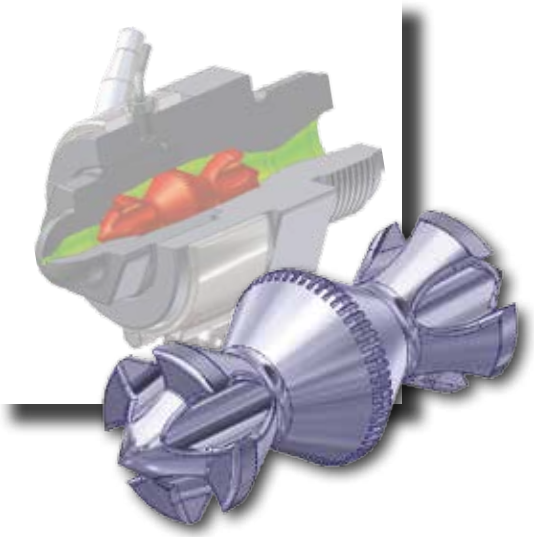
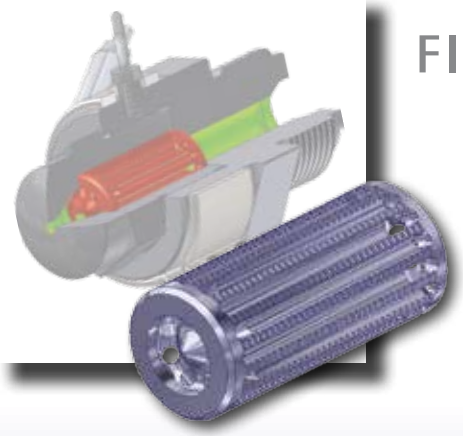
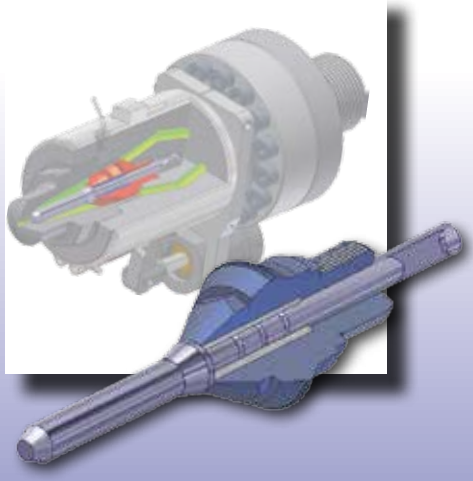
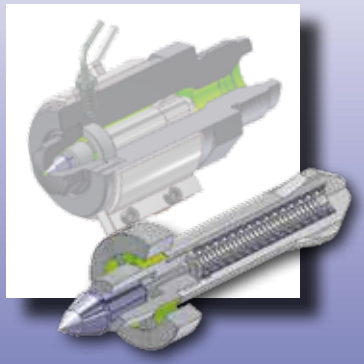
ofs
FILTERSYSTEME



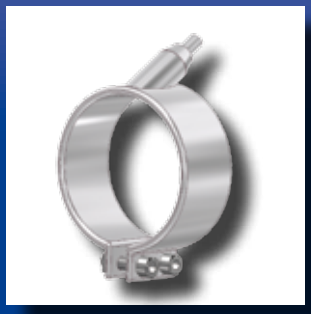




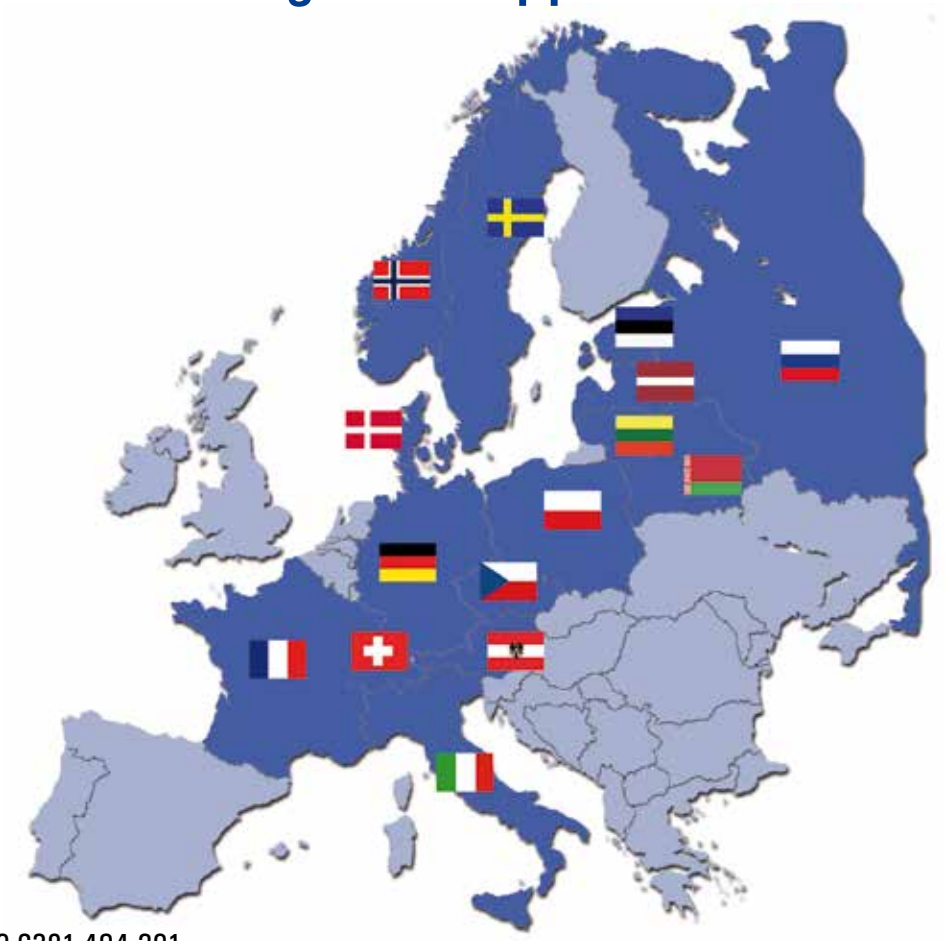


Odenwälder Filtersysteme GmbH

your partner for filter-, mixing- and shut-off nozzles



Distribution network: OFS global supplier



Deutschland
Odenwälder Filtersysteme GmbH
Industriegebiet III
Im Krötenteich 3a
D-74722 Buchen/Odw.
phone: +49 6281 404-393
fax: +49 6281 404-391
E-mail: info.ofs@okw.com
www.ofs-filtersysteme.de

Frankreich
Nickerson Machines France
Rue de Nancy
F-68220 Hesingue
phone: +33 38 967 11 04
fax: +33 38 967 10 83
E-mail: cdetzel@nickerson-france.com
www.nickerson-france.com

Schweiz
Odenwälder Filtersysteme GmbH
Im Krötenteich 3a - 74722 Buchen
Steffen Thüry
phone: +49 62 81 404-398 - fax: +49 6281 404-391
E-Mail: thuerys@okw.com

Italien
TECNOSTYLE S.r.l. Società unipersonale
Via Monte Bianco, 8/10 Zona Industriale Turcata
I-31040 - Falze Di Trevignano (TV)
phone: +39 0423 -812490 / -670948 - fax: +39 0423 679553
www.tecnostyle.com - E-mail: tecnostyle@ tecnostyle.com

Schweden, Norwegen, Dänemark
TEMEC AB
Box 204 - 591 23 Motala
SE-Medevivägen 73
phone: +46 141-23 70 60 vxl - fax: +46 141-23 70 61
E-mail: info@temec.se - www.temec.se

Österreich
Alboroc GmbH
Bibinger Straße 14
D-85540 Haar
phone: +49 8982/952636 - fax: +49 8982/952637
E-mail: info@alboroc.com

Tschechien
okatec spol. s r.o.
Zámecká 193
CZ-564 01 Žamberk
phone: +420 465 618 061 - fax: +420 465 618 062
E-mail: vinfo@okatec.cz

Polen
P.P.H.U. TRANS-WEST GmbH Sp. zo.o.
ul. Prądzyńskiego 2 0
PL-63-000 Środa Wlkp.
phone: +48 61 28 702 64 - fax: +48 61 28 526 63
E-mail: transwest@telvinet.pl

Estland, Lettland, Litauen, Russland, Weissrussland
Plastic Service OÜ
Viru pst. 21-39
40233 Sillamäe - Estonia
phone: +372 511 01 89 - +372 555 88 981
fax: +372 39 24 399
E-mail: info@plasticservice.net - www.plasticservice.net

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

ofs FILTERSYSTEME

Contents

Odenwälder Filtersysteme GmbH

... your reliable partner for filtration, mixing and shut-off technology.

With over 30 years experience that goes beyond the beginnings of melt filtration, our company Odenwälder Filtersysteme GmbH has managed to secure a leading market position over in recent years.

1984 The first nozzles were developed by Mr. Karl-Heinz Dörsam and tested thoroughly in collaboration with universities. Because of the significant improvements they made in the injection moulding process, this new technology achieves a huge awareness in the market.

1996 Because of the increased demand for the nozzle systems, a new division, the "Profit-Center GEDU", was established. Mr. Karl-Heinz Dörsam was employed as division manager.

2003 For economic reasons, the profit centre that had thus far been part of the company was separated from the main company OKW and re-established under the name Odenwälder Filtersysteme GmbH. This new formation provided an opportunity to carry out a change of generations. Employee Michael Dörsam became the new managing director.

2009 For space reasons, the company was also physically separated from the main company. The new production premises was opened in May.

2017 expansion of the production area

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

Products:

Melt filter systems for thermoplastic and elastomer processing make up the core activity of Odenwälder Filtersysteme GmbH, and our range has been expanded to include a few other products, such as shut-off, mixing, machine and specially designed nozzles, hopper magnets, heaters, etc., because of close customer contact and market the demand.

Philosophy:

Customer satisfaction and manufacturing of the highest quality products is our top goal. To achieve these targets, the company is constantly in touch with industry specialists and institutions. Our employees stand out due to their flexibility and are constantly adapting to the latest industry developments through further education and training.
Our constant contact with customers helps us recognise needs early and thus our company has positioned itself as a problem-solver in the field of nozzles.

Benefits for our customers:

With our own nozzles developed and produced in-house, including some which have international patents, we offer our customers a sophisticated product that has proven itself over a long period of time, with several advantages in injection moulding production:

- trouble-free injection moulding
- longer running time
- no blockages and damages of tools and hot runners due to foreign bodies
- quick and easy cleaning
- low loss of pressure and minimal friction
- variable filter sizes thanks to changeable inserts
- short payback period
- large variety of uses thanks to different model versions
- simple assembly instead of machine nozzle
- can be used with any injection moulding tool

For these reasons, we have been able to gain many satisfied customers from a variety of industry sectors around the world.

Service:

We will continue to direct all our efforts towards satisfying our customers in the future and thereby further strengthen and expand our market position. We look forward to continuing our fruitful and trusting cooperation with you.

Selection guide for OFS-standard-filternozzles:

nozzle type	S-nozzle	SR-nozzle	SF-nozzle	UR-nozzle	SF-filterinsert
material					
amorphous					
PMMA	●	●	□	□	□
ABS	●	●	●	●	●
SAN	●	●	●	●	●
PS	●	●	●	●	●
PVC	●	□	○	○	○
PC	●	□	○	○	○
semicrystalline					
PE	●	●	●	●	●
PP	●	●	●	●	●
PA	●	●	●	●	●
POM	●	□	○	○	○
additives					
flame retardants	●	●	□	□	□
reinforcements	●	●	□	□	□
***handling efforts**	-	-	-	-	-
***shot weights**	type I 150 g type II 500 g type III 1200 g type IV 2500 g type V 4000 g	type I 150 g type II 500 g type III 1200 g type IV 2500 g	type I 200 g type II 400 g type III 1200 g	type I 400 g type II 1300 g type III 3000 g	type I 200 g type II 400 g type III 1200 g

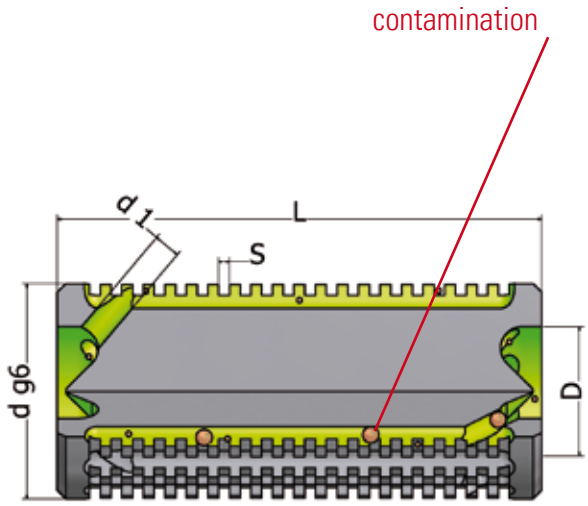
Clarification	**material:**	***handling efforts**	***shot weights**
	● suitable □ limited suitable ○ unsuitable	- no special knowledge needed (easy handling / only screw in and out of parts) + specific knowledge needed (requires handling in the correct sequence) ++ more specific knowledge needed (handling more complex than „+“)	The possible shot weight is dependent on the material (MFI/MVR), the filtration gap and the injection time. The data shown is only given as a tendency (the data is determined with a filtration gap and material PS).

