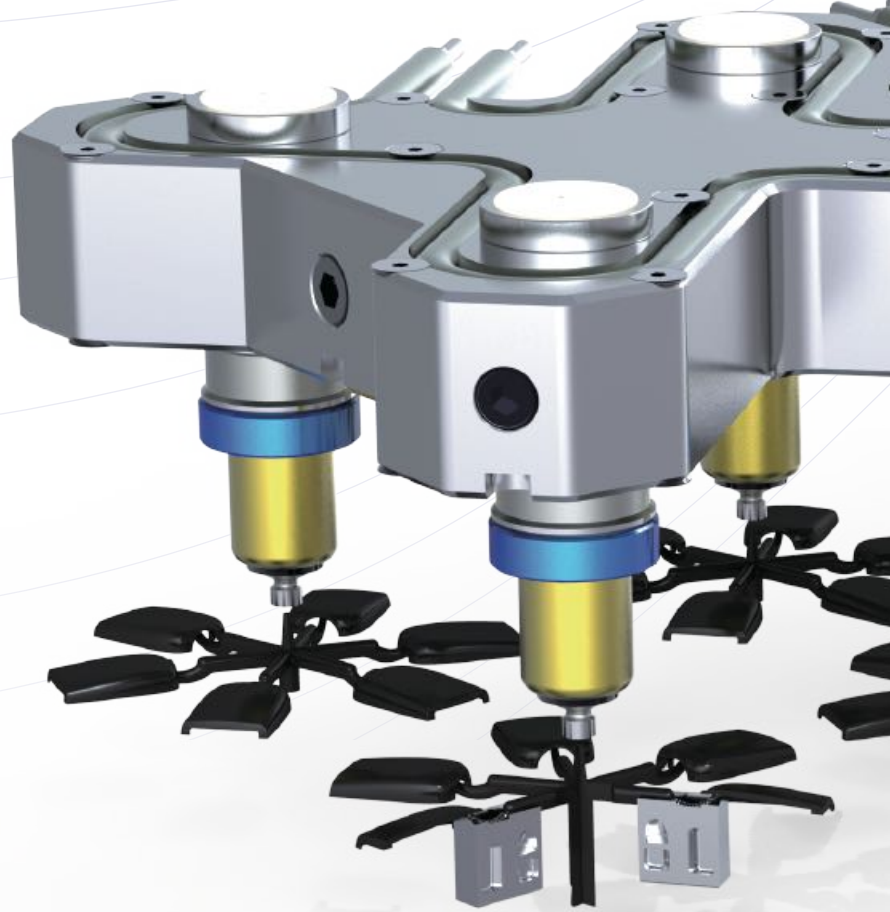


# HEATLOCK®

## Global Hot Runner Solution Provider



Our passion is hot runner solutions and we pride ourselves on simplicity whilst maintaining maximum performance, achieving modular perfection.

Our Operation is set up according to international business standards with strict quality and management system as key ingredients. We have more than 30 years' experience with Hot Runner Solutions.

We supply standardised products or special hot runner solutions, hot half's all up to your specific requirements. All simulated in depth, if needed, by our global partners. Our network has top of the line tech know-how.

### **Ceramic insulated, CE technology**

HEATLOCK Hot Runners are known for their ceramic insulation, which insulates all the contact- and location-points from the mould. With our patented CE fix technology have we made ceramics even easier to use with increased sustainability

### **Service fanatics**

Heatlock is a service company fanatic about customer care, we deliver hot runner solutions, your lean partner.

