Filter Reactors

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### **JACKETED FILTER REACTOR ★**

Rugged, heavy wall reactor, jacketed for cooling and/or heating of reaction material. With 60mm, 100mm, or 150mm Duran<sup>®</sup> style flange with O-Ring groove at top, for connection to 6527, 6528 or 6529 heads, with 6517 quick-release clamp. Bottom has an Ace-Thred (internal glass thread) for installing 5838-83 (#50) or 5857-86 (#80) bottom adapter with filter support and drain valve. Body is jacketed with your choice of 28/15 O-Ring ball joint, or Ace-Thred connections, sealed tangentially for more efficient circulation. Head has three \$ 24/40 joints on 60mm size; four \$ 24/40 joints on 100mm and 150mm sizes.

Replacement glass fritted support, polyethylene support, or polypropylene screen, see 5848 or 5814. For condenser and funnel, see 6029 and 7298; stoppers with \$ 24/40 joints, see 8250. For stirring motor, see 13517, 13565 or 13566 motor; for chuck, see 8124 or 8126. Use 7855-829 CAPFE O-Ring for #50 adapter, 7855-864 for #80 bottom adapter.

**Note:** Complete item consists of: reactor body with CAPFE O-Ring, head with joints, 6517 clamp, PTFE bottom adapter with CAPFE O-Ring (with perforated plate – #80 thread only), retainer ring, 350 micron polypropylene screen support, and 100 micron polyethylene support, 5844 adapter, 5839 shutoff valve (optional larger valve is available), non-flaking 8066 bearing, 8075 stirring rod, 8089 multi-paddle agitator. **Pressure manifold, stand, and support clamps are optional.** 

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	Capacity, mL	Flange I.D., mm (in)	Bottom Ace-Thred, #	Body I.D., mm	Approx. Height*, mm	Top CAPFE O-Ring	Jacket Inlet/Outlet	Order Code	
	Ball Joint Inle	t/Outlet							
	150**	60 (2.4)	50	60	100	7855-878	28/15	6386-40	
	600**	60 (2.4)	50	79	205	7855-878	28/15	6386-45	
	1000	100 (4)	80	100	180	7855-880	28/15	6386-50	
	2000	100 (4)	80	126	210	7855-880	28/15	6386-55	
)	3000	150 (6)	80	150	205	7855-881	28/15	6386-60	
2	6000	150 (6)	80	150	395	7855-881	28/15	6386-65	
Ace-Thred Inlet/Outlet									
	150**	60 (2.4)	50	60	100	7855-878	#11	6386-440	
	600**	60 (2.4)	50	79	205	7855-878	#11	6386-445	
	1000	100 (4)	80	100	180	7855-880	#11	6386-450	
	2000	100 (4)	80	126	210	7855-880	#11	6386-455	
	3000	150 (6)	80	150	205	7855-881	#15	6386-460	
	6000	150 (6)	80	150	395	7855-881	#15	6386-465	
	* *** * * *	,							

\* Height measurements are measured from top of flask flange to seal on top thread.

\*\* 150mL and 600mL heads have angled side necks.

- Stand (12840, 12841, 13568 or 13586) and Support Shelf (11173) and Chain Clamp (11079-40) not included.
- 150mL size requires 11079-24 chain clamp rather than a shelf.
- For #80, bottom also available with 1/2" MNPT, 5857-89.
- For #80, bottom also available with 3/8" MNPT, 5857-96.

#### For safety, it is recommended that a pressure relief manifold be used on jacketed reactors.



8075

Stirring

Shaft

8066

Bearing

6527/6528 /6529 Head

6517 Clamp

7855 CAPFE O-Ring 6386-16 Jacketed Reactor Body

28/15 O-Ring

Ball Joint Connectors (Ace-Thred optional)