Odenwälder Filtersysteme GmbH

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

OFS-filterinsert

!!! filtersizes up from 0,2 mm possible!!!



mm	L	d	D	d1	S
type 1	45	ø 14	ø 8	ø 2.5	0.2, 0.3, 0.6, 0.8, 1.0
type 2	45	ø 20	ø 12	ø 2.8	0.2, 0.4, 0.6, 0.8, 1.0
type 3	50	ø 25	ø 16	ø 3.8	0.2, 0.4, 0.6, 0.8, 1.0

The measurements in the list can be delivered from stock. If other measurements are needed, please inquire.

Application fields:

- **characteristic:**

The OFS-filterinsert is a mechanical filter. It ensures the undisturbed processing on hot runner systems and moulds with small feed points.
The OFS-filterinsert prevents blockages of feed points caused through contamination. Because it's huge filtration surface, you get only a small pressure loss and friction.
A huge advantage of the OFS-filterinsert is it's very simple cleaning. The contaminations are filtered out at the diameter of the filter insert and can be removed through simple brush off.

The OFS-filterinsert can be delivered in three different sizes with several filtration gaps, as you can find in the list below.

- **function:**

The OFS-filterinsert is fitted in a hole in the nozzle. Its design is symmetrical, so that no mistakes can happened during the installation.
The melt flows through the drills on the one side into the run-in canals. These run in canals are closed at the other end so that the melt is diverted over the filtration gaps, which are positioned along the complete length of the run in canals. Through the filtration gaps, the contaminants are filtered out. The cleaned melt flows into the run-out canals, which are opened in the flow direction, so that the cleaned melt can be injected into the mould. The OFS-filterinsert ensures the filtration of every contamination, metallic or non-metallic (metal, glass, stones, wood, foreign granules,....) down to the smallest particle sizes.

OFS-filternozzle type S

Application fields:

- **suitable materials:**
  The OFS-filternozzle type S is highly suitable for processing all technical plastic materials. The nozzle is particulary suitable when frequent changes of color and material are carried out.
  Because of the optimally rheological design, the nozzle is also suitable for reinforced materials. But for reinforced materials, we recommend special coatings. The coatings counteract the abrasive and corrosive attacks of the reinforced materials and increase the life span of the filternozzle.

- **shot weights:**
  The possible shot weight is dependent on the material, the filtration gap and the injection time. The OFS-filternozzle type S is offered in five sizes. As a guide, the following datas can be used (filtration gap S= 0.6 mm and material PS)

type SI → appr. 150 g
type SII → appr. 500 g
type SIII → appr. 1200 g
type SIV → appr. 2500 g
type SV → appr. 4000 g

- **cleaning-expenditure:**
  Very simple handling (screw in and out of parts).

- **filtration gap:**
  Filtertorpedos with filtration gaps (mm)
  S= 0.25, 0.3, 0.4, 0.6, 0.8, 1.0, 1.2, 1.4, ...
  can be delivered from stock.

Handling:

1. Lift of aggregate.
2. Spray off.
3. Pressure relief (move back the screw).
4. Screw out nozzlehead (5) (ring spanner is included in the delivery).
5. Take out filtertorpedo (2).
6. If necessary, remove remaining material carefully.
7. Install the changing-set (nozzlehead and filtertorpedo) and tighten it (handle thread with heat resistant molycote).
8. Start again injection moulding process.
9. Clean changing-set (nozzlehead and filtertorpedo) for next cleaning-process.

Odenwälder Filtersysteme GmbH

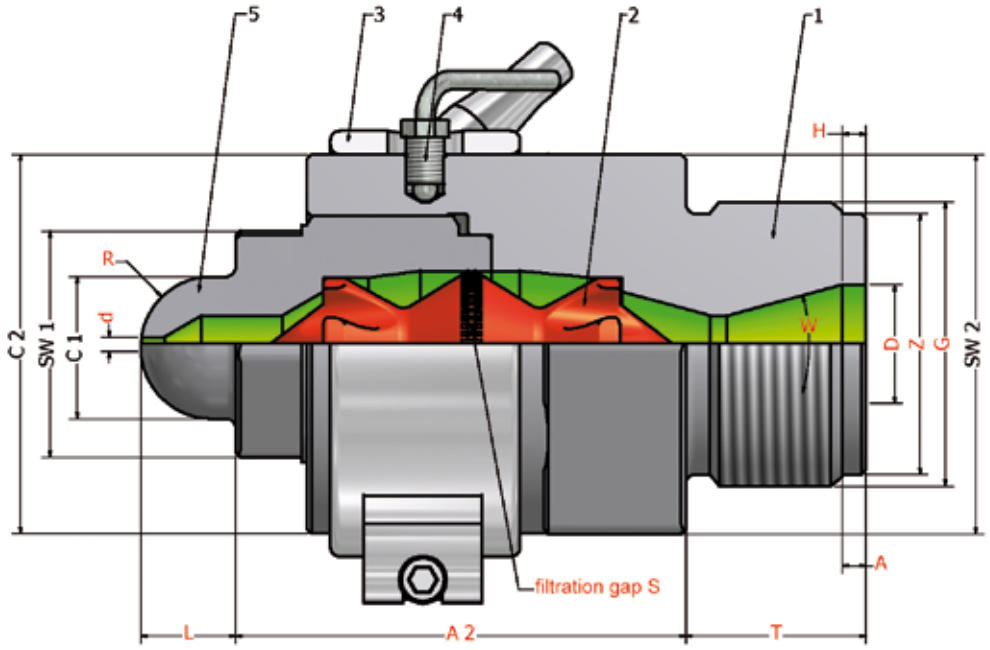
Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

Dimensions

datas and standard dimensions (mm)		SI	SII	SIII	SIV	SV
possible shot weight*	gr.	150	500	1.200	2.500	4.000
max. injection pressure	bar	3.000	3.000	3.000	3.000	3.000
length	A2	75	96	125	154	198
head diameter	C1	30	30	40	40	60
base diameter	C2	60	80	100	110	130
head hexagon	SW1	32	46	60	60	80
base hexagon	SW2	60	80	90	90	100

*at PS and S= 0,6 mm

1 nozzle base
2 filtertorpedo
3 heater
4 thermocouple
5 nozzlehead

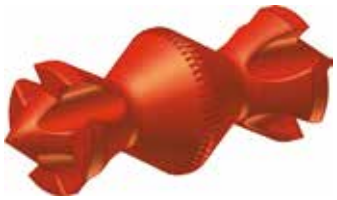


required dimensions (mm)			required informations		
machine thread	G		material (MFI)		
T/ A/ D/ Z/ W°/ H		specify if required	shot weight	gr.	
filtration gap	S		melt temperature	C°	
length of nozzlehead	L		injection time	sec	
drill	d		injection pressure (specific)	bar	
radius / surface	R		machine type		
			screw diameter	mm	

additional options:

- with shut-off function
- nozzlehead with dip nozzle
- nozzlehead with internal thread
- with mixing insert
- nozzle base with needle seat
- etc.

filtration gap up from S= 0,25 mm
filter gap up from SP= 0,1 mm



OFS-filternozzle type SR

Handling:

1. Lift of aggregate.
2. Spray off.
3. Pressure relief (move back the screw).
4. Screw out nozzlehead (6) to the marked of cleaning-position (7) (ring spanner is included in the delivery)
   ! Attention, safety warning, screw out only to marked position !
5. Reduce injection pressure. Spray off once or twice in the open air. Observe the safety-regulations!
6. Screw in nozzlehead (6) and tighten it.
7. Start again process of moulding injection.

Application fields:

- **suitable materials:**
  The OFS-filternozzle type SR is highly suitable for processing all technical plastic materials. Because of the optimally rheological design, the nozzle is also suitable for slightly reinforced materials. But for reinforced materials, we also recommend special coatings. The coatings counteract the abrasive and corrosive attacks of the reinforced materials and increase the life span of the filternozzle.

- **shot weights:**
  The possible shot weight is dependent on the material, the filtration gap and the injection time. The OFS-filternozzle type SR is offered in four sizes. As a guide, the following data can be used (filtration gap S= 0.6 mm and material PS):

  type SRI → appr. 150 g
  type SRII → appr. 500 g
  type SRIII → appr. 1200 g
  type SRIV → appr. 2500 g

- **cleaning-expenditure:**
  Very simple handling (screw in and out nozzlehead)

- **filtration gap:**
  Filtertorpedos with filtration gaps (mm)
  S= 0.25, 0.3, 0.4, 0.6, 0.8, 1.0, 1.2, 1.4, ...
  can be delivered from stock.

Odenwälder Filtersysteme GmbH

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

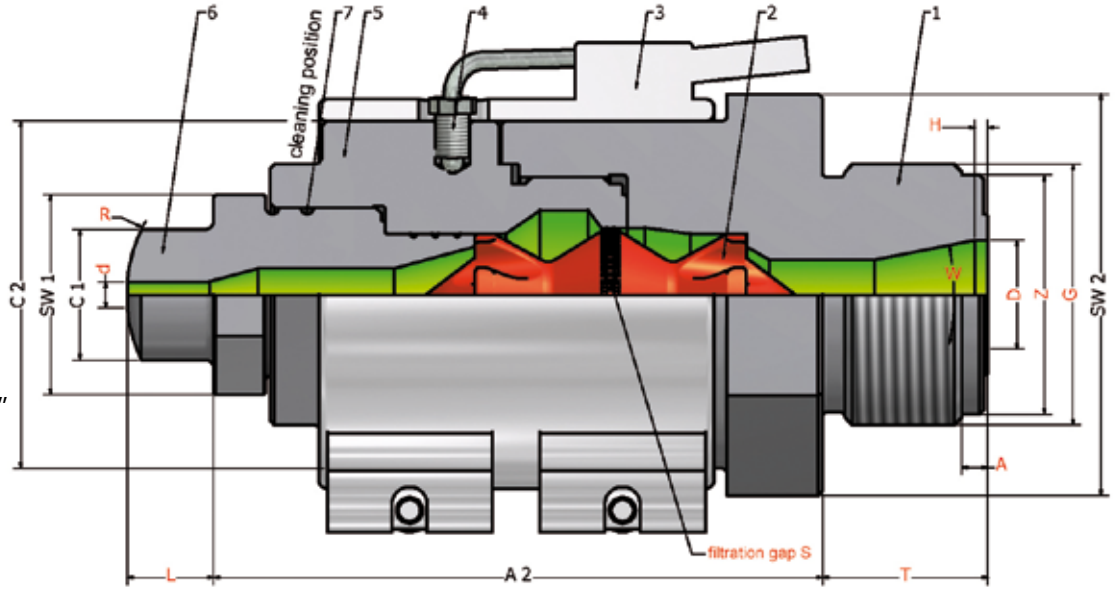
ofs FILTERSYSTEME

Dimensions

datas and standard dimensions (mm)		SRI	SRII	SRIII	SRIV
possible shot weight*	gr.	150	500	1.200	2.500
max. injection pressure	bar	2.500	2.500	2.500	2.500
length	A2	115	140	190	220
head diameter	C1	30	30	40	40
base diameter	C2	60	80	100	110
head hexagon	SW1	32	46	60	60
base hexagon	SW2	60	80	90	90

*at PS and S= 0,6 mm

1 nozzle base
2 filtertorpedo
3 heater
4 thermocouple
5 guide piece
6 nozzle head
7 marking
"cleaning position"