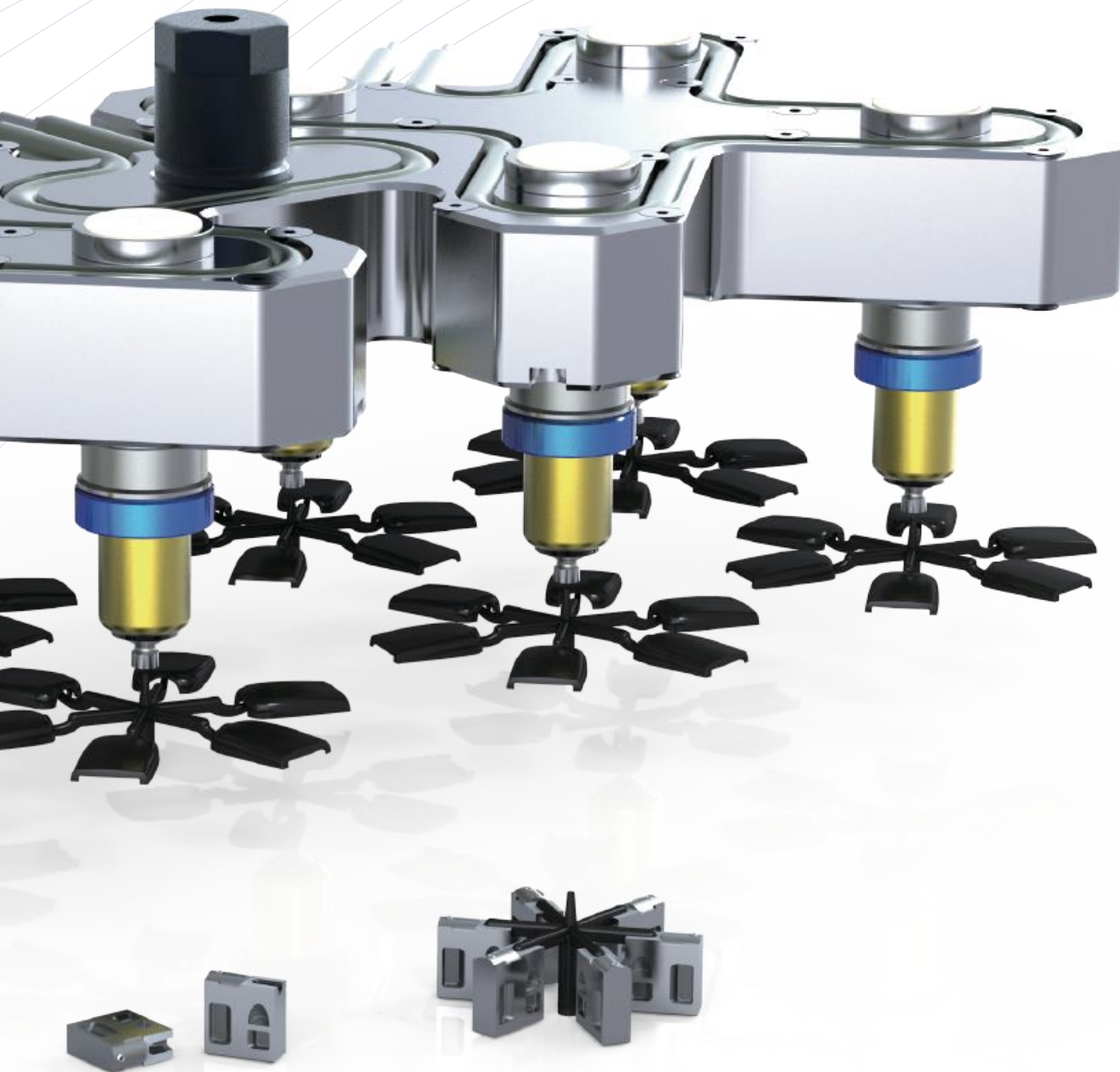
### **Global partners**

Throughout our global network of partners, HEATLOCK guarantees high quality service no matter where your mould is produced or in production. You make your mould in China, Germany, Portugal, UK.....our Global Call service takes care of you.

Tech centre and spare part stock in;

**China \* Germany \* US**

**GLOBAL ASSISTANCE, HELP ANYWHERE=  
GLOBAL CALL BY HEATLOCK**




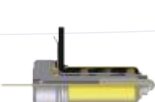


## Standard hot runner series, floating manifold system, the work horse

- Price optimized hot runner solutions
- Ceramic insulated manifolds
- Optional ceramic insulated nozzles
- Special solutions or standard nozzle series
- Valve gate systems
- Multi tip nozzle

Individually design nozzle solutions to suit your production needs.

## → Nozzle Selection Guide/ Shot Weight

A1 Nozzle																
	EN1	EN2	EN3	EN4	TP1	TP2	TP3	TP4	TN1	TN2	TN3	TN4	VG1	VG2	VG3	VG4
*** Good																
** Ok																
* Contact HEATLOCK																
-- Not recommended																
Feed Channel (mm)	4	6	9	14	4	6	9	14	4	6	9	14	4	6	9	14
Low-viscosity PE, PS, PP	100	450	850	1800	100	450	850	1800	80	330	590	1600	80	390	700	1200
Medium-viscosity ABS, P A, POM, SAN	60	240	400	1200	60	240	400	1200	60	190	340	1000	60	130	300	550
High-viscosity	7	30	70	600	7	30	70	600	5	25	60	500	5	25	70	300
PP	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Low-viscosity PS/PE	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
ABS/SAN	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
POM	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
LCP	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
Medium-viscosity PBT	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
PET	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
PA6/P A6.6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
High-viscosity PC/PMMA	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
PPO	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
PES/PEK	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
PPS/PEI	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
L/M/H viscosity + additives	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

