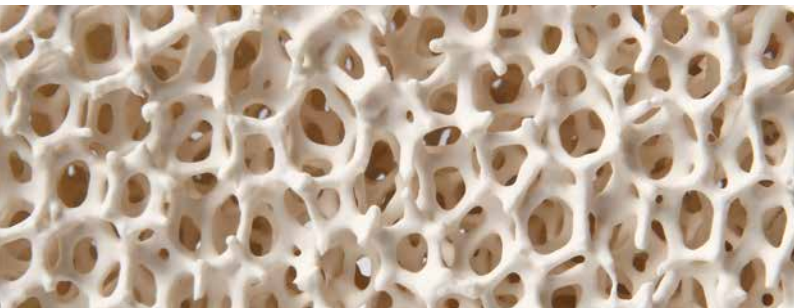




# UDICELL and EXACTFLO Filters

Application Guide



**ASK**CHEMICALS  
We advance your casting



## Filtration Technology

ASK Chemicals offers a full portfolio of metal filtration products for all metal types and applications, which includes our UDICELL and EXACTFLO metal filtration products.

We pride ourselves on being able to deliver quality products and solutions bundled with the highest level of experience and service to assist today's metal casters in successful filter implementations.

Throughout our organization we are committed to providing our customers with the best in filtration technology, leading to improved properties and therefore a more valuable casting.

## Filtration services

Technical services –  
Experienced Technical Support

- Reliable recommendations
- Fast response

R&D –  
Industry Leading Capabilities

- Casting defect analysis
- Full service

Design services –  
Casting Optimization

- Reduced scrap
- Calculation of optimal feeding

# UDICELL and EXACTFLO Filters

## Filter families:

### ► UDICELL

Highly robust foundry filtration products recommended for high temperature alloys and/or heavy castings

### ► EXACTFLO

Foundry filters providing cost effective means to control metal flow and inclusion removal for both ferrous and non-ferrous casting applications



## ► UDICELL

### Investment casting filters

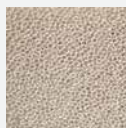
High quality performance filters  
specifically designed for the  
critical demands of the invest-  
ment casting industry



## Filter material selection

Metal type	Filter material			
	Zirconia	Alumina	Silicon carbide	Carbon bonded
Steel	X			X
Iron	X		X	X
Aluminum	X	X	X	
Brass / Bronze / Copper	X	X	X	
Superalloys	X	X		

## Pore size selection: foundry

**10 ppi****15 ppi****20 ppi****30 ppi**

Metal type	Pore size				
	10 ppi	15 ppi	20 ppi	30 ppi	45 ppi
Steel	X	X			
Ductile iron	X	X			
Grey iron			X	X	
Aluminum	X	X	X	X	X
Brass / Bronze / Copper	X	X	X	X	



## UDICELL Zirconia Filters

Stainless/low alloy steel

- 1,700 °C max. temperature
- High purity/thermal grade
- Open pore structure
- Extremely durable and consistent
- Metal types: steel
- Pore sizes: 10–20 ppi

Filter size*		Ledge size	Filter capacities		Pieces
inch	mm	mm	kg/ Carbon Steel	kg/high alloyed steel	per Box
DIA 2 x 0.75	DIA 50 x 20	5	29	43	240
DIA 3 x 1	DIA 75 x 25	7	66	97	120
DIA 4 x 1	DIA 100 x 25	9	118	173	60
DIA 5 x 1.25	DIA 125 x 30	11	184	270	32
DIA 6 x 1.25	DIA 150 x 30	12	265	389	24
DIA 7 x 1.25	DIA 175 x 30	14	361	529	20
DIA 8 x 1.5	DIA 200 x 35	16	471	691	12
	DIA 250 x 35	18	736	1,080	6
	DIA 300 x 35	20	1,060	1,555	3
2x2x0.75	50x50x20	5	38	55	240
3x3x1	75x75x25	7	84	124	100
4x4x1	100x100x25	9	150	220	60
4x8x1	100x200x25	11	300	440	20
5x5x1.25	125x125x30	11	234	344	32
6x6x1.25	150x150x30	12	338	495	24
6x8x1.25	150x200x30	13	450	660	16
7x7x1.25	175x175x30	14	459	674	15
8x8x1.5	200x200x35	16	600	880	6