5844/12770

Adapter 3/8" MNPT – 1/4" FNPT/

3/8" MNPT - 3/8" MNPT

8089 Agitator

5839 Bottom Valve



Filter Reactors

## JACKETED FILTER REACTOR, PRESSURE VERSION \*

Heavy wall glass reactor, jacketed version for cooling or heating of reactor. Available with 60mm, 100mm, or 150mm diameter Duran<sup>®</sup> flange with O-Ring grove at top. Connects to 6433 head with a 6517 quick-release clamp. Reactor bottom has an Ace-Thred for installing a 5838-83 (#50) or 5857-86 (#80) adapter with a filter support and bottom drain valve. Jacket inlet/outlet are your choice of 28/15 O-Ring ball joint, or Ace-Thred connections, sealed tangentially for more efficient circulation. The 60mm reactor head has a #15 Ace-Thred center neck, (2) #15 and (1) #7 Ace-Thred side necks. The 100mm head has a #15 Ace-Thred center neck, (3) #15 and (1) #7 Ace-Thred side necks. The 150mm head has a #15 Ace-Thred center neck, (4) #15 and (1) #7 Ace-Thred side necks. The 150mm head has a #15 Ace-Thred center neck, (4) #15 and (1) #7 Ace-Thred side necks. The 150mm head has a #15 Ace-Thred center neck, (4) #15 and (1) #7 Ace-Thred side necks. The 150mm head has a #15 Ace-Thred center neck, (4) #15 and (1) #7 Ace-Thred side necks. The 150mm head has a #15 Ace-Thred center neck, (4) #15 and (1) #7 Ace-Thred side necks. The 150mm head has a #15 Ace-Thred center neck, (4) #15 and (1) #7 Ace-Thred side necks. The 150mm head has a #15 Ace-Thred center neck, (4) #15 and (1) #7 Ace-Thred side necks. The Ace-Threds allow for vacuum or pressure applications, and for draining material out of the reactor. The main bearing, funnel, and condenser are designed to connect to the threads on the head via compression bushing connections. The #7 Ace-Thred is used for connecting a 1/4" O.D. tubing fitting to allow for a direct connection to a pressure source or a 6448 pressure manifold.

Replacement glass fritted discs and supports, see 5848 or 5814. For motor, see 13517, 13565 or 13566; for chucks, see 8124 or 8126. Use 7855-829 CAPFE O-Ring for #50 adapter, 7855-864 for #80 bottom adapter.

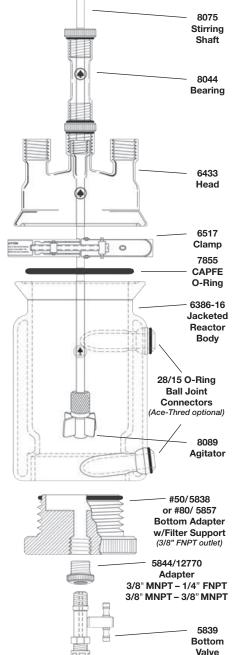
**Note:** Complete item consists of: reactor body with 60mm CAPFE O-Ring, head with Ace-Threds, 6517 clamp, PTFE bottom threaded adapter and valve with CAPFE O-Ring, retainer ring, 350 micron polypropylene screen support, 100 micron polyethylene support, 5844 adapter, 8044 bearing, 8075 stir rod, 8089 multi-paddle agitator, 6024 condenser, 7299 addition funnel and #7 Ace-Thred bushing. #80 bottom adapter also comes with a perforated glass plate support. **Pressure manifold, stand, and clamps are optional.** 

Bal	Capacity, mL I <b>Joint Inle</b>	Flange I.D., mm (in) t/Outlet	Bottom Ace-Thred, #	Body I.D., mm	Approx. Height*, mm	Top CAPFE O-Ring	Jacket Inlet/Outlet	Order Code	
	150**	60 (2.4)	50	60	100	7855-878	28/15	6386-107	
	600**	60 (2.4)	50	79	205	7855-878	28/15	6386-110	
	1000	100 (4)	80	100	180	7855-880	28/15	6386-115	
	2000	100 (4)	80	126	210	7855-880	28/15	6386-120	
	3000	150 (6)	80	150	205	7855-881	28/15	6386-124	
	6000	150 (6)	80	150	395	7855-881	28/15	6386-128	
Ace-Thred Inlet/Outlet									
	150**	60 (2.4)	50	60	100	7855-878	#11	6386-507	
	600**	60 (2.4)	50	79	205	7855-878	#11	6386-510	
	1000	100 (4)	80	100	180	7855-880	#11	6386-515	
	2000	100 (4)	80	126	210	7855-880	#11	6386-520	
	3000	150 (6)	80	150	205	7855-881	#15	6386-524	
	6000	150 (6)	80	150	395	7855-881	#15	6386-528	

\* Height measurements are measured from top of flask flange to seal on top thread.

