

## Ceralu Al<sub>2</sub>O<sub>3</sub> Filter Flow Rates

Drache Ceralu Al<sub>2</sub>O<sub>3</sub> Filters are primarily used in Aluminium casthouses. Ceralu Al<sub>2</sub>O<sub>3</sub> filters are used for vertical DC casting as well as various types for continuous casting like horizontal DC casting, sheet casting, strip casting and rod casting as well as ingot casting.

The data given below **is valid for (vertical) DC-casting only** (slab, billet). For continuous casting applications like e.g., sheet casting or rod casting, please refer to the section "Choosing a Ceralu Al<sub>2</sub>O<sub>3</sub> Filter for Continuous Casting".

### Flow Rates of Standard Filters

The following table gives an overview of the nominal filter capacity in kg/min for various sizes and porosities.

	9"	12"	15"	17"	20"	23"	26"	Double 23"	Double 26"
<b>PPI 25 F25</b>	83	169	240	324	479	698	978	1396	1956
<b>PPI 30 F30</b>	73	146	209	293	438	584	789	1168	1578
<b>PPI 40 F40</b>	63	109	146	219	334	480	695	960	1370
<b>PPI 50 F50</b>	43	84	125	168	250	334	448	668	896
<b>PPI 60 F60</b>	35	68	100	134	200	268	360	536	720

### Flow Rates of HF Filters

The following table gives an overview of the nominal filter capacity in kg/min of various sizes and porosities for Drache HF-filters.

	15"	17"	20"	23"
<b>PPI 40 F40 HF</b>	326	419	580	767
<b>PPI 50 F50 HF</b>	239	307	424	561
<b>PPI 60 F60 HF</b>	188	242	335	443

HF-Filters show the best efficiency when operated close to the given flow rates. In case the actual flow rate is significantly lower than the recommended flow rate, the efficiency may not be better compared to standard Drache filters.

### **Total Capacity**

The following table gives an overview of the nominal total filter capacity in tons (metric) for the various sizes and porosities. The finally achievable capacity may vary depending on various factors e.g., alloy, metal cleanness, furnace settling time, etc.

	9"	12"	15"	17"	20"	23"	26"	Double 23"	Double 26"
<b>PPI 25 F25</b>	12	25	36	49	72	105	147	210	294
<b>PPI 30 F30</b>	11	22	31	44	66	88	118	172	236
<b>PPI 40 F40</b>	9	16	22	33	50	72	104	144	288
<b>PPI 50 F50</b>	6	13	19	25	38	50	67	100	200
<b>PPI 60 F60</b>	5	10	15	20	30	40	54	80	108

### **Capacity of Duplex Filters**

The capacity of a Drache Duplex Filter is identical to a similar-sized standard filter with a porosity equal to the average of both porosities of the Duplex filter. E.g., a Duplex filter 17" PPI 30/50 has a similar capacity like a 17" PPI 40 standard filter.

### **Choosing a Ceralu Al<sub>2</sub>O<sub>3</sub> Filter for Continuous Casting**

Choosing a filter for continuous casting applications follows different criteria than for DC casting. The focus is typically to minimize the number of filter changes in order to minimize interfering with the casting process. A bigger filter size is commonly chosen to achieve long casting times and high throughputs of the filter.