

# Selection guide/specifications

## Guideline table for shot weights (g) per nozzle

### Nozzle selection tables

#### Maximum shot weight per nozzle [g]

Gate type		low viscosity n (Tset/3000 s-1) < 60Pa*s		medium viscosity n (Tset/3000 s-1)=(60-150)Pa*s		high viscosity n (Tset/3000 s-1) > 150Pa*s		
		PE-HD, PE-LD, PE, PP, PS, SB, LCP, TPE-O , TPE-S		ABS, PA, SAN, ASA, PBT, POM-Copo, SEBS, PP-EPDM, TPE-A, TPE-C		PC, PC/ABS, PC/PBT, PEI, PET, PMMA, PPS, PSU, PPO (PPE), POM-Homo, PVC (soft), TPE-U		
Manifold nozzles:		min [g]	max [g]	min [g]	max [g]	min [g]	max [g]	
smartFILL slide seal/screwed in	40/4519	RT3W3	0.5	30	0.5	15	0.5	8
		DRT3W3	0.5	30	0.5	15	0.5	8
		DRT3W3K	0.5	30	0.5	15	0.5	8
	40/4527	RT3W3	3	70	3	35	3	20
		DRT3W3	3	70	3	35	3	20
		DRT3W3K	3	70	3	35	3	20
		DRT3W3L	3	70	3	35	3	20
	40/4537	RT3W3	20	500	20	300	20	150
		DRT3W3	20	500	20	300	20	150
		DRT3W3K	20	500	20	300	20	150
		DRT3W3L	20	500	20	300	20	150
	4547	RT3W3	150	2000	150	1200	150	750
		DRT3W3	150	2000	150	1200	150	750
		DRT3W3L	150	2000	150	1200	150	750
	4557	RT3W3	200	2500	200	2000	200	1500
		DRT3W3	200	2500	200	2000	200	1500
		DRTW3L	200	2500	200	2000	200	1500

The maximum shot weight is reduced by about 20% for reinforced and filled plastics with more than 20% filler content.

The selection tables include only general recommendations based on our calculations and many years of experience. We do not guarantee this information, as our products are only a part of a manufacturing process.

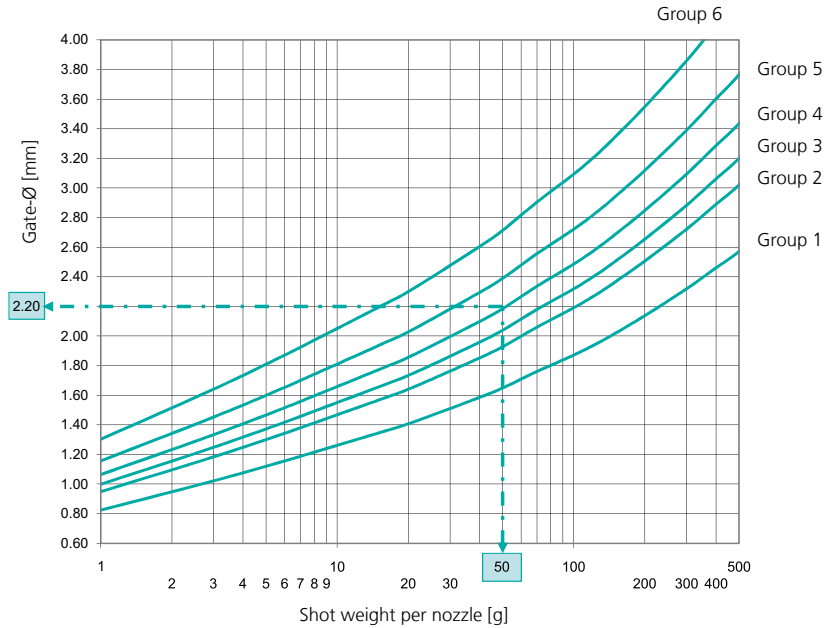
**Maximum shot weight per nozzle (g) / valve gate / single nozzle**

Gate type		low viscosity n (Tset/3000 s-1) < 60Pa*s		medium viscosity n (Tset/3000 s-1)=(60-150)Pa*s		high viscosity n (Tset/3000 s-1) > 150Pa*s		
		PE-HD, PE-LD, PE, PP, PS, SB, LCP, TPE-O, TPE-S		ABS, PA, SAN, ASA, PBT, POM-Copo, SEBS, PP-EPDM, TPE-A, TPE-C		PC, PC/ABS, PC/PBT, PEI, PET, PMMA, PPS, PSU, PPO (PPE), POM-Homo, PVC (soft), TPE-U		
Manifold nozzles: Valve gate		min [g]	max [g]	min [g]	max [g]	min [g]	max [g]	
smartFILL slide seal/screwed in	40/4519	NZW3	0.5	10	0.5	5	0.5	3
		DNZW3	0.5	10	0.5	5	0.5	3
	40/4527	NZW3	3	60	3	30	3	15
		DNZW3	3	60	3	30	3	15
		DNZW3L	3	60	3	30	3	15
	40/4537	NZW3	20	400	20	200	15	80
		DNZW3	20	400	20	200	15	80
		DNZW3L	20	400	20	200	15	80
	4547	NZW3	150	1500	150	1000	80	500
		DNZW3	150	1500	150	1000	80	500
		DNZW3L	150	1500	150	1000	80	500
	4557	NZW3	200	2000	200	1500	200	750
		DNZW3	200	2000	200	1500	200	750
		DNZW3L	200	2000	200	1500	200	750

