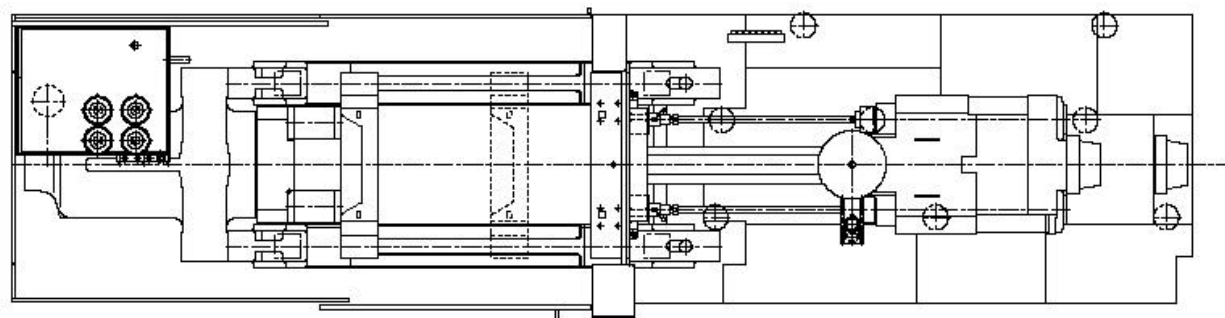
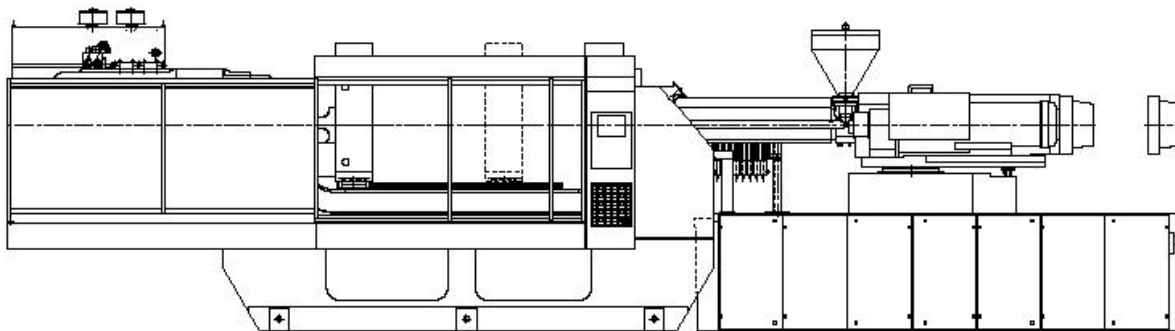


Size designation	4550/...						
		Standard			N execution		
Screw diameter	in/mm	3.25 / 80	3.54 / 90	4.13 / 105	3.25 / 80	3.54 / 90	4.13 / 105
Screw Stroke	in/mm	15.35 / 390	15.35 / 390	15.35 / 390	15.35 / 390	15.35 / 390	15.35 / 390
Max stroke volume	in ³ /cm ³	119.6 / 1960	151.3 / 2480	206.3 / 3380	119.6 / 1960	151.3 / 2480	206.3 / 3380
Screw speed	rpm	140			140		
Screw L/D ratio	L/D	20:1			20:1		
Plasticizing capacity	oz-sec / gram-sec	1.8 / 50	2.5 / 70	3.5 / 100	2.2 / 62	3.1 / 88	4.5 / 127
Screw L/D ratio	L/D	24:1			24:1		
Plasticizing capacity	oz-sec / gram-sec	3.1 / 87	4.2 / 118	6.1 / 173	3.9 / 112	5.4 / 152	7.8 / 222
Injection rate at max. press.	in ³ /sec / cm ³ /sec	25.6 / 420	32.3 / 530	43.9 / 720	34.8 / 570	43.9 / 720	59.8 / 980
Injection rate regenerative	in ³ /sec / cm ³ /sec	22.6 / 370	28.4 / 465	38.7 / 635	30.5 / 500	38.4 / 630	52.3 / 860
Injection pressure at max. press.	psi / bar	33360 / 2300	27700 / 1910	20305 / 1400	33360 / 2300	27700 / 1910	20305 / 1400
Injection pressure regenerative	psi / bar	33360 / 2300	31620 / 2180	23705 / 1600	33360 / 2300	31620 / 2180	23705 / 1600
Nozzle stroke	in/mm	27.6 / 700			27.6 / 700		
Nozzle contact force	ton/kN	16.8 / 150			16.8 / 150		
Heating capacity	kW	48	56	64	48	56	64
Number of heat zones		6			6		
Horsepower	HP/kW	100 / 75			120 / 90		
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 4550 / 550 - 660	490 / 1850	100 / 75	120 / 90	145 / 240	160 / 265



Injection unit ES 4550 / ... TL

The equipment features are valid for the following Machines

Tie-barless machines:

ES 4550 / 550 TL CC100 A03
ES 4550 / 660 TL CC100 A03

DUO Machines

ES 4550 / 900 DUO 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 bimetallic cylinder
- Manual quick change barrel
- MI heater bands
- Direct drive of the screw with hydraulic motor

Control system and electric system

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

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
- Power melt heavy duty screws
- Needle shut off nozzle spring actuated
- Extremely wear resistant and corrosion resistant plasticizing units
- Holding pressure switchover as a function of mold cavity pressure with charge amplifier
- Insulating mats for heaterbands
- 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
- Quality data statistics QDS
- MICROTAMP
- Absolute value input
- Quality documentation package QDP incl. Process data monitoring CPC
- Program package expert control
- Energy measurement + analysis
- Program automatic cylinder cleaning
- Program cycle sequence freely program-mable in 36 program steps
- Interface for handling system
- AUTOPROTECT self-learning precision mold protection
- ENGEL Monitoring System (EMS)
- Control circuits for mold heating
- Week switch clock for peripheral equipment and motor on/off
- Network interface for central computer / tele-service
- Access authorization system with magnetic card
- Printer, PC input keyboard
- Manual control device for machine functions
- Interface for conveyor belt
- Interface for temperature control units, hot runner controller and conveying unit
- Start-up circuit with automatic switchover from start-up to production parameters
- Additional electric connections (2-pole / 3 phase), switchable alternatively
- Acoustic warning signal

Automation modules

- Automatic feed units