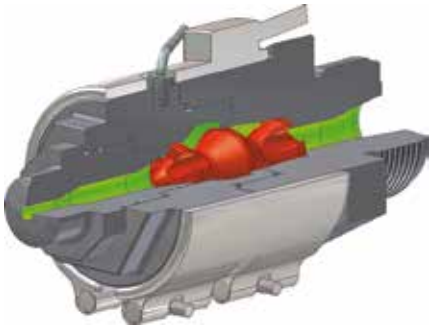


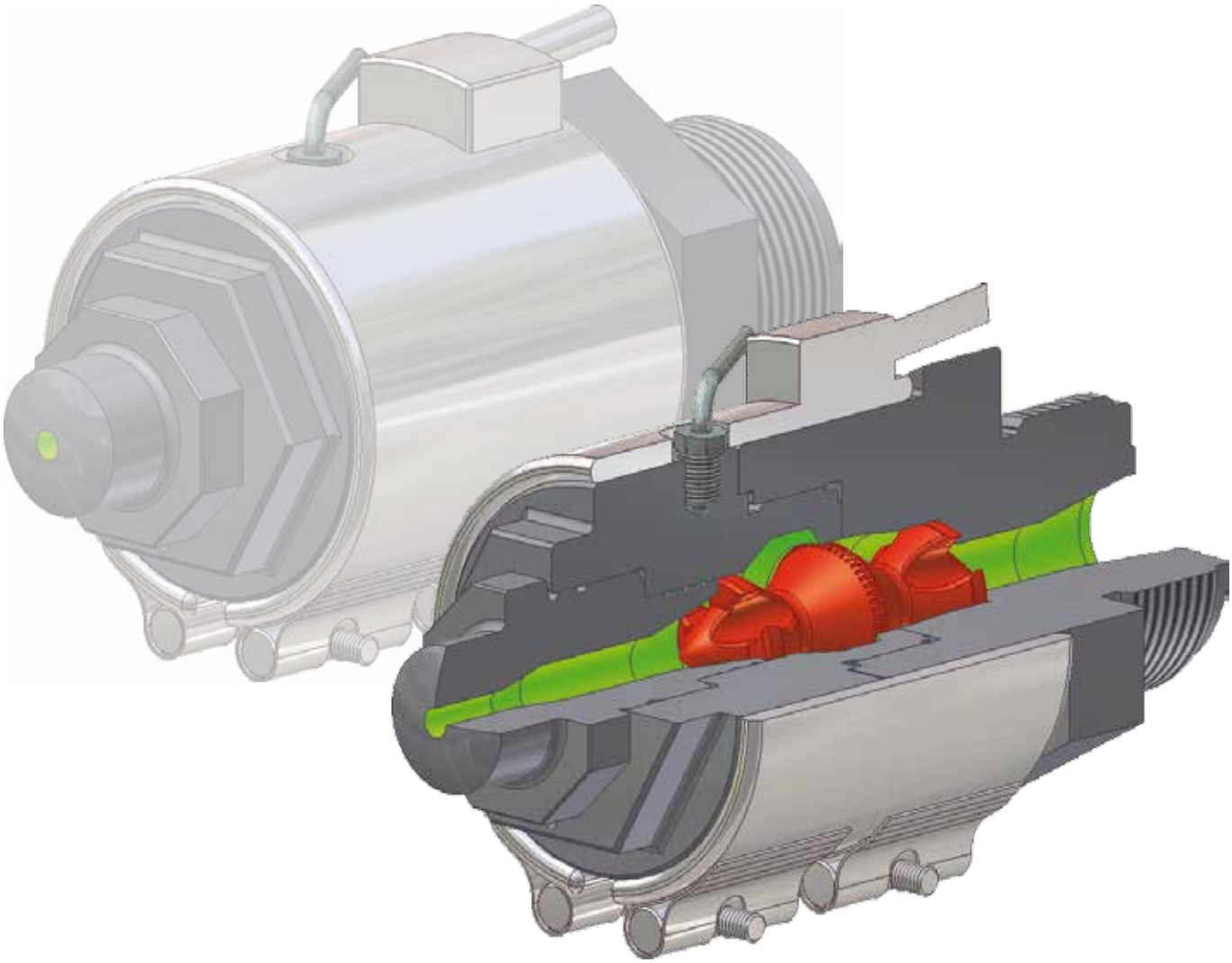
required dimensions (mm)			required informations		
machine thread	G		material (MFI)		
T/ A/ D/ Z/ W°/ H		specify if required	shot weight	gr.	
filtration gap	S		melt temperature	C°	
length of nozzlehead	L		injection time	sec	
drill	d		injection pressure (specific)	bar	
radius / surface	R		machine type		
			screw diameter	mm	

additional options:

- with shut-off function
- nozzle head with dip nozzle
- nozzlehead with internal thread
- with mixing insert
- nozzle base with needle seat
- etc.

filtration gap up from S= 0,25 mm
filter gap up from SP= 0,1 mm





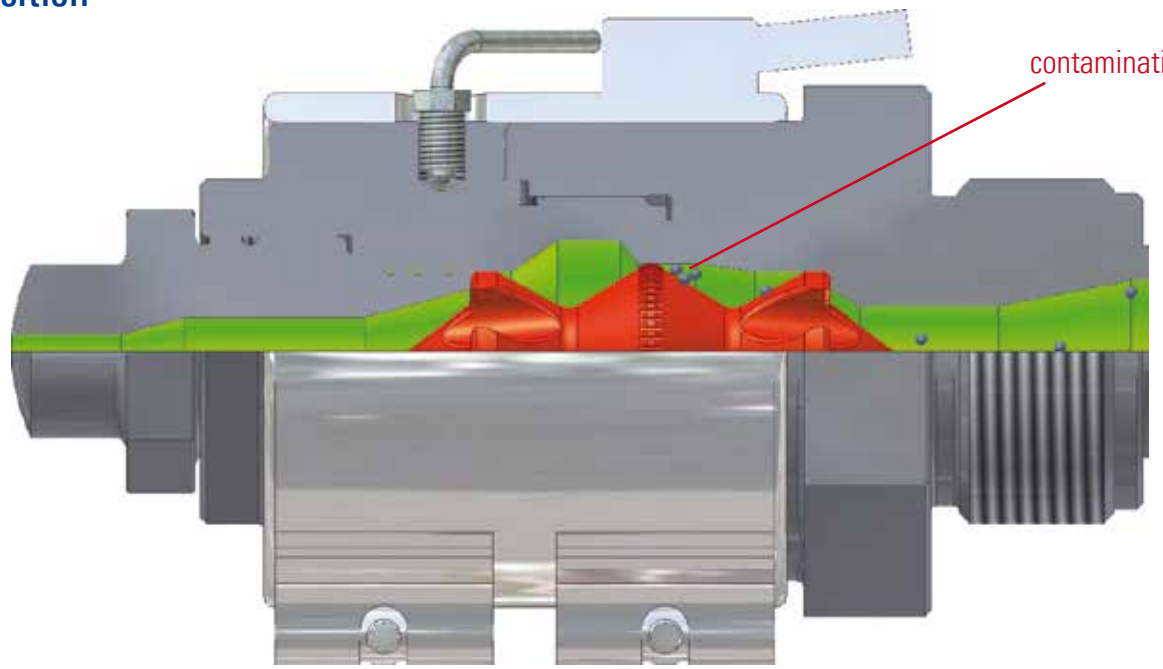
OFS-filternozzle type SR

the optimum nozzle
for engineering plastics
with quick cleaning

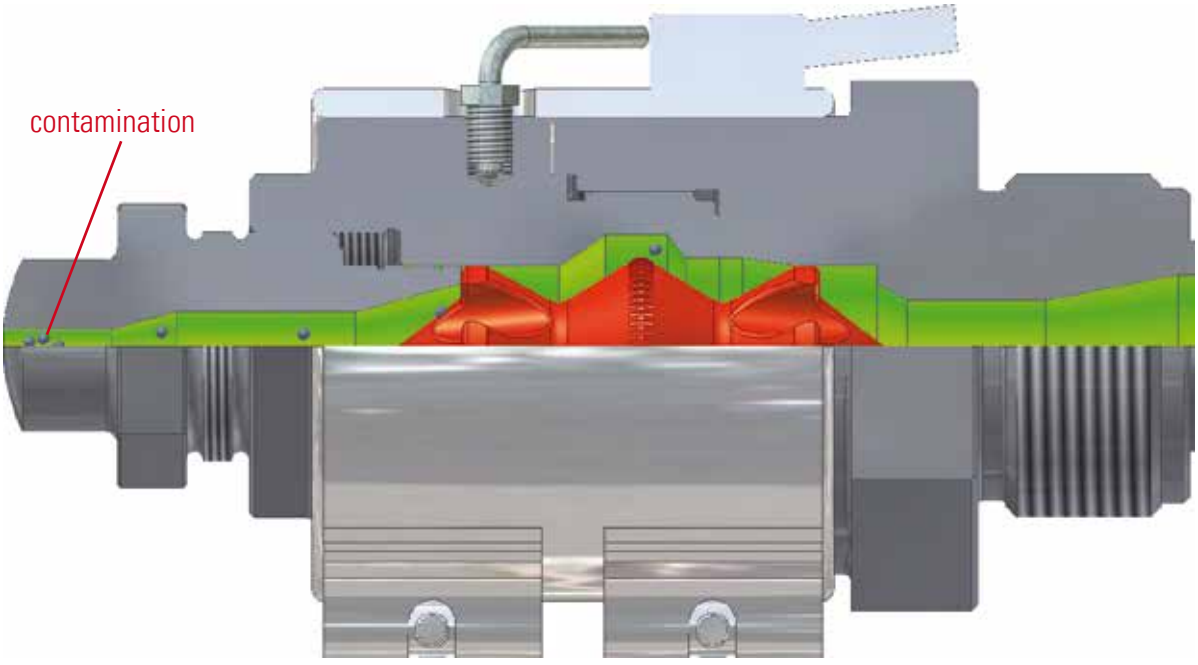
Odenwälder Filtersysteme GmbH

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

filter position



cleaning position



! Attention, safety warning, screw out only to marked position !

OFS-filternozzle type SF

Handling:

1. Lift off aggregate.
2. Spray off.
3. Pressure relief (move back the screw).
4. Screw out nozzlehead (5) (ring spanner is included in the delivery).
5. Take out filterinsert (2).
6. If necessary, remove remaining material carefully. Sealing surfaces must be clean.
7. Put in changing-set (nozzlehead and filter insert) and tighten it (handle thread with heat resistant molycote).
8. Start again injection moulding process.
9. Clean changing-set (nozzlehead and filter insert) for the next cleaning-process.

application fields:

- **suitable materials:**
  The OFS-filternozzle type SF is highly suitable for processing of all unreinforced standard-plastics (f.e. PE, PP, PS, ABS, PA). For reinforced materials, like glass fibre and flame retardant, the nozzle is not suitable. Because of the change in the flow direction while the filtration, the nozzle has an additionally homogenization or mixing effect, especially for applications with blended materials.

- **shot weights:**
  The possible shot weight is dependent on the material, the filtration gap and the injection time. The OFS-filternozzle type SF is offered in 3 sizes. As a guide, the following datas can be used (filtration gap S= 0.6 mm and material PS):

  type SFI → appr. 200 g
  type SFII → appr. 400 g
  type SFIII → appr. 1200 g

- **cleaning-expenditure:**
  Very simple handling (screw in and out parts).

- **filtration gap:**
  Filterinserts with filtration gaps (mm)
  up from S= 0.2 mm can be delivered from stock

Odenwälder Filtersysteme GmbH

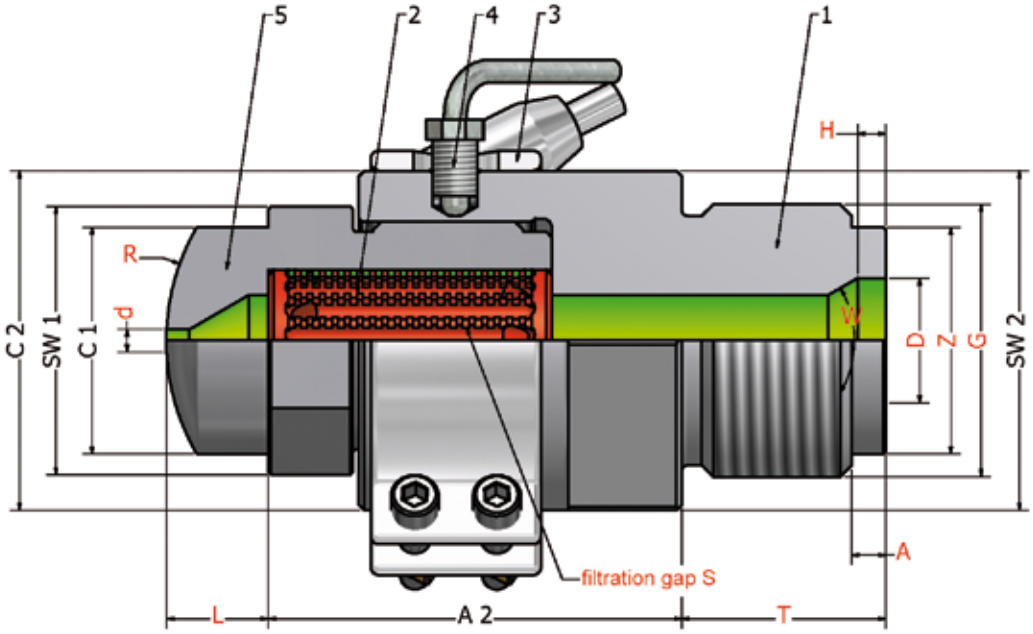
Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

Dimensions

datas and standard dimensions (mm)		SFI	SFII	SFIII
possible shot-weight*	gr.	200	400	1.200
max. injection pressure	bar	3.000	3.000	3.000
length	A2	55	71	71
head diameter	C1	24	40	40
base diameter	C2	40	60	60
head hexagon	SW1	27	41	41
base hexagon	SW2	41	60	60

*at PS and S= 0,6 mm

1 nozzle base
2 filterinsert
3 heater
4 thermocouple
5 nozzlehead



required dimensions (mm)			required informations		
machine thread	G		material (MFI)		
T/ A/ D/ Z/ W°/ H		specify if required	shot weight	gr.	
filtration gap	S		melt temperature	C°	
length of nozzlehead	L		injection time	sec	
drill	d		injection pressure (specific)	bar	
radius / surface	R		machine type		
			screw diameter	mm	

additional options:

- with shut-off function
- nozzlehead with dip nozzle
- nozzlehead with internal thread
- with mixing insert
- nozzle base with needle seat
- etc.

filtration gap up from S= 0,25 mm
filter gap up from SP= 0,1 mm

OFS-filternozzle type UR

Handling:

1. Lift of aggregate.
2. Spray off.
3. Pressure relief (move back the screw).
4. Screw out nozzlehead (5) to the beginning of the thread (6). According to the nozzle-type 4-8 mm (ring spanner is included in the delivery).
   ! Attention, safety warning, screw out only to marked position !
5. Reduce injection pressure. Spray off once or twice in to the open. Observe the safety-regulations!
6. Screw in nozzlehead (5) and tighten it.
7. Start again injection moulding process.