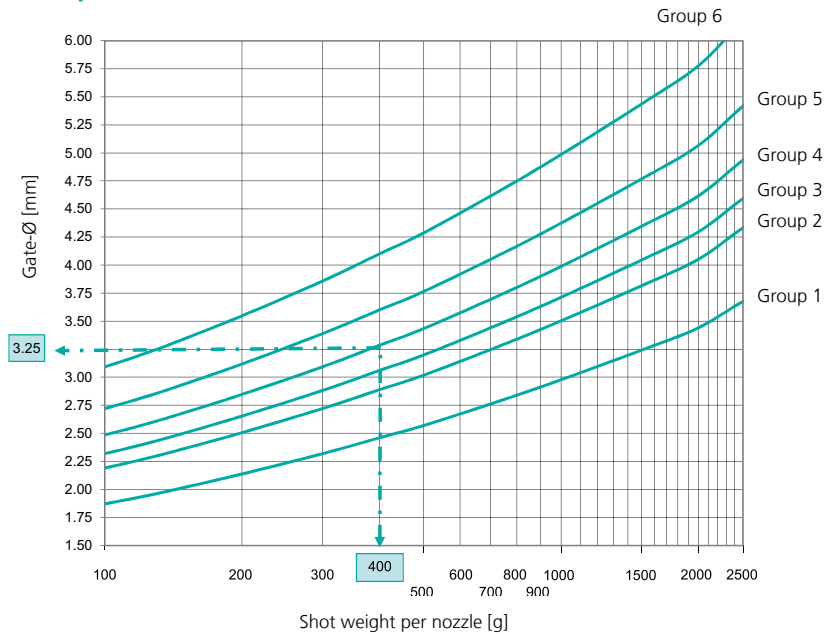
Single nozzle		min [g]	max [g]	min [g]	max [g]	min [g]	max [g]	
smartFILL single nozzle	4519-S	RT3W3	0.5	30	0.5	20	0.5	10
		DRT3W3	0.5	30	0.5	20	0.5	10
		DRT3W3K	0.5	30	0.5	20	0.5	10
	4527-S	RT3W3	3	70	3	35	3	20
		DRT3W3	3	70	3	35	3	20
		DRT3W3K	3	70	3	35	3	20
		DRT3W3L	3	70	3	35	3	20
	4537-S	RT3W3	20	500	20	300	20	150
		DRT3W3	20	500	20	300	20	150
		DRT3W3K	20	500	20	300	20	150
		DRT3W3L	20	500	20	300	20	150
	4547-S	RT3W3	150	2000	150	1200	150	750
		DRT3W3	150	2000	150	1200	150	750
		DRT3W3L	150	2000	150	1200	150	750
	4557-S	RT3W3	200	2500	200	2000	200	1500
DRT3W3		200	2500	200	2000	200	1500	
DRT3W3L		200	2500	200	2000	200	1500	

## Gate diameter

### Example 1



### Example 2



### Example 1

50g polycarbonate PC (group 4),  
 Result: Ø 2.20 mm  
 Selected for direct gating 2.0 mm (standard)  
 Selected for gating on cold runner 3.0 mm (standard)

### Example 2

400g PMMA (group 4),  
 Result: Ø 3.25 mm  
 Selected for direct gating 3.0 mm (standard)  
 Selected for gating on cold runner 4.0 mm (standard)

For both examples:  
 Always select the next possible standard diameter for the gate geometry of the nozzle head.

## Thermoplastic groups

<b>Group 1</b>	PP	Polypropylene
<b>Group 2</b>	PA	Polyamide
	TPE-S	Styrene-based thermoplastic elastomers
	TPE-O (TPO)	Olefin-based thermoplastic elastomers
<b>Group 3</b>	PBT	Polybutylene terephthalate
	PET	Polyethylene terephthalate
	PES	Polyethersulfone
	PSU	Polysulfone
	ABS	Acrylonitrile butadiene styrene
	PS	Polystyrene
	PE	Polyethylene
<b>Group 4</b>	PC	Polycarbonate
	PC/PBT	Polycarbonate / polybutylene terephthalate blend
	PC/ABS	Polycarbonate / acrylonitrile butadiene styrene blend
	TPE-C	Thermoplastic copolyester
	TPE-A	Thermoplastic copolyamide
	PMMA	Polymethyl methacrylate
	PEI	Polyetherimide
	SAN	Styrene-acrylonitrile
	ASA	Acrylic-styrene-acrylonitrile
	PPS	Polyphenylene sulphide
	PPO	Polyphenylene oxide
<b>Group 5</b>	POM-C	Polyoxymethylene copolymer
<b>Group 6</b>	POM-H	Polyoxymethylene homopolymer
	PVC-soft	Polyvinyl chloride, soft
	TPE-U (TPU)	Urethane-based thermoplastic elastomers

The selection table refers exclusively to the shot weights per nozzle. The table does not give any information about the suitability of the nozzle for the processing of the respective thermoplastics. For reinforced and filled plastics, the maximum shot weight must be reduced by the corresponding percentage.

Example: 30% filler content

30% lower shot weight

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