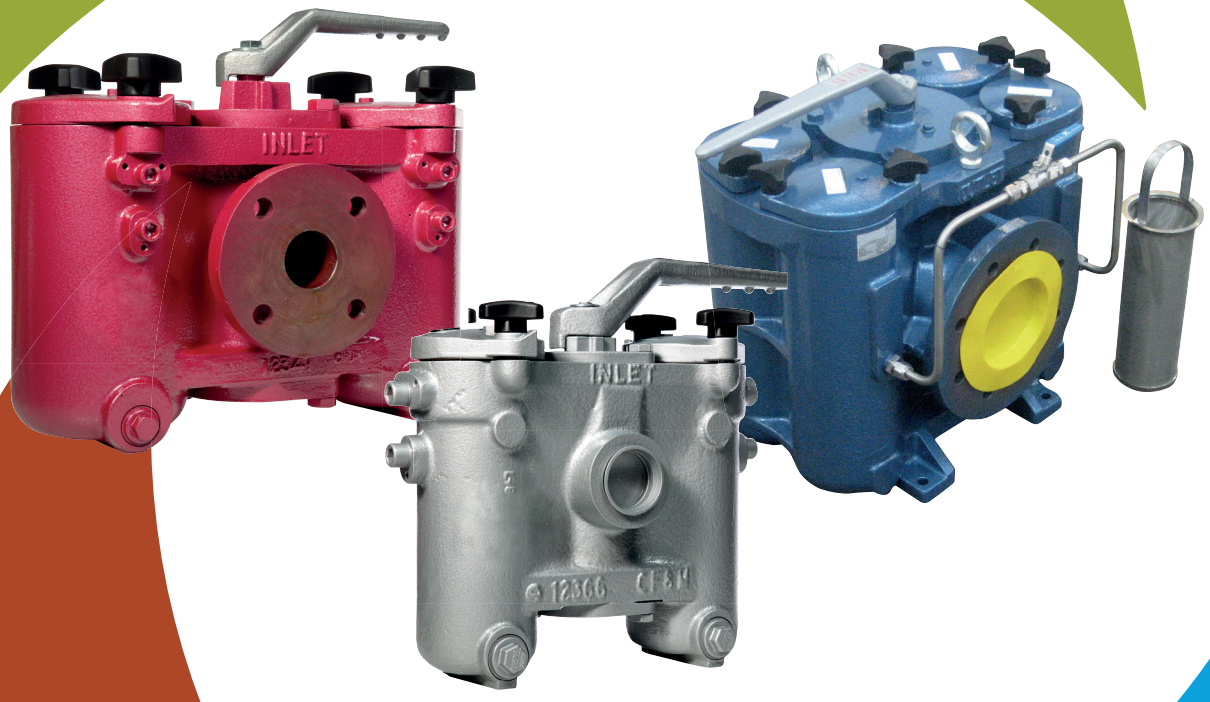
CELEROS™ FLOW TECHNOLOGY

AIRPEL®

DUAL FILTER OW & MULTIBASKET OW

DUAL FILTER
20 MM (¾")–200 MM (8")
MULTI BASKET FILTER
150 MM (6")



DUAL FILTER OW 20 mm (¾")–200 mm (8")

For applications where the requirement is for continuous flow with minimum loss of pressure, the dual filter OW provides quality of design and performance.

The filter is of cast construction and incorporates two chambers each containing a high quality stainless steel basket. Flow is diverted from one basket to the other without interruption by turning the handle, which rotates dual cylindrical cocks, delivering the flow to the appropriate chamber.

MAIN FEATURES

- Simple changeover operation requires infrequent maintenance.
- Compact design.
- Large filtration areas giving low-pressure drops.
- Working pressures up to 50 bar (A300 Series).
- Quick release filter covers and knobs for easy maintenance.
- No contamination between filtered and unfiltered liquids.
- Wide range of materials, sizes and accessories.
- Filtration down to 10 microns.
- Handle covers chamber in use — preventing accidental opening of pressurised chamber.
- Differential pressure indicators as optional extras.

DUAL FILTER MULTIBASKET OW 150 mm (6")

The Dual Filter Multibasket design compliments the existing OW range by offering a high level of filtration within a small, compact physical size where space, weight and high free filtration area are key to the operator.