Application fields:

- **suitable materials:**
  The OFS-filternozzle type SF is highly suitable for processing of all unreinforced standard-plastics (f.e. PE, PP, PS, ABS, PA). For reinforced materials, like glass fibre and flame retardant, the nozzle is not suitable.
  Because of the change in the flow direction while the filtration, the nozzle has an additionally homogenization or mixing effect, especially at applications with blend.

- **shot weights:**
  The possible shot weight is dependent on the material, the filtration gap and the injection time. The OFS-filternozzle type UR is offered in three sizes. As a guide, the following data can be used (filtration gap S= 0.6 mm and material PS):

  type URI → appr. 400 g
  type URII → appr. 1300 g
  type URIII → appr. 3000 g

- **cleaning-expenditure:**
  Very simple handling (Screw in and out nozzlehead)

- **filtration gap:**
  Filter inserts with filtration gaps (mm)
  up from S= 0.2 mm can be delivered.

Odenwälder Filtersysteme GmbH

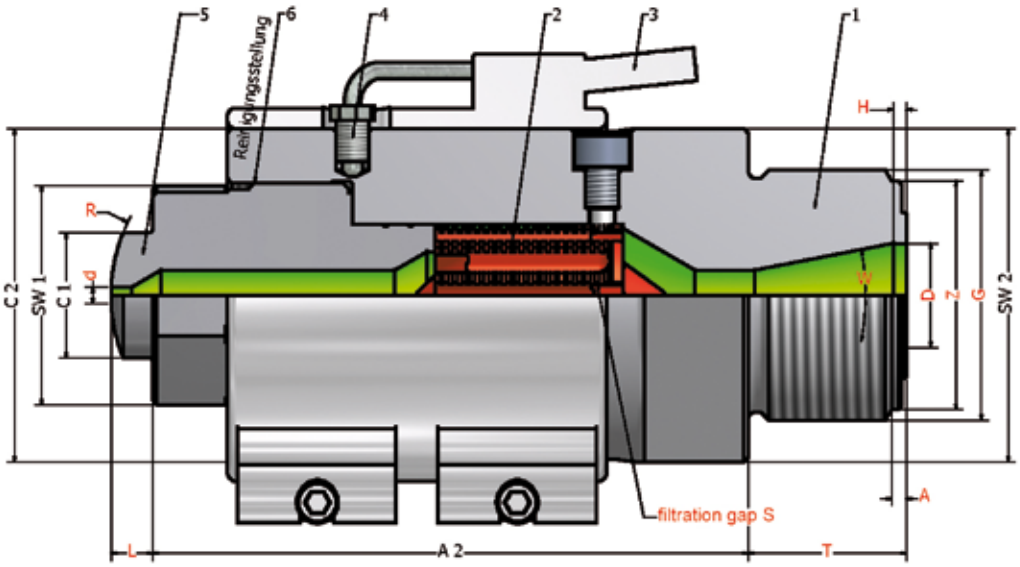
Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

Dimensions

datas and standard dimensions (mm)		URI	URII	URIII
possible shot-weight*	gr.	400	1.300	3.000
max. injection pressure	bar	3.000	3.000	3.000
length	A2	115	140	170
head diameter	C1	30	30	40
base diameter	C2	60	80	100
head hexagon	SW1	32	46	60
base hexagon	SW2	60	80	90

*at PS and S= 0,6 mm

1 nozzle base
2 filterinsert
3 heater
4 thermocouple
5 nozzlehead
6 beginning
of the thread

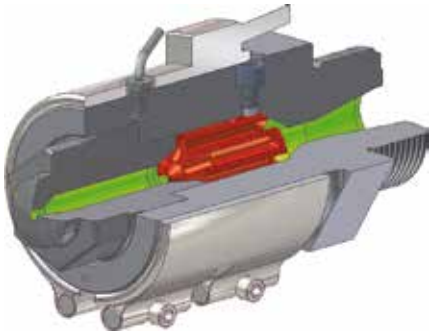


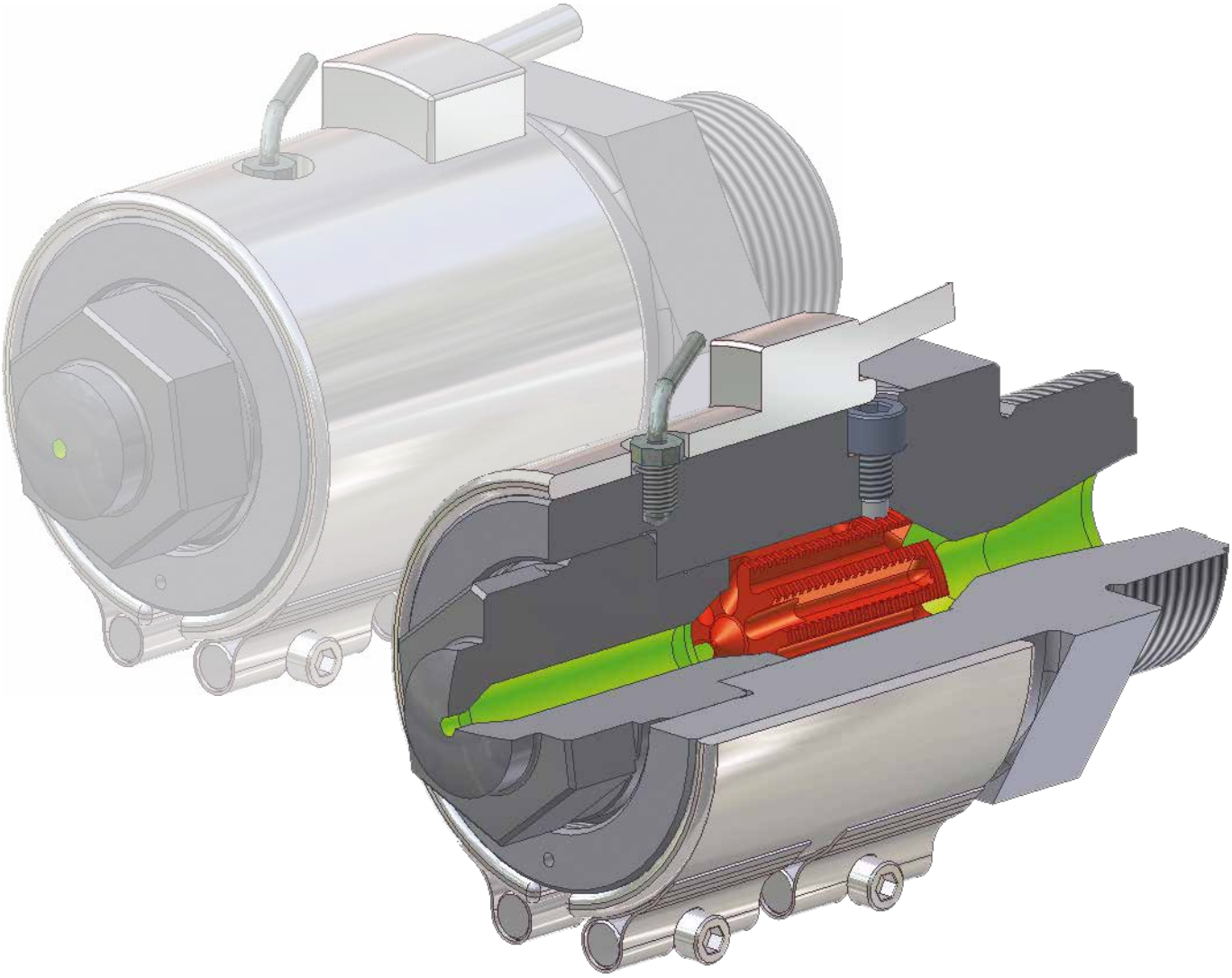
required dimensions (mm)			required informations		
machine thread	G		material (MFI)		
T/ A/ D/ Z/ W°/ H		specify if required	shot weight	gr.	
filtration gap	S		melt temperature	C°	
length of nozzlehead	L		injection time	sec	
drill	d		injection pressure (specific)	bar	
radius / surface	R		machine type		
			screw diameter	mm	

additional options:

- with shut-off function
- nozzlehead with dip nozzle
- nozzlehead with internal thread
- with mixing insert
- nozzle base with needle seat
- etc.