\*\*\* Good \*\* Ok \* Contact HEATLOCK -- Not recommended

**Viscosity:**

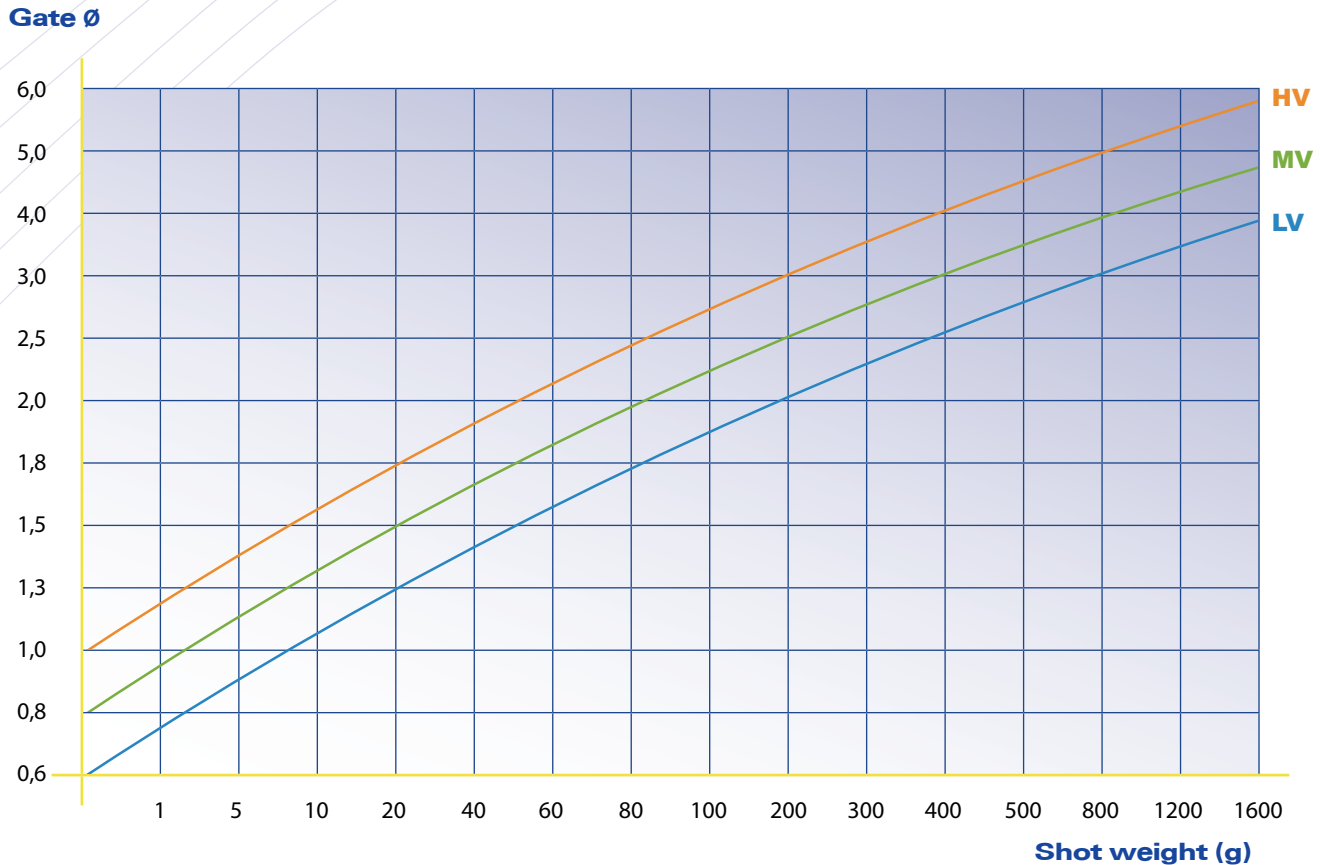
Low

Medium

High

All value above & approximate. For details regarding your product welcome to contact Heatlock.

## → A1 Gate diameter



**NOTE:**

1. For "TP" type reduce gate Ø 30%
2. For filled materials increase gate Ø 20%

1. **LV** Low viscosity materials PS, PE, PP
2. **MV** Medium viscosity materials ABS, SAN, PA, POM
3. **HV** High viscosity materials PC, PMMA, PC/ABS, PUR

Above diagram is a guideline built on experience from thousands of applications. However is the result depending on numerous conditions in your mould; balance between shot weight, injection speed, injection pressure, mould temperature, temperature control around the gate area, temperature control opposite the gate.

A smaller gate freeze faster compared with a larger gate, a faster cycle time allow smaller gate, long cycle time requires bigger gate.

If cycle time is short and injection speed fast it may be necessary to design gate cooling to avoid gate to overheat.

When you gate on a runner is it recommended to make the gate slightly larger to reduce pressure drop and decrease shear rates. Runner shall be adjusted in size to suit Hot Runner moulding to get shortest cycle time.

Above diagram is a guideline only, final decision is to be decided by the moulder or simulation considering all factors of the process.

## → A1 technology



### A1-EN Series

- Easy to install, easy to use
- For direct gate or gate on runner, easy to control gate temperature
- Excellent heat separation between HR and mould
- Ceramic (size1) or Titanium insulation ring optional

### A1-TP Series

- Easy to install, easy to use
- Fast gate cooling
- Suitable for direct gate or gate on runners
- For shot weights up to 1650 gram
- Ceramic (size1) or Titanium insulation ring optional



### A1-TN Series

- Easy to install, easy to use
- Small residue
- For direct gate on the part
- For shot weights up to 1200 gram
- Ceramic (size1) or Titanium insulation ring optional