mold cavity pressure with charge amplifier
- Servo valve closed loop control for injection speed. Holding pressure and back pressure

### Control System and electric system

- Microcomputer CC 100 closed loop controlled incl. MICROGRAPH PLUS and QDP / CPC
- MICROPLAST / MICROFLOW
- MICROTEMP
- Quality documentation package QDP incl. Process data monitoring CPC
- Absolute value input
- Quality data statistics QDS
- Program package expert control
- Energy measurement + analysis
- Program automatic cylinder cleaning
- Interface for handling system
- ENGEL Monitoring System (EMS)
- Program cycle sequence freely programmable in 36 program steps
- AUTOPROTECT self-learning precision mold protection
- Week switch clock for peripheral equipment and motor on/off
- Control circuits for mold heating
- Printer, PC input keyboard
- Access authorization system with magnetic card
- Interface for conveyor belt
- Network interface for central computer / tele- service
- Acoustic warning signal
- Interface for temperature control units, hot runner control and conveying unit
- Manual control device for machine functions
- Start-up circuit with automatic switch over from start-up to production parameters
- Additional electric connections (2-pole / 3 phase ), selectable
- Week switch clock for heating on/off motor

### Automation modules

- Automatic feed units