filtration gap up from S= 0,2 mm
filter gap up from SP= 0,1 mm





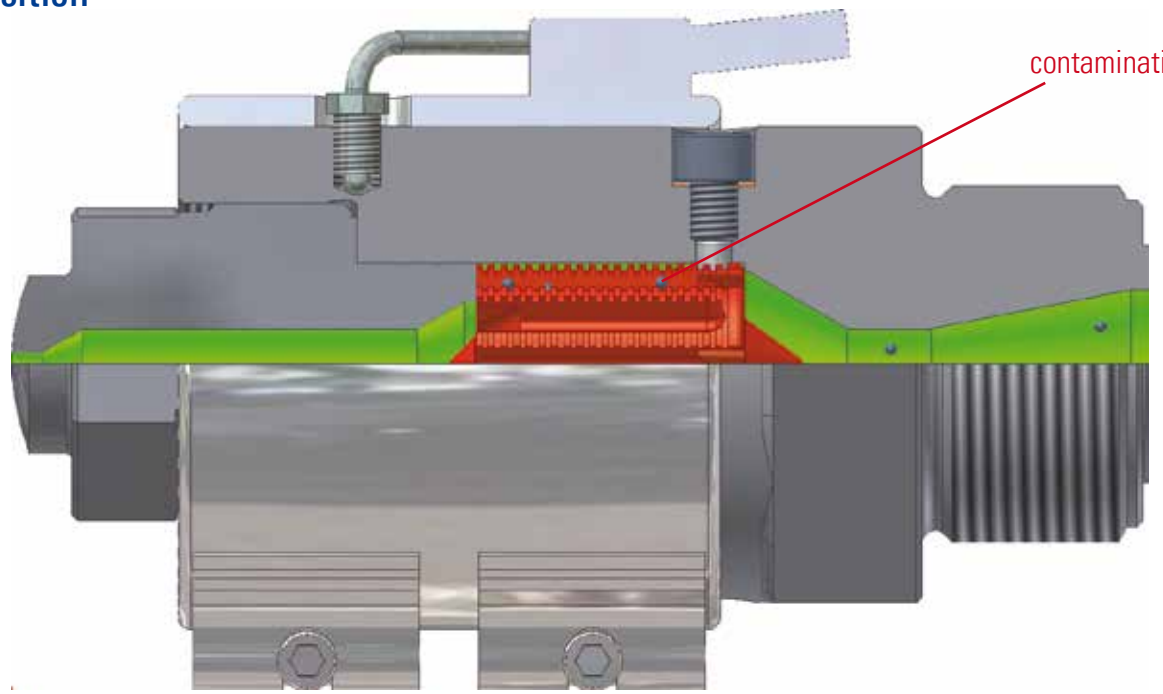
OFS-filternozzle type UR

the optimum nozzle
for standard plastics
with quick cleaning

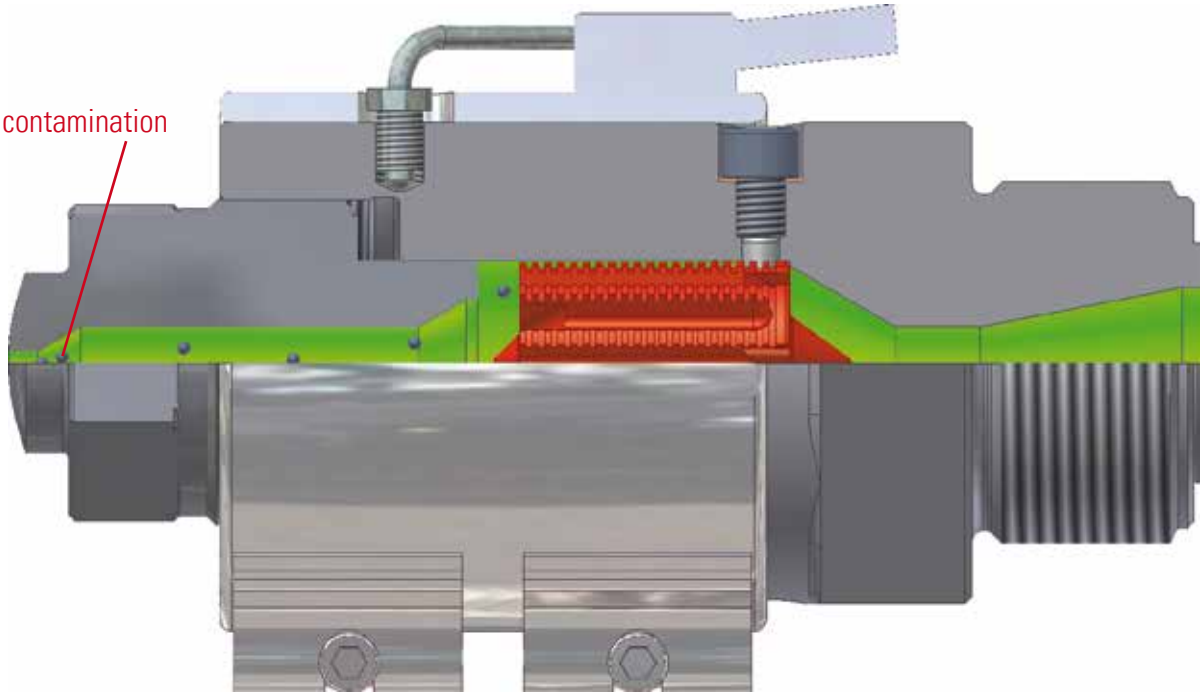
Odenwälder Filtersysteme GmbH

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

filter position

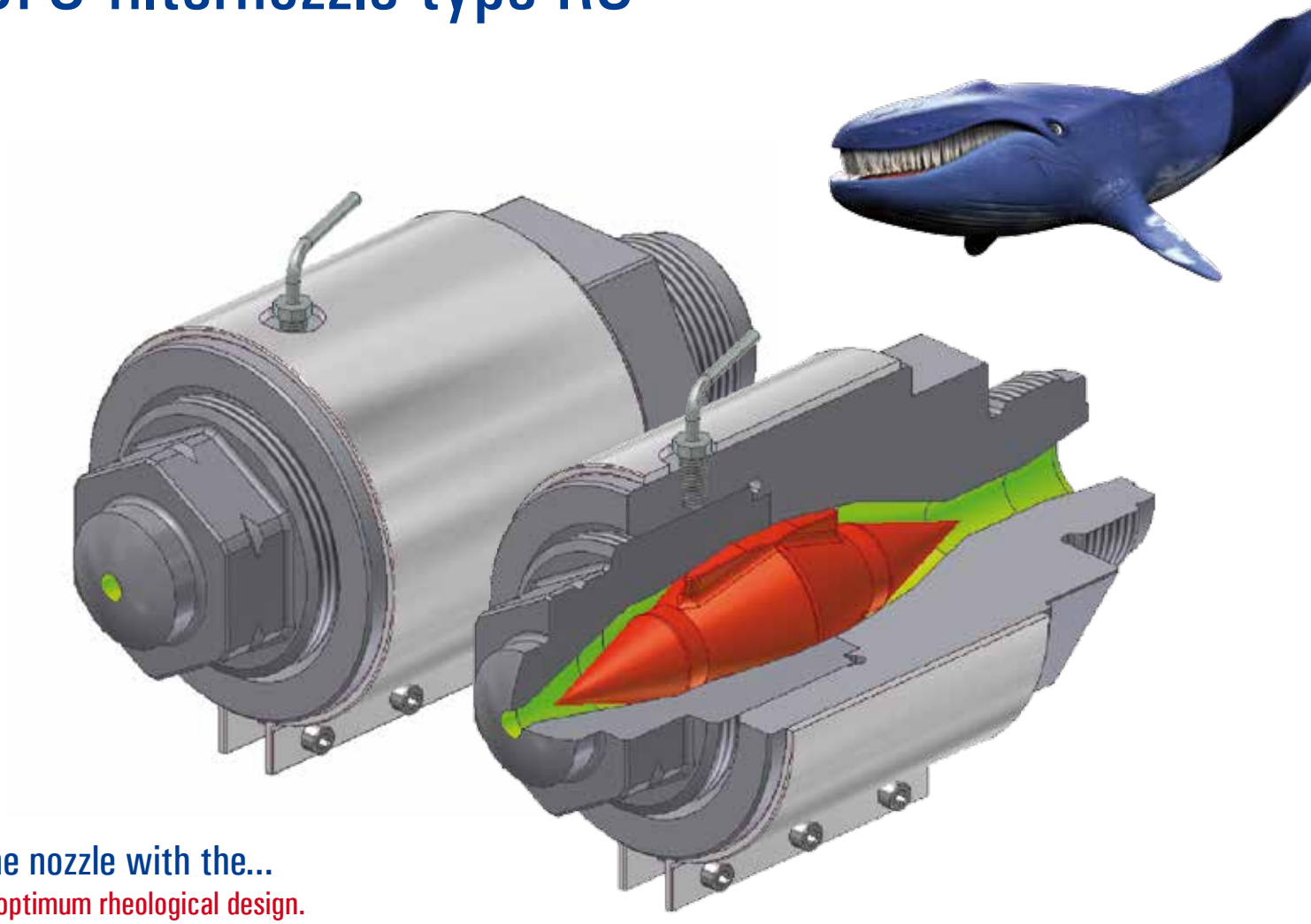


cleaning position



! Attention, safety warning, screw out only to marked position !

OFS-filternozzle type RS

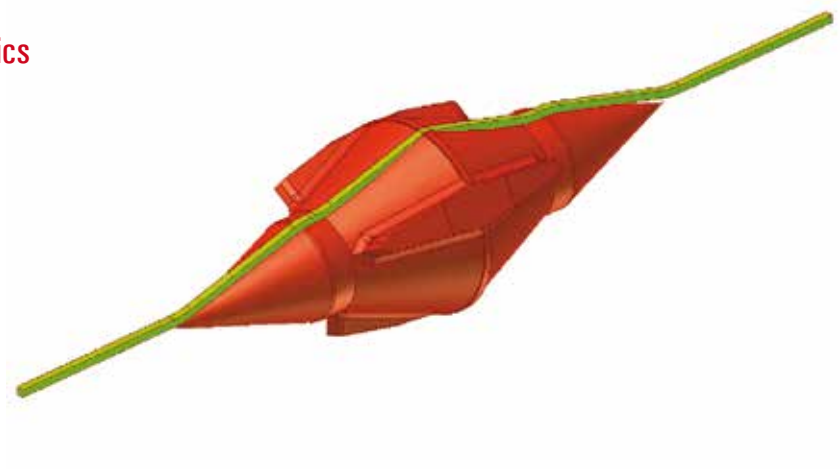


the nozzle with the...

...optimum rheological design.

for use at:

- extreme shear and friction sensitive plastics
- extreme slow moving materials (low MFI)



This nozzle is available on request!

Odenwälder Filtersysteme GmbH

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

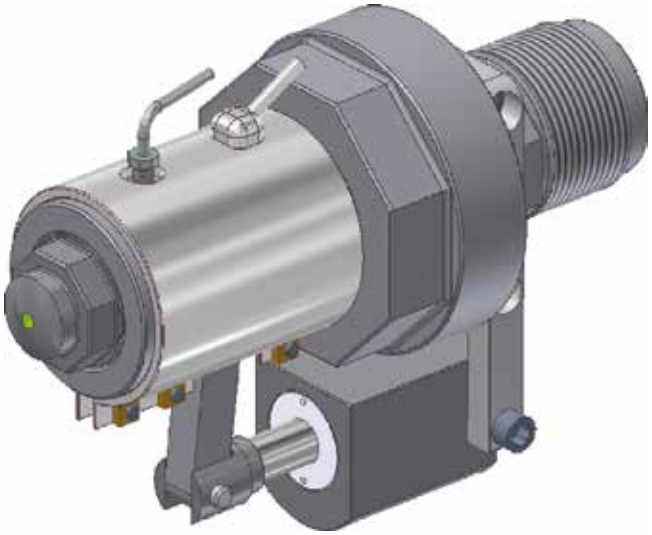
OFS-hopper magnets

The universal hopper magnets for separation of ferritic contaminants in the plastics granules.

- high process security
- strong magnetic field through anisotropic ceramic magnets
- long life span
- low flow resistance
- minimal bridging
- temperature resistant up to 150 ° C

Datas und standard sizes		type TM-1	type TM-2	type TM-3	type TM-4
Dimensions	mm	230 x 230 x 80	180 x 180 x 80	130 x 130 x 80	90 x 90 x 75

OFS-needle shut-off nozzle type NV



Application fields:

The OFS-needle shut-off nozzle is actuated pneumatically or hydraulically by a flanged cylinder. This nozzle can also be controlled by a linkage of the machine. Because the controlled closing of the flow path, shorter cycle times are possible and there are less material loss.
The OFS-needle shut-off nozzle is suitable for all thermoplastic materials. The size of the nozzle depends on the injection rate, the material and the screw diameter.

Advantages:

1. shorter cycle times.
2. possible dosing during lift of aggregate
3. higher process security at the injection moulding
4. compact and robust construction of the nozzle
5. all parts are exchangeable
6. all spare parts are available
7. easy mounting and disassembly
8. easy handling

- **nozzle sizes:**
The OFS-needle shut-off nozzle is available in 3 sizes. For selection, the following data could be used:

type NVI → screw diameter up to appr. 35 mm
type NVII → screw diameter appr. 30 – 80 mm
typeNVIII → screw diameter from appr. 70 mm

- **features:**
  - modular design
  - nozzle complete with suitable heater and thermocouple
  - max. injection pressure up to appr. 2500 bar
  - customer specific design
  - optimum rheological design

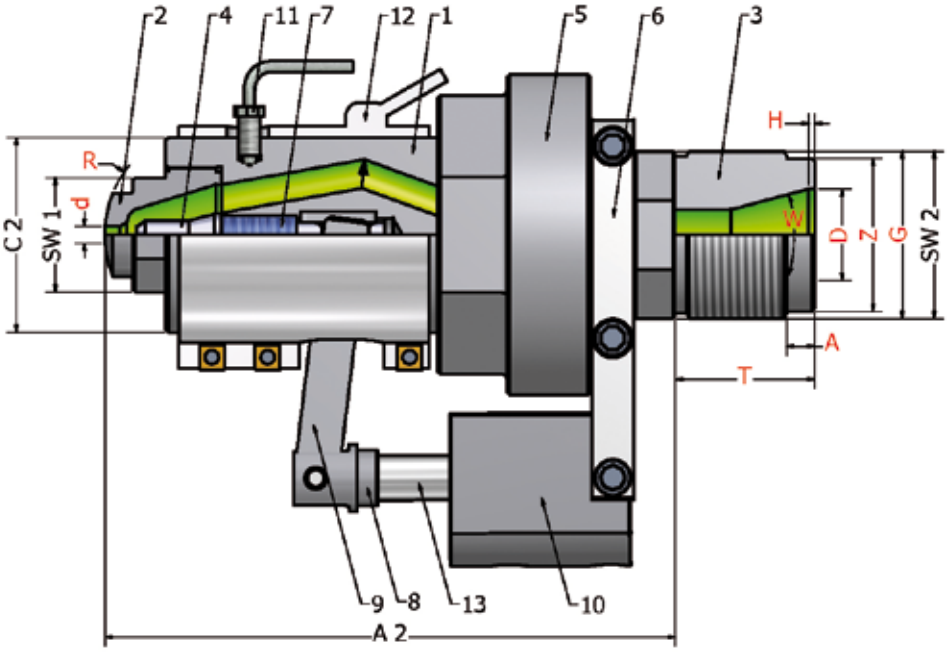
Odenwälder Filtersysteme GmbH

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

Dimensions

datas and standard dimensions (mm)		NVI	NVII	NVIII
screw diameter*	mm	up to appr. 35	appr. 30 - 80	from appr. 70
max. injection pressure	bar	2.500	2.500	2.500
length	A2	205	210	225
head diameter	C1	30	30	40
base diameter	C2	60	70	80
head hexagon	SW1	32	41	46
adapter hexagon	SW2	60	60	80

1 nozzle base
2 nozzlehead
3 adapter
4 needle
5 nut
6 cylinder clamp
7 needle guide
8 lever clamp
9 lever
10 cylinder
11 thermocouple
12 heater
13 piston



required dimensions (mm)			required informations		
machine thread	G		material (MFI)		
T/ A/ D/ Z/ W°/ H		specify if required	shot weight	gr.	
drill	d		melt temperature	C°	
radius / surface	R		injection time	sec	
			injection pressure (specific)	bar	
			machine type		
			screw diameter	mm	

additional options:

- nozzle head with dip nozzle
- nozzle body with internal thread
- with filtration
- with mixing insert
- etc.

needle

OFS-shut-off nozzle type FV

OFS-shut-off nozzle type FV:

The OFS-shut-off nozzle is spring operated and is open through the injection-pressure. At a specific pressure of appr. 200 bar, the nozzle is opened and the needle gives the flow canal free.
The OFS-shut-off nozzle is suitable for all thermo-plastic materials. The choice of the nozzle-type depends on the injection rate and the screw diameter.

