

Process Setting Chart

Date: _____

1. Supplier Details

Supplier Name:		Tel No.:	
Contact Name:		E-mail:	

2. General Information

Part No.:		Part Name:		Tool S/N:	
Machine type:		Screw Ø [mm]:		No of cavities:	
Material:	ABS	Master batch [%]:		Pre-heating:	°C hrs
Pressure recorded:	Plastic	Inj. cylinder Ø [mm]:		Intensification ratio:	Inj.cylinder Ø needed!

3. Settings

Cylinder Temperature:	Nozzle Zone	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Yoke Zone
Hot Runner Temperature:	°C	°C	°C	°C	°C	°C	°C	°C
Mould Temperature:	Ejector Side	Nozzle Side						
	°C	°C						

Injection		
1st	Injection Speed	cm ³ /s
	Injection Force [PP]	bar
	Switch Over	cm ³
2nd	Injection Speed	cm ³ /s
	Injection Force [PP]	bar
	Switch Over	cm ³
3rd	Injection Speed	cm ³ /s
	Injection Force [PP]	bar
	Switch Over	cm ³

Holding		
Speed		cm ³ /s
Ramp Time		sec
1st	Holding Pressure [PP]	bar
	Holding time	sec
2nd	Holding Pressure [PP]	bar
	Holding time	sec
3rd	Holding Pressure [PP]	bar
	Holding time	sec
Cooling time		sec

Dosage	
Circumference Spd.	m/min
Back Pressure [PP]	bar
Volume	cm ³
Decompression Spd.	cm ³ /s
Decompression Vol.	cm ³

Monitoring	
Injection time	sec
Inj.press @ S/Over [PP]	bar
Max inject press [PP]	bar
Cushioning	cm ³
Total cycle time	sec

Convert Plastic Pressure to Hydraulic Pressure

Mould Parameters			
		Mould Closing	Mould Opening
1st	Speed	mm/s	mm/s
	Force	KN	KN
	S/Over	mm	mm
2nd	Speed	mm/s	mm/s
	Force	KN	KN
	S/Over	mm	mm
3rd	Speed	mm/s	mm/s
	Force	KN	KN
	S/Over	mm	mm
Clamping Pressure		KN	
Mould height		mm	

Ejector Parameters			
		Mould Closing	Mould Opening
1st	Speed	mm/s	mm/s
	Force	KN	KN
	S/Over	mm	mm
2nd	Speed	mm/s	mm/s
	Force	KN	KN
	S/Over	mm	mm
3rd	Speed	mm/s	mm/s
	Force	KN	KN
	S/Over	mm	mm

4. Notes

Remarks:

- 1) Field in blue lettering shall be filled.
- 2) All pressures are to be logged in as plastic pressure (not machine, hydraulic, etc.)
- 3) While setting, reference shall be made to the 'Matrix of ideal parameters document'.
- 4) First copy to be filled and forward with packing graph during first trials.
- 5) Another updated copy to be filled and forward when OEE will take place.
- 6) [PP] denotes plastic pressure while [HP] denotes Hydraulic pressure.

Retention period: Production + 1 yr

Retention method: Soft copy

Matrix for ideal parameters

Type of material	ABS	
Injection time of MAX	2 sec	filling up to 95% - 98% of parts
Holding pressure to be between	500 bar	plastic pressure up to 1000 bar plastic pressure
for a MIN of	2 sec	as first holding time.
Cylinder temperature to be between	200 °C	up to 260 °C
Hot runner to be between	210 °C	up to 260 °C
Mould temperature to be between	20 °C	up to 70 °C

If a parameter is exceeded, a note is to be written on notes of our process setting chart stating why.

Type of material	PP	
Injection time of MAX	2 sec	filling up to 95% - 98% of parts
Holding pressure to be between	450 bar	plastic pressure up to 900 bar plastic pressure
for a MIN of	3 sec	as first holding time.
Cylinder temperature to be between	190 °C	up to 230 °C
Hot runner to be between	190 °C	up to 230 °C
Mould temperature to be between	20 °C	up to 45 °C

If a parameter is exceeded, a note is to be written on notes of our process setting chart stating why.

Type of material	PBT	
Injection time of MAX	1.8 sec	filling up to 95% - 98% of parts
Holding pressure to be between	600 bar	plastic pressure up to 1100 bar plastic pressure
for a MIN of	3 sec	as first holding time.
Cylinder temperature to be between	250 °C	up to 290 °C
Hot runner to be between	265 °C	up to 300 °C
Mould temperature to be between	50 °C	up to 75 °C

If a parameter is exceeded, a note is to be written on notes of our process setting chart stating why.

Type of material	POM	
Injection time of MAX	1.5 sec	filling up to 95% - 98% of parts
Holding pressure to be between	600 bar	plastic pressure up to 1100 bar plastic pressure
for a MIN of	3 sec	as first holding time.
Cylinder temperature to be between	175 °C	up to 200 °C
Hot runner to be between	180 °C	up to 220 °C
Mould temperature to be between	50 °C	up to 75 °C

If a parameter is exceeded, a note is to be written on notes of our process setting chart stating why.