\* Further information on the back page of this brochure



## UDICELL PSZT (Tan)

Stainless / low alloy steel

- Open pore structure
- Extremely durable & consistent
- Metal types: steel
- Pore sizes: 10–20 ppi

Filter size*		Ledge size	Filter capacities		Pieces
inch	mm	mm	kg / Carbon Steel	kg / high alloyed steel	per Box
DIA 2 x 0.75	DIA 50 x 20	5	29	43	240
DIA 3 x 1	DIA 75 x 25	7	66	97	120
DIA 4 x 1	DIA 100 x 25	9	118	173	60
DIA 5 x 1.25	DIA 125 x 30	11	184	270	32
DIA 6 x 1.25	DIA 150 x 30	12	265	389	24
DIA 6 x 1.5	DIA 200 x 35	16	471	690	12
2 x 2 x 0.75	50 x 50 x 20	5	38	55	240
3 x 3 x 1	75 x 75 x 25	7	84	124	100
4 x 4 x 1	100 x 100 x 25	9	150	220	60
4 x 8 x 1	100 x 200 x 25	11	300	440	20
5 x 5 x 1.25	125 x 125 x 30	11	234	344	32
6 x 6 x 1.25	150 x 150 x 30	12	338	495	24
6 x 8 x 1.25	150 x 200 x 30	13	450	660	16

\* Further information on the back page of this brochure





## UDICELL Tubular Filter & EXACTFILL Housing System

- 3x greater filter area
- Self-supporting geometry
- Quick install – easy to use
- Metal types: steel, low carbon low alloy steel, stainless steel, iron (ductile)
- Pore sizes: 10ppi

Filter housing	Filter size*		Inlet /outlet diameter		Capacities steel	Capacities ductile iron	Filter Area (Outside)
	inch	mm	inch	mm	kg	kg	cm <sup>2</sup>
No Housing	6 OD x 3.5 ID x 4 H	150 OD x 90 ID x 100 H	–	–	600 – 1,100	800 – 1,700	471
No Housing	6 OD x 3.5 ID x 5 H	150 OD x 90 ID x 125 H	–	–	700 – 1,300	1,200 – 2,200	589
EXACTFILL 150/60	6 OD x 3.5 ID x 6 H	150 OD x 90 ID x 150 H	2.36 / 2 x 2.36	60 / 2 x 60	1,000 – 2,000	2,000 – 3,000	707
EXACTFILL 150/80	6 OD x 3.5 ID x 6 H	150 OD x 90 ID x 150 H	3.15 / 2 x 3.15	80 / 2 x 80	1,000 – 2,000	2,000 – 3,000	707
EXACTFILL 200/80	6 OD x 3.5 ID x 8 H	150 OD x 90 ID x 200 H	3.15 / 2 x 3.15	80 / 2 x 80	1,500 – 3,500	2,500 – 4,500	942
EXACTFILL 300/100	7 OD x 4.3 ID x 12 H	180 OD x 110 ID x 300 H	4.7 / 2 x 4	120 / 2 x 100	3,000 – 6,500	3,500 – 10,000	1,696

\* Further information on the back page of this brochure



## UDICELL Carbon Bonded Filters

Stainless/low alloy steel

- Ideal for low pouring temps
- Efficient filtration and oxide reduction
- Metal types: steel and iron
- Pore sizes: 10–15 ppi

Filter size*		Ledge Size	Capacity	Pieces
inch	mm	mm	kg/ carbon steel	per Box
DIA 2 x 0.75	DIA 50 x 20	5	38	200
DIA 3 x 1	DIA 75 x 25	7	86	96
DIA 4 x 1	DIA 100 x 25	9	153	48
DIA 5 x 1.25	DIA 125 x 30	11	239	24
DIA 6 x 1.25	DIA 150 x 30	12	345	18
DIA 8 x 1.5	DIA 200 x 35	16	612	9
	DIA 250 x 40	18	957	4
	DIA 300 x 40	20	1,378	2
2 x 2 x 0.75	50 x 50 x 20	5	49	200
3 x 3 x 1	75 x 75 x 25	7	110	80
4 x 4 x 1	100 x 100 x 25	9	195	48
5 x 5 x 1.25	125 x 125 x 30	11	305	24
6 x 6 x 1.25	150 x 150 x 30	12	439	18
4 x 8 x 1	100 x 200 x 25	12	390	16
6 x 8 x 1.25	150 x 200 x 30	16	585	10
8 x 8 x 1.5	200 x 200 x 35	18	780	4