- **nozzle sizes:**
  The OFS-shut-off nozzle is available in 3 sizes. For selection, the following data can be used:

  type FVI → screw diameter up to appr. 20 mm
  type FVII → screw diameter appr. 18 – 50 mm
  type FVIII → screw diameter appr. 50 – 100 mm

- **features:**
  - opening pressure appr. 200 bar
  - temperature resistance of the spring up to appr. 350°C / 450°C
  - high resistance against abrasion and corrosion
  - nozzle complete with suitable heater and thermo-couple

Advantages:

1. shorter cycle times
2. higher process security at the injection moulding
3. compact and robust construction of the nozzle
4. all parts are exchangeable
5. all spare parts are available
6. easy mounting and disassembly
7. easy handling

Odenwälder Filtersysteme GmbH

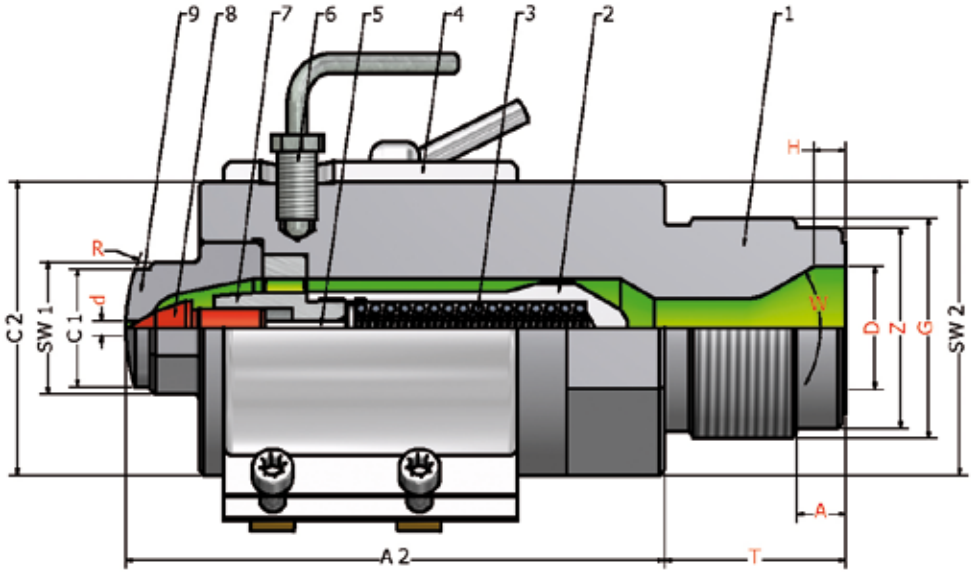
Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

Dimensions

datas and standard dimensions (mm)		FVI	FVII	FVII slim	FVIII
screw diameter	mm	up to appr. 20	18 - 50	18 - 50	50 - 100
max. injection pressure	bar	2.000	2.000	2.000	2.000
length	A2	85	110	110	145
head diameter	C1	17	24	24	30
base diameter	C2	40	60	45	60
head hexagon	SW1	24	27	27	46
base hexagon	SW2	41	60	46	60

*at PS

1 nozzle base
2 spring chamber
3 spring
4 heater
5 thrust pin
6 thermocouple
7 needle guide
8 needle
9 nozzlehead

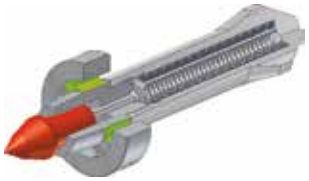


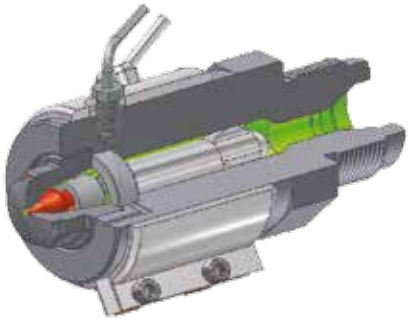
required dimensions (mm)			required informations		
machine thread	G		material (MFI)		
T/ A/ D/ Z/ W°/ H		specify if required	shot weight	gr.	
drill	d		melt temperature	C°	
radius / surface	R		injection time	sec	
			injection pressure (specific)	bar	
			machine type		
			screw diameter	mm	

additional options:

- with filtration
- nozzlehead with dip nozzle
- nozzlehaed with internal thread
- with mixing insert
- etc.

shut-off unit





OFS-mixing-nozzle type FMD

OFS-mixing-nozzles for injection moulding:

For high quality plastic parts, it is necessary to have a thermal homogeneous melt. The regular homogeneity of additives like flame retardant and UV-stabilizer are also a guarantor for high quality plastic parts as colour and thermal mixing. The high blend power of the OFS-mixing-nozzle ensures saving of colour-batches and other additives.

- **static wing-mixer:**
  The static wing-mixer consists of 4 rustproof elements with specifically arranged wings, in order to mix the cast. Each element is arranged in such a way that by combining several elements a complete mixing system develops.
  This system produces the desired homogeneity through continuous swirling of the fusion stream in layers, which are spread over the whole flow diameter.

- **features:**
  - 4 mixing elements
  - completely detachable → simple cleaning
  - high mechanical firmness through cast ring system
  - available for all machine types
  - suitable for nearly all plastic materials
  - nozzle complete with suitable heater and thermocouple

Advantages of the wing-mixer:

1. thermally homogeneous melt
2. uniform melt viscosity also with high regenerate portion
3. closer tolerances, better surface quality of the shaped parts, that means less discarded parts
4. homogeneous colour distribution → streak-free products, reduced colouring material costs
5. amortization by production advantages within a short time
6. self-cleaning, no dead corners

description	Di (mm)	Da (mm)
OFS-FM0 static wing-mixer with 3 or 4 elements adequate for screws ø up to 35 mm	8	14
OFS-FMI static wing-mixer with 4 elements adequate for screws ø 30-75 mm	12	20
OFS-FMII static wing-mixer with 4 elements adequate for screws ø 70-130 mm	16	25

flow direction

The illustrated mixing experiment demonstrates the excellent mixing characteristics

Odenwälder Filtersysteme GmbH

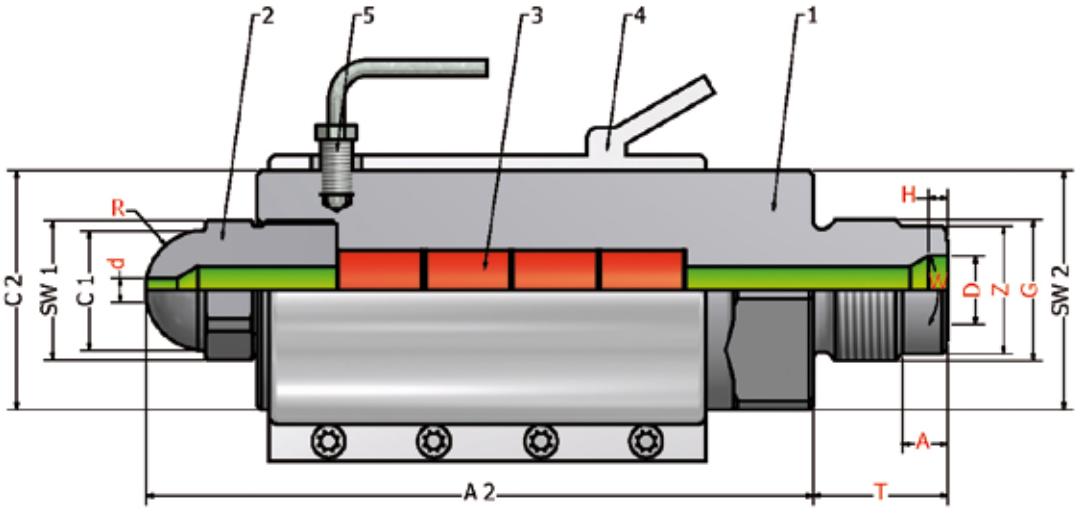
Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

Dimensions

datas and standard dimensions (mm)		FMDO	FMDI	FMDII
screw diameter*	mm	bis 35	30 - 75	70 - 130
max. injection pressure	bar	2.000	2.000	2.000
length	A2	122	128 / 148	148 / 168
head diameter	C1	24	30	30
base diameter	C2	45	60	60
head hexagon	SW1	27	32	32
adapter hexagon	SW2	46	60	60

*at PS

1 nozzle base
2 nozzlehead
3 mixinginsert
4 heater
5 thermocouple

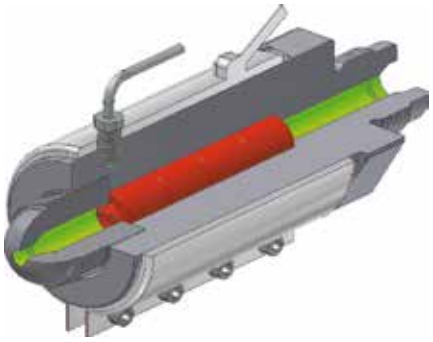


required dimensions (mm)			required informations		
machine thread	G		material (MFI)		
T/A/D/Z/W°/H		specify if required	shot weight	gr.	
drill	d		melt temperature	C°	
radius/surface	R		injection time	sec	
			injection pressure (specific)	bar	
			machine type		
			screw diameter	mm	

additional options:

- with shut-off function
- nozzle head with dip nozzle
- nozzle head with internal thread
- nozzle base with needle seat
- etc.

mixing insert



plastic-leakproof OFS-machine nozzle

The nozzle for deep and thin requirements, with optimum heating

Odenwälder Filtersysteme GmbH

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

plastic-leakproof OFS-machine nozzle

Optimum production conditions

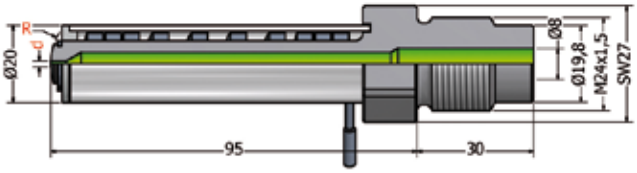
- optimum heating
- save of raw material
- less maintenance costs
- less production breakdown
- longer machine running time
- short amortization
- absolute plastic leakproof
- no overmoulding of the heaters
- strong design
- modular design

Application fields:

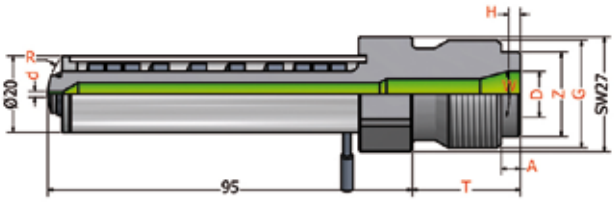
The plastic-leakproof OFS-machine nozzle is especially designed for applications in deep and thin mold dimensions. Because of the high end heaters, the nozzles ensure an optimum temperature and allow especially the processing of technical and high temperature plastic materials.
Because of the protective pipe on the nozzle base, the heater is insulated absolutely plastic leakproof and so there is no production breakdowns caused through damaged heaters. The results are less costs for maintenance, less production breakdowns, longer machine runtimes, ...
Another application is the saving of raw materials. Because of the thin, long design and the optimum heating, the nozzles allow a deeper sprue bush and so it is possible to reduce the raw material for the sprue (comparable with a hot runner nozzle).

The plastic-leakproof OFS-machine nozzle is available in 4 standard designs. Of course, other dimensions and special designs can be also supplied.