Retention period: Production + 1 yr

Retention method: Soft copy

Matrix for ideal parameters

Type of material	PA6.	
Injection time of MAX	1.5 sec	filling up to 95% - 98% of parts
Holding pressure to be between	750 bar	plastic pressure up to 1200 bar plastic pressure
for a MIN of	3 sec	as first holding time.
Cylinder temperature to be between	255 °C	up to 300 °C
Hot runner to be between	270 °C	up to 325 °C
Mould temperature to be between	50 °C	up to 75 °C

If a parameter is exceeded, a note is to be written on notes of our process setting chart stating why.

Type of material	PC	
Injection time of MAX	1.5 sec	filling up to 95% - 98% of parts
Holding pressure to be between	600 bar	plastic pressure up to 1200 bar plastic pressure
for a MIN of	3 sec	as first holding time.
Cylinder temperature to be between	255 °C	up to 300 °C
Hot runner to be between	275 °C	up to 320 °C
Mould temperature to be between	20 °C	up to 80 °C

If a parameter is exceeded, a note is to be written on notes of our process setting chart stating why.

Type of material	PC_ABS	
Injection time of MAX	2 sec	filling up to 95% - 98% of parts
Holding pressure to be between	600 bar	plastic pressure up to 1200 bar plastic pressure
for a MIN of	3 sec	as first holding time.
Cylinder temperature to be between	255 °C	up to 290 °C
Hot runner to be between	265 °C	up to 310 °C
Mould temperature to be between	20 °C	up to 80 °C

If a parameter is exceeded, a note is to be written on notes of our process setting chart stating why.

Type of material	PC_A_SURFACE	
Injection time of MAX	2 sec	filling up to 95% - 98% of parts
Holding pressure to be between	500 bar	plastic pressure up to 1000 bar plastic pressure
for a MIN of	2 sec	as first holding time.
Cylinder temperature to be between	200 °C	up to 260 °C
Hot runner to be between	210 °C	up to 260 °C
Mould temperature to be between	20 °C	up to 70 °C

If a parameter is exceeded, a note is to be written on notes of our process setting chart stating why.

Retention period: Production + 1 yr

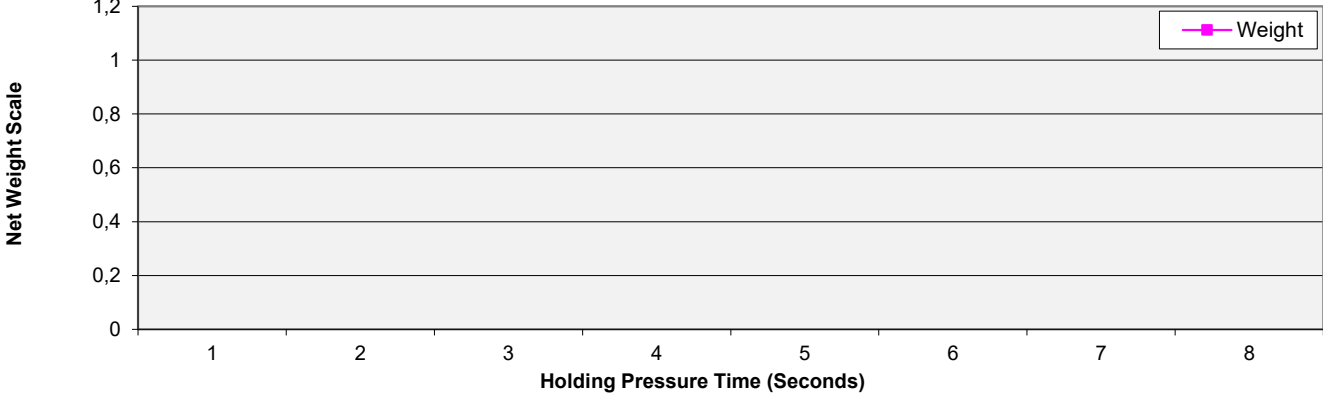
Retention method: Soft copy

 METHODE ELECTRONICS		Packing Graph			Date: 	
1. Supplier Details						
Supplier Name:				Tel No.:		
Contact Name:				E-mail:		
2. General Information						
Part No.:		Part Name:		Tool S/N:		
Machine type:		Screw Ø [mm]:		No of cavities:		
Material:		ABS		Master batch [%]:		
				Pre-heating:		°C hrs

Tick Holding Time	Holding Pressure Time	Net Weight Scale Actual	1st Holding Hydraulic Pressure	Remarks:
	(seconds)	(grams)	(Kg/cm2) ▼	
○	1			
○	2			
○	3			
○	4			
○	5			
○	6			
○	7			
○	8			

Convert Hydraulic to Plastic Pressure

Net Weight per Shot - density in grams



Notes:

- Input information needed in grey shaded areas. All other information will be automatically copied from the 'Process Setting Chart'
- If Error messages are shown on the right hand side of the remarks section, please rectify the process and update the values before submitting the packing graph to Methode.
- Once the process is set-up, and the packing graph is drafted, tick the most sensible holding time.
- Take a complete shot and weigh each part individually. Record the individual weight in the table below.

Cavity no.	1	2	3	4	5	6	7	8
Weight in grams								