\* Further information on the back page of this brochure



## EXACTFLO Silicon Carbide Filters

Gray / ductile iron

- Remove inclusions
- Improve surface finish
- Provide laminar flow
- Metal types: iron (ductile), iron (gray)
- Pore sizes: 10–15 ppi (ductile iron),  
20–30 ppi (gray iron)

Item	Dimensions*	Capacity		Pieces	Pieces
		kg		box	pallet
	mm	ductile	gray		
EXACTFLO 30x50x22 SIC	30x50x22	30	60	840	35,280
EXACTFLO 40x40x15 SIC	40x40x15	30	60	1,078	45,276
EXACTFLO 50x50x15 SIC	50x50x15	40	80	756	31,752
EXACTFLO 50x50x20 SIC	50x50x20	45	90	594	24,948
EXACTFLO 50x50x22 SIC	50x50x22	50	100	540	22,680
EXACTFLO 50x75x15 SIC	50x75x15	60	120	504	21,168
EXACTFLO 50x75x22 SIC	50x75x22	70	140	360	15,120
EXACTFLO 50x100x20 SIC	50x100x20	90	180	297	12,474
EXACTFLO 50x100x22 SIC	50x100x22	100	200	270	11,340
EXACTFLO 60x60x22 SIC	60x60x22	70	140	350	14,700
EXACTFLO 75x75x22 SIC	75x75x22	100	200	240	10,080
EXACTFLO 75x100x22 SIC	75x100x22	150	300	180	7,560
EXACTFLO 100x100x22 SIC	100x100x22	180	360	120	5,040
EXACTFLO 125x125x30 SIC	125x125x30	320	640	56	2,352
EXACTFLO 150x150x22(30)	150x150x22 (30)	405	810	60	2,520
EXACTFLO DIA 40x20 SIC	DIA 40x20 SIC	25	50	847	35,574
EXACTFLO DIA 50x22 SIC	DIA 50x22 SIC	35	70	540	22,680
EXACTFLO DIA 60x22 SIC	DIA 60x22 SIC	55	110	350	14,700
EXACTFLO DIA 70x22 SIC	DIA 70x22 SIC	70	140	240	10,080
EXACTFLO DIA 80x22 SIC	DIA 80x22 SIC	100	200	240	10,080
EXACTFLO DIA 100x22 SIC	DIA 100x22 SIC	170	340	120	5,040
EXACTFLO DIA 125x30 SIC	DIA 125x30 SIC	270	540	56	2,352
EXACTFLO DIA 150x30 SIC	Dia 150x30 SIC	318	636	42	1,764

\* Further information on the back page of this brochure



## EXACTFLO Alumina Filters

### Aluminum

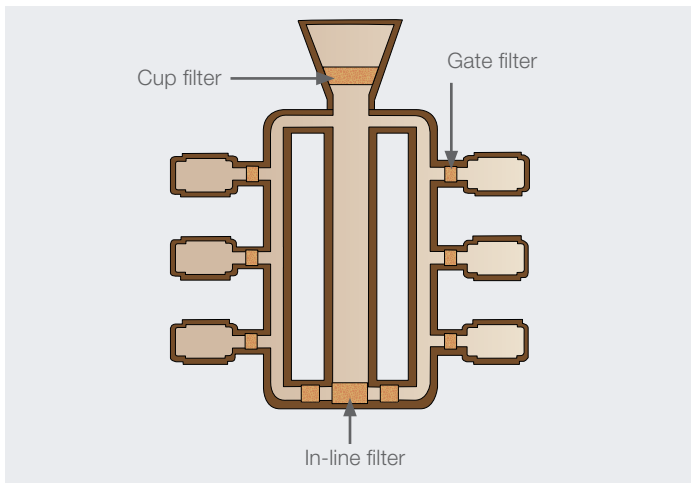
- Remove inclusions
- Improve surface finish
- Provide laminar flow
- Metal types: alumina
- Pore sizes: 10–30 ppi