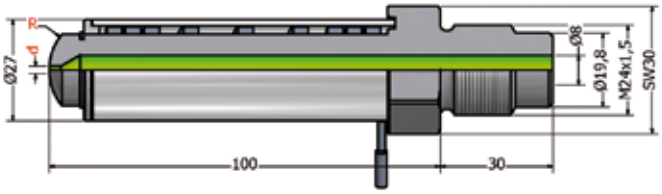
type 0: ☐ standard design



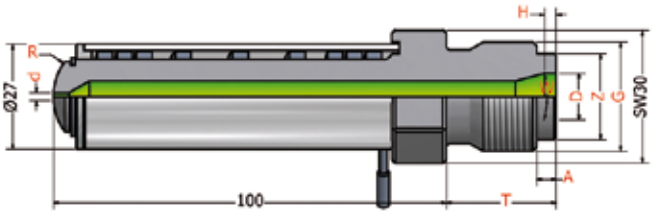
type 0: ☐ as specified*



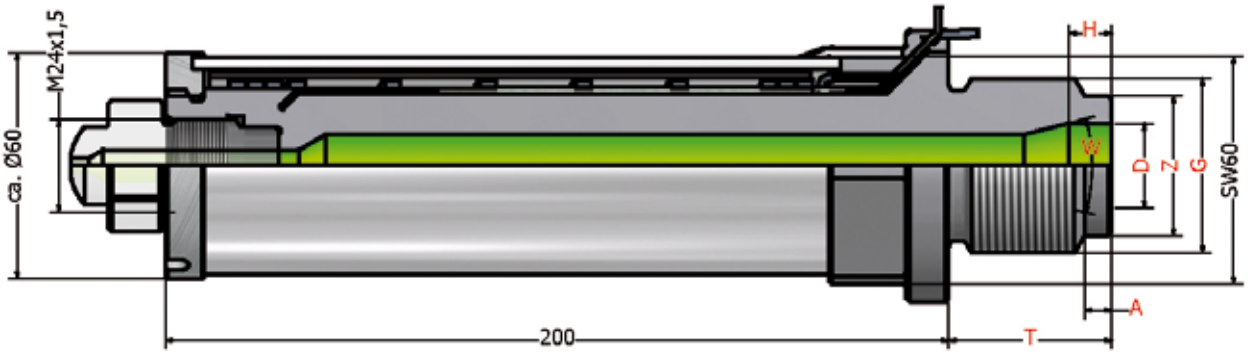
type 1: ☐ standard design



type 1: ☐ as specified*



type 2: ☐ as specified*



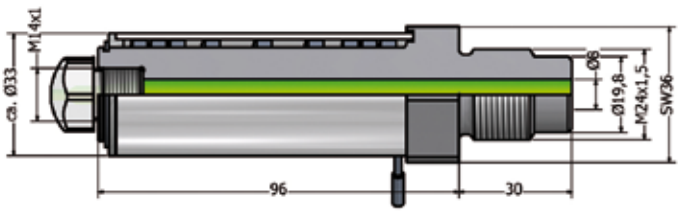
required dimensions (mm)					
machine thread	G		depth connecting diameter	H	
radius/surface	R		connecting diameter	D	
drill	d		fit diameter	Z	
			length fit diameter	A	
			length thread	T	
			connecting angle	W°	

*all other designs and measurements are also available
please contact us to discuss your requirements

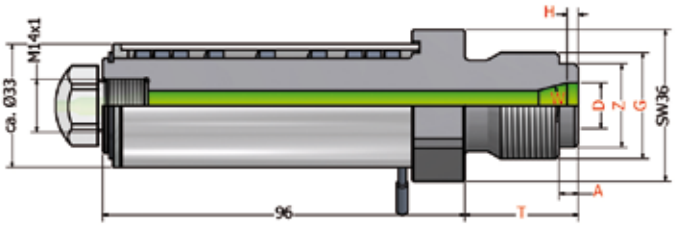
Odenwälder Filtersysteme GmbH

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

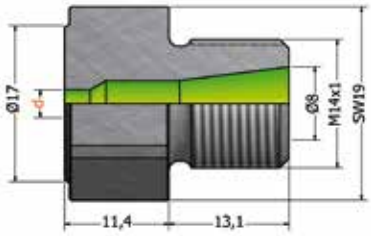
type 1-DS: ☐ standard design



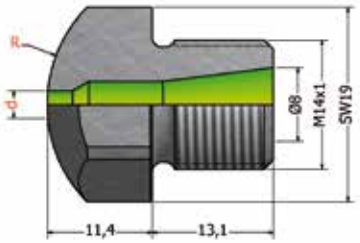
type 1-DS: ☐ as specified*



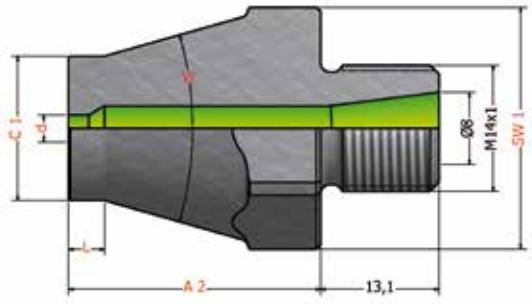
☐ standard design



☐ standard design



☐ special tip as specified*



required dimensions (mm)					
machine thread	G		depth connecting diameter	H	
radius/surface	R		connecting diameter	D	
drill	d		fit diameter	Z	
length	L		length fit diameter	A	
length	A2		length thread	T	
dia	C1		connecting angle	W°	

***all other designs and measurements are also available**
please contact us to discuss your requirements

OFS-thermal conductive nozzle

- no heater required
- for deep and thin applications
- no production breakdown through damaged heaters
- longer machine running time
- optimum temperature
- strong design
- less maintenance costs
- short amortization

material	thermal conductivity	tensile strength	hardness
A 83[1]	130 W/mK	1200 - 1300 N/mm²	320 - 370 HB
A 95[1]	250 W/mK	720 - 820 N/mm²	230 - 260 HB
tool steel[2]	appr. 20 W/mK	appr. 1200 N/mm²	appr. 360 HB (unhardened)

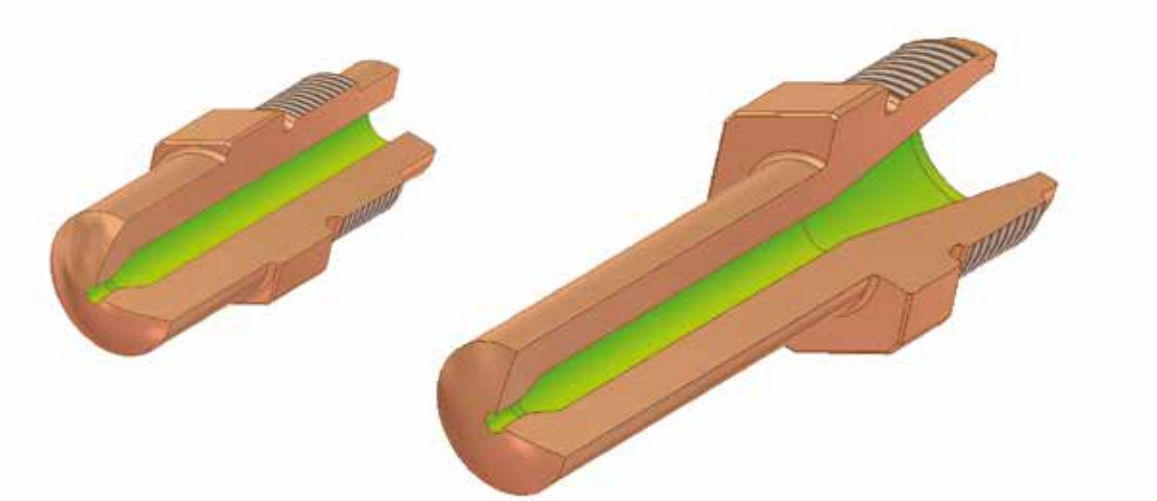
[1]used thermal conductive material
[2]for sample tool steel

Odenwälder Filtersysteme GmbH

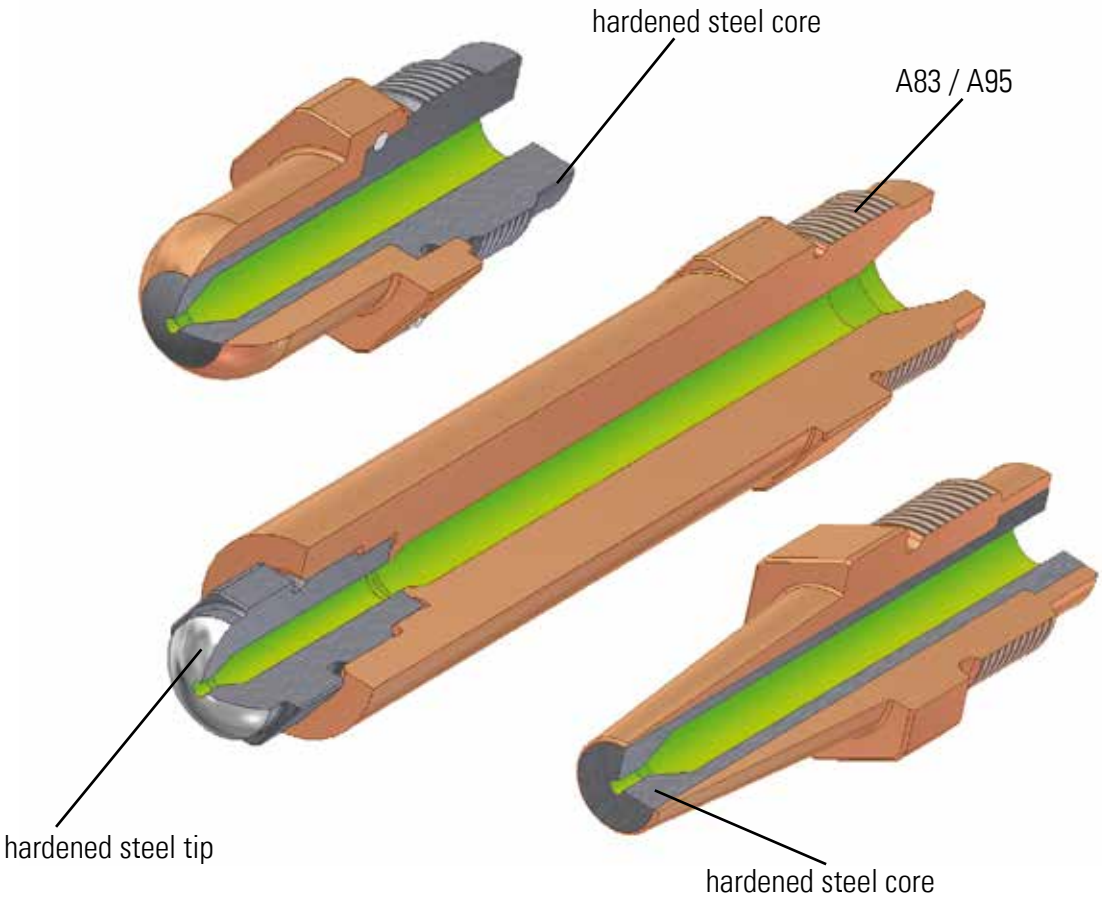
Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

OFS-thermal conductive nozzle

thermal conductive nozzle from Ampcoloy A83 / A95:



thermal conductive nozzle from Ampcoloy A83 / A95- steel combination:



OFS-machine nozzles
nozzle tips
adapters

in standard or special design.

Odenwälder Filtersysteme GmbH

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

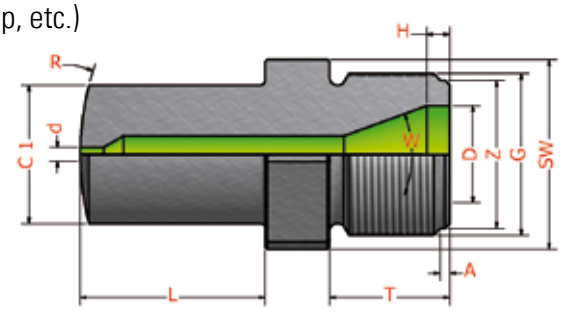
OFS-machine nozzles

The machine nozzle is an important connecting element between the plastification unit and the mold. It is very important, that the measurements and the material are correctly selected to suit the processing application, plastic material, the plastification unit and the mold. Otherwise, there could be a lot of interruptions in production and faults on the plastic parts. By using the suitable material and optimum rheological design, the OFS-machine nozzle ensures the best conditions for every injection moulding application. Beside our large stock of standard nozzles, we also deliver specially designed nozzles in a short time and at the best prices.

machine nozzle (also with internal thread, clamp, etc.)

☐ with heater

☐ with thermocouple

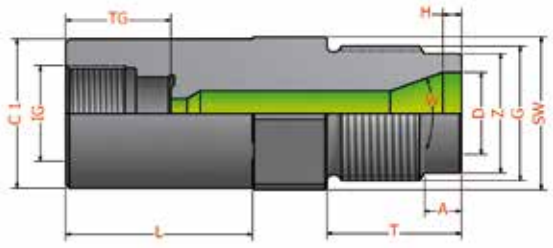


required dimensions (mm)					
head diameter	C1		depth connecting diameter	H	
radius / surface	R		connecting diameter	D	
drill	d		fit diameter	Z	
length	L		thread	G	
hexagon	sw		connecting angle	W°	
machine type			length fit diameter	A	
screw diameter	mm		length thread	T	

adapter (also with internal thread, clamp, etc.)