\*\* 150mL and 600mL heads have angled side necks.

- Stand (12840, 12841, 13568 or 13586) and Support Shelf (11173) and Chain Clamp (11079-40) not included.
- 150mL size requires 11079-24 chain clamp rather than a shelf.
- For #80, bottom also available with 1/2" MNPT, 5857-89.
- For #80, bottom also available with 3/8" MNPT, 5857-96.



For safety, it is recommended that a pressure relief manifold be used on jacketed reactors.

35psig

@100°C

Filter Reactors



# Small Volume

## 9534 Stirring Shaft 8066 Bearing 9443 Head 6381-05 Body 9542 C Blade #50/5838 **Bottom Adapter** w/Filter Support (3/8" FNPT outlet) 5844-120 Adapter 3/8" MNPT-1/4" FNPT H 5839 Bottom Valve

## **UNJACKETED FILTER REACTOR**

Small-volume filter reactor with \$ 45/50 joint at top, and #50 Ace-Thred (internal glass thread) at bottom that accepts a 5838-83 (#50) PTFE bottom adapter with filter support and drain valve. Head has a \$ 19/38 center neck and three \$ 14/20 side necks. Complete item consists of: reactor body, head with \$ joints, clamp, #50 PTFE bottom adapter with size –136 CAPFE O-Ring, 350 micron polypropylene screen support, 100 micron polyethylene support, 5844 adapter, 5839-42 shutoff valve, 8066-120 non-flaking bearing, 9534-40 stirring rod, 9542-20 blade.

Replacement glass fritted supports for polypropylene screen and polyethylene support, see 5848 or 5814; for condensers, see 6024; for addition funnel, see 7299. For stirring motor, see 13523; for chuck, see 8124 or 8126.

					Complete		Head, onl	y	Body, onl	y
10	Top Joint O <b>mL Capa</b>	Bottom Ace-Thred, # acity	Body I.D., mm	Approx. Height, mm	Order Code		Order Code		Order Code	
	\$45/50	50	51	65	6381-25	*	9443-10	•	6381-05	*
150mL Capacity										
	\$45/50	50	51	125	6381-30	*	9443-10	•	6381-10	*

#### **Replacement Parts**

Adapter, PTFE, 3/8" MPT-1/4" FNPT, only	5844-120	
Bottom Adapter, #50–3/8" FNPT, only	5838-83	•
Bottom Shutoff Valve, 1/4" MNPT-1/4" Tube, PTFE	5839-42	*
Clamp, Plastic, \$45/50	7598-45	*
Bearing, \$19/22, 6mm	8066-120	
Stopper, \$14/20	9543-04	•

#### **Optional Accessories:**

PTFE Sleeves \$14/20/Pkg. 3	7642-07	*
PTFE Sleeves \$19/38/Pkg. 3	7643-06	*
PTFE Sleeves \$45/50/Pkg. 3	7642-23	*
Thermometer Adapter, \$14/20	5028-26	•
CAPFE O-Ring	7855-829	•

 Stand (12841 or 13568) and Clamp (11079) and Clamp Holder (13568-16) not included.





# **Process Scale** Filtration Apparatus and Filter Reactors

Ace Glass fabricates bench scale filtration apparatus and reactors as standard products. ACE also fabricates kilo scale filter reactors such as the one pictured here.

**ACE** has typically produced 20L, 30L and 50L filter apparatus, but has also produced custom units from 150mL up to as large as 150L. All filter reactors are built on stands with locking, rolling casters for portability. All borosilicate heavy wall glass bodies have either glass or PTFE bottom units. Many bottom and side outlet valve styles are available, such as our flush seal. Various agitator styles exist in either stainless steel or PTFE, and custom fabrication is possible. Glass vessels can be standard single-wall or jacketed double-wall. Heads can be stainless steel, glass domed, or flat head style.

Filter apparatus stands can be fabricated from anodized aluminum or stainless steel with powder coated components. Various sizes and types of stir motors are available, including UL classified Hazardous duty motors that meet either Class I, Div 1, Group D or Class II, Div I, Group F&G atmospheres.



# **Quality Chemistry begins with Quality Glassware**

45

**Reactor Systems** 