Filter size*		Ledge size	Flow rate	Capacity
inch	mm	mm	kg/sec	kgs
2 x 2 x 0.75	50 x 50 x 22	5	1	27
3 x 3 x 1	75 x 75 x 25	7	3	61
4 x 4 x 1	100 x 100 x 25	9	5	108
5 x 5 x 1.25	125 x 125 x 30	11	8	169
6 x 6 x 1.25	150 x 150 x 30	12	12	243
2 OD x 0.75	50 OD x 22	5	1	21
3 OD x 1	75 OD x 25	7	2	48
4 OD x 1	100 OD x 25	9	4	85
5 OD x 1.25	125 OD x 30	11	7	132
6 OD x 1.25	150 OD x 30	12	10	191

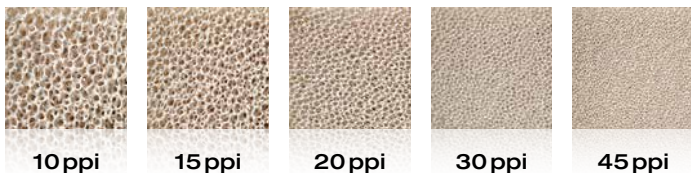
\* Further information on the back page of this brochure

# Investment Casting Filtration

## Filter location and pore sizes



### Pore size selection: investment foundry



Filter location	Pore Size				
	10	15	20	30	45
Cup	X	X	X	X	
In-Line	X	X	X	X	
Gate		X	X	X	X

# Investment Casting Filtration

## Cast capacity and edge coat treatments



**FG** – Range of fiber gasket materials to ensure a snug fit



**SEC** – smooth uniform edge coating for straight wall filters



**FEC** – durable edge coating applied to tapers and special shapes



**No edge coat** – standard filter webs

### Gate filters

Filter size		Flow rate			Capacity	
inch	mm	10 ppi kgs / sec	15 ppi kgs / sec	20 ppi kgs / sec	air melt kgs	vacuum melt kgs
0.50	13	0.19	0.17	0.16	3	4
0.75	19	0.44	0.39	0.35	7	9
1.00	25	0.78	0.70	0.63	12	16

### Cup filters

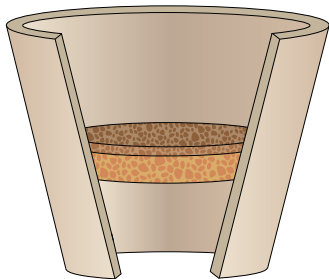
Filter size*		Flow rate			Capacity	
inch	mm	10 ppi kgs / sec	15 ppi kgs / sec	20 ppi kgs / sec	air melt kgs	vacuum melt kgs
2 TOD x 1	50 TOD x 25	3.15	2.84	2.55	50	63
3 TOD x 1	75 TOD x 25	7.20	6.48	5.83	111	143
4 TOD x 1	100 TOD x 25	12.60	11.34	10.21	198	254
5 TOD x 1	125 TOD x 25	19.35	17.42	15.67	309	397

# Investment Casting Filtration

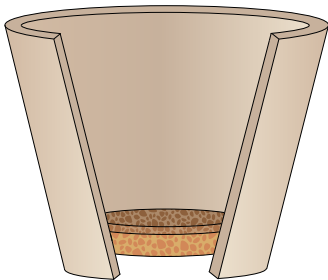
## Cup filter placement

- Cup filters should be placed as close to the bottom of the cup as possible
- It is preferred to cover the entire surface area of the filter as quickly as possible
- Greater metal head pressure helps filter flow and priming

Incorrect placement



Correct placement



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Please contact ASK for any questions concerning the usage of these marks.

TOD = Tapered Outside Diameter

DIA or OD = Outside Diameter

ID = Inside Diameter

H = Height

Excerpt from the delivery program. Data are to be understood as guideline values and not as guaranteed values. See related product data sheet.

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