☐ with heater

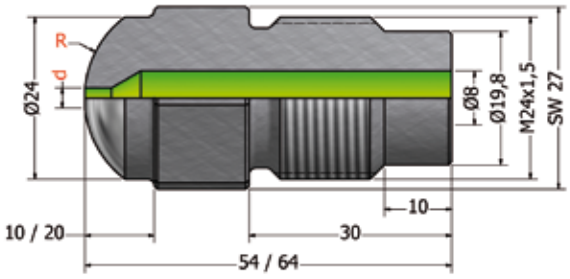
☐ with thermocouple

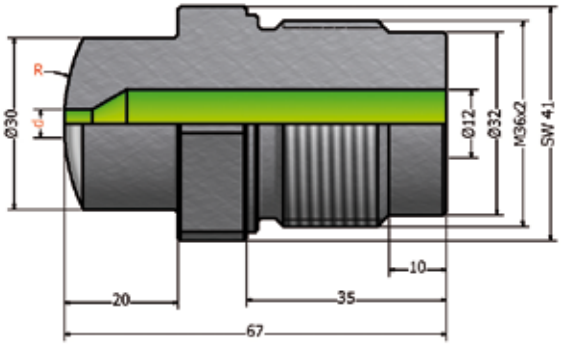


required dimensions (mm)					
head diameter	C1		depth connecting diameter	H	
radius / surface	R		connecting diameter	D	
drill	d		fit diameter	Z	
length	L		thread	G	
hexagon	sw		connecting angle	W°	
internal thread	IG		depth internal thread	TG	
machine type			length fit diameter	A	
screw diameter	mm		length thread	T	

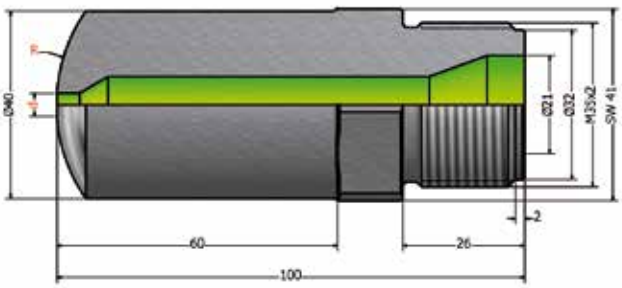
OFS-machine nozzles

nozzle tips for Arburg (other dimensions on request)

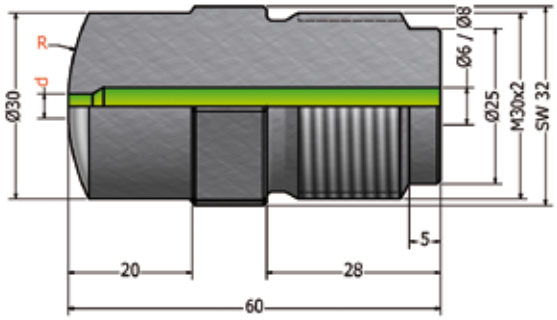


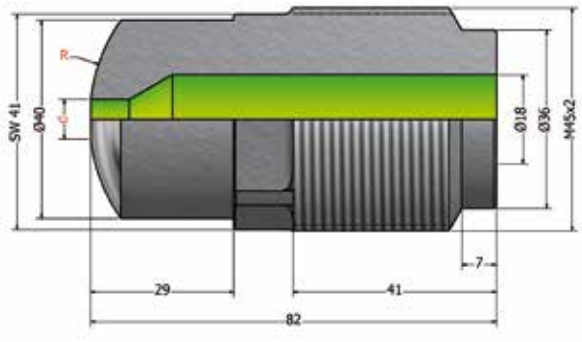


machine nozzle for Battenfeld (other dimensions on request)

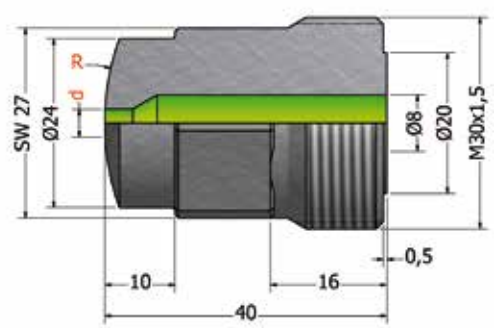


nozzle tip / machine nozzle for Krauss-Maffei (other dimensions on request)



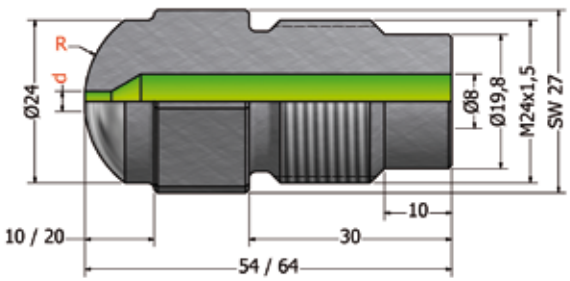


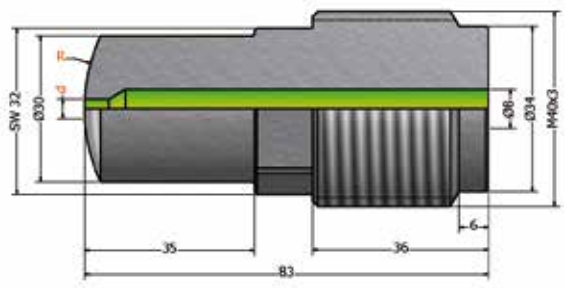
nozzle tip / machine nozzle for Ferromatik (other dimensions on request)

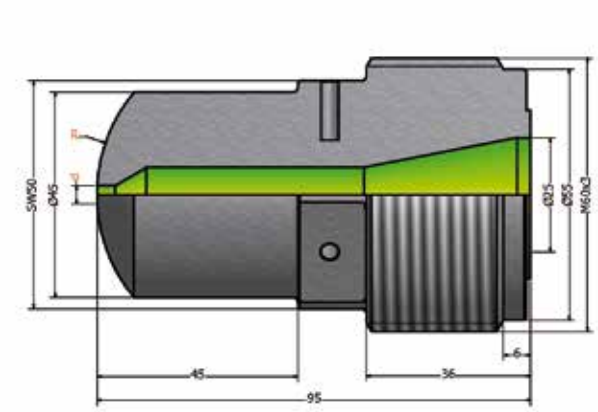


Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

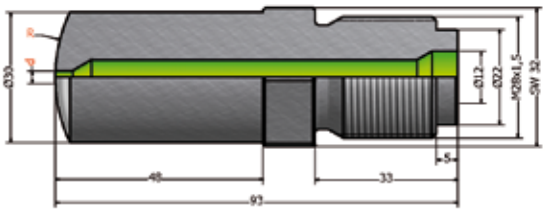
nozzle tip / machine nozzle for Demag (other dimensions on request)

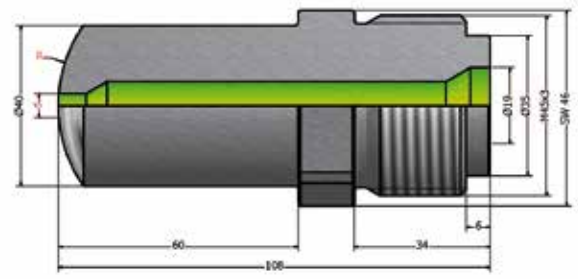


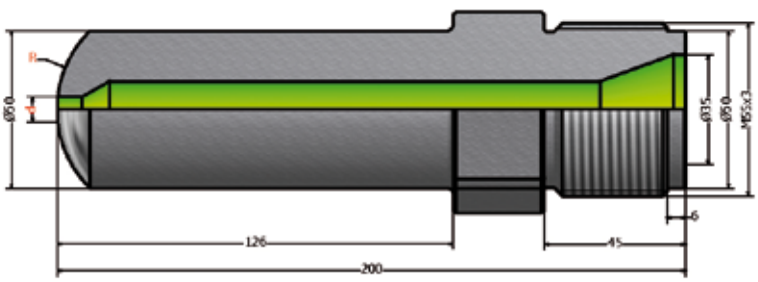




nozzle tip / machine nozzle for Engel (other dimensions on request)

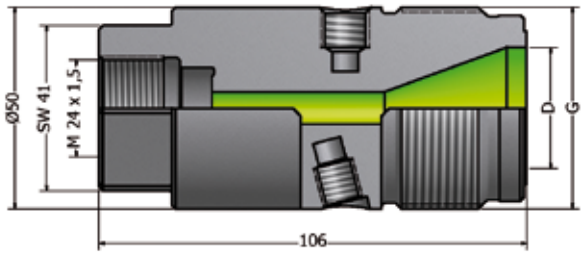






OFS-adapters

adapters for Arburg (other dimensions on request)

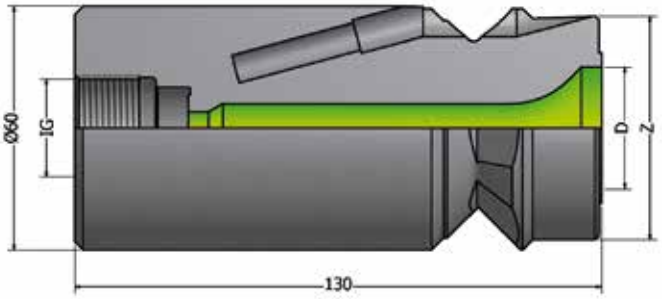


design 1:
G: M 45 x 2 LH

design 2:
G: M 50 x 2 LH

design 3:
G: M 55 x 2 LH

D as specified

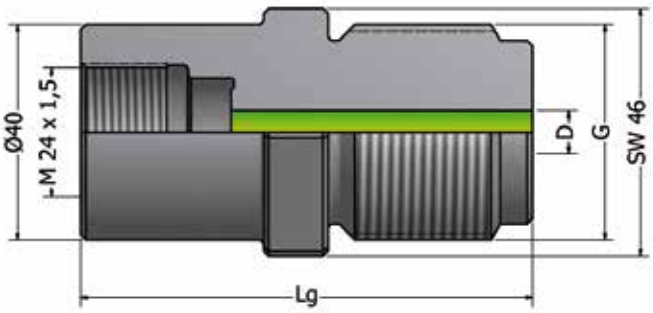


design 1:
IG: M 24 x 1,5

design 2:
IG: M 36 x 2

Z and D as specified

adapters for Demag (other dimensions on request)



Design 1:
G: M 40 x 3
LG: 84

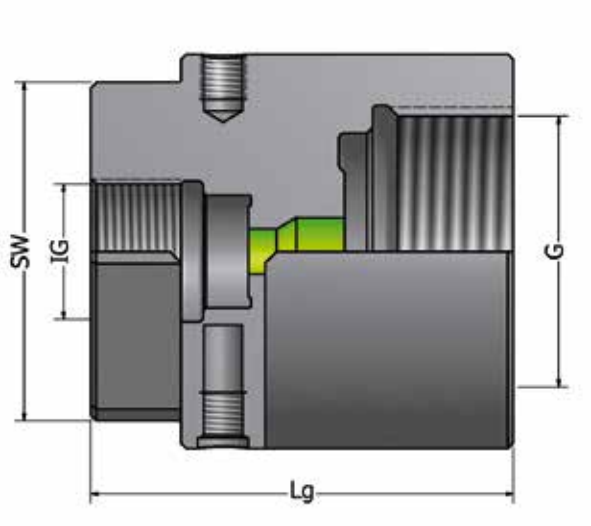
Design 2:
G: M 60 x 3
LG: 82

also we deliver other designs of adapters, barrel heads, clamps, etc... or other turned- or milled parts can be delivered in a short time and at the best prices

Industriegebiet III
Im Krötenteich 3a - D-74722 Buchen / Odw.
phone 06281/404-393 - fax: 06281/404-391

ofs FILTERSYSTEME

adapters for Krauss-Maffei (other dimensions on request)

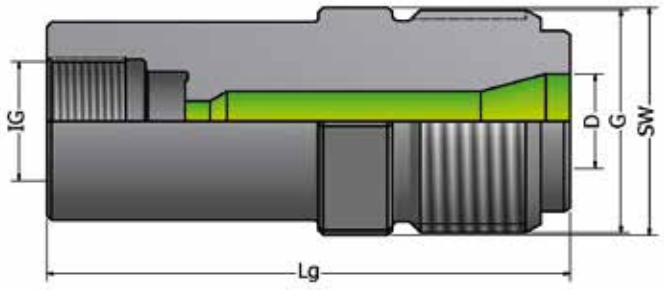


design 1:
G: M 48 x 3
IG: M 24 x 1,5 / M 30 x 2
LG: 75

design 2:
G: M 70 x 3
IG: M 24 x 1,5 / M 45 x 2
LG: 110

design 3:
G: M 75 x 3
IG: M 24 x 1,5 / M 45 x 2
LG: 110

adapters for Engel (other dimensions on request)

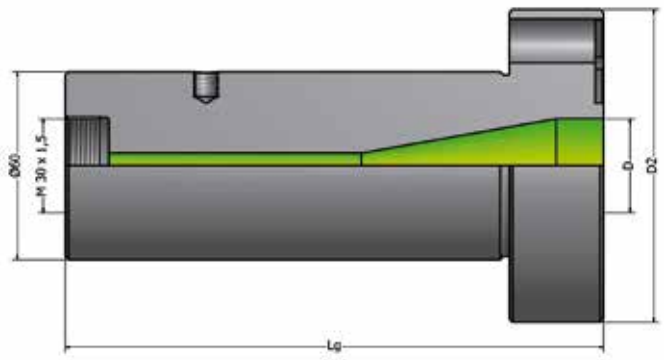


design 1:
G: M 28 x 1,5
IG: M 24 x 1,5
LG: 105

design 2:
G: M 45 x 3
IG: M 24 x 1,5 / M 28 x 1,5
LG: 106

design 3:
G: M 55 x 3
IG: M 24 x 1,5 / M 28 x 1,5
LG: 180

adapter/barrel head for Ferromatik (other dimensions on request)



LG, D and D2 as specified

visit our website
www.ofs-filtersysteme.de

ofs
FILTERSYSTEME

Odenwälder Filtersysteme GmbH

your partner for filter-, mixing- and shut-off nozzles

for any questions, please do not hesitate to contact us

Odenwälder Filtersysteme GmbH
Industriegebiet III
Im Krötenteich 3a
74722 Buchen (Odenwald)
Postfach 13 12

phone: +49 6281 / 404 – 393
fax: +49 6281 / 404 – 391
E-mail: DoersamM@okw.com