The filter is of cast construction and is supplied with four quality stainless steel cylindrical baskets which are fitted into the filter in a 2 (left) + 2 (right) arrangement. Just as the standard dual filter range, the construction lends itself to non-interrupted liquid flow during basket removal for cleaning.

MAIN FEATURES

- High quality stainless steel baskets with large filtration areas resulting in low pressure drops
- Compact design for space saving
- Working pressures up to 22 bar
- Quick release filter covers and knobs for easy basket removal
- Simple changeover for uninterrupted operation

OPTIONS

- Range of extras allowing filter to be customised
- Available in cast iron, cast steel, gunmetal (bronze) or stainless steel as standard
- Differential pressure indicators are available
- Equilisation Pressure Line as standard

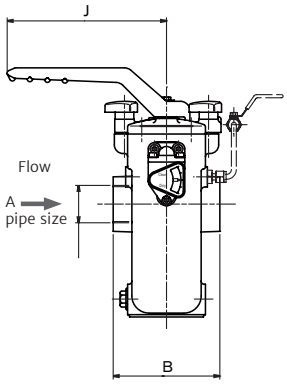
THREADED BSP OR NPT (SIZES IN MM)

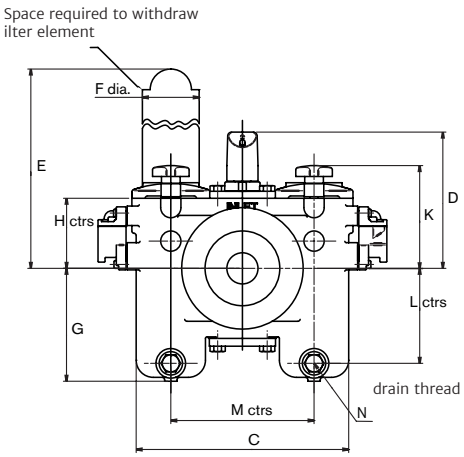
A PIPE SIZE	B	C	D	E	F	G	H	J	K	L	M	N	ELEMENT AREA	WEIGHT (CAST IRON)
20 (¾")	120	282	149	220	73	105	64	205	103	86	170	½" BSP	184 CM^2	13 KG
25 (1")	120	282	149	220	73	105	64	205	103	86	170	½" BSP	184 CM^2	13 KG
32 (1¼")	137	295	175	306	73	145	90	205	132	122	184	½" BSP	268 CM^2	19 KG
40 (1½")	137	295	175	306	73	145	90	205	132	122	184	½" BSP	268 CM^2	19 KG

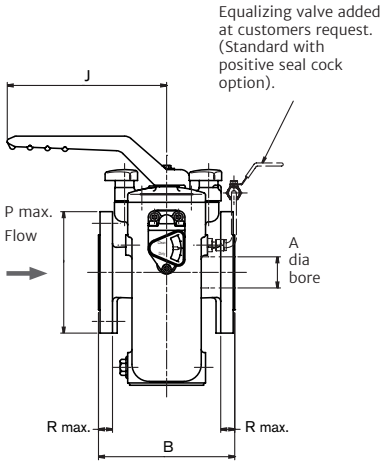
FLANGED DRILLED BS10, BS4504, ANSI, DIN OR JIS (SIZES IN MM)

A DIA. BORE	B	C	D	E	F	G	H	J	K	L	M	N	P	R	ELEMENT AREA	WEIGHT (CAST IRON)
25 (1")	152	282	149	220	73	105	64	205	103	86	170	½" BSP	124	16	184 CM2	16 KG
40 (1½")	175	295	175	306	73	145	90	205	132	122	184	½" BSP	156	18	268 CM2	23 KG
50 (2")	210	425	212	351	112	156	112	219	165	131	280	½" BSP	165	20	484 CM2	52 KG
65 (2½")	230	425	212	351	112	156	112	219	165	131	280	½" BSP	191	20	484 CM2	53 KG
80 (3")	267	490	256	451	132	210	140	250	198	186	330	½" BSP	210	22	718 CM2	85 KG
100 (4")	318	540	294	575	132	265	175	250	233	241	380	½" BSP	230/254	24	964 CM2	125 KG
150 (6") *	380	760	398	868	160	410	275	380	—	359	530	½" BSP	318	25	2065 CM2	250 KG
200 (8")	570	1020	550	1210	248	520	390	500	—	472	700	½" BSP	381	30	3980 CM2	730 KG

* Also available as a Multibasket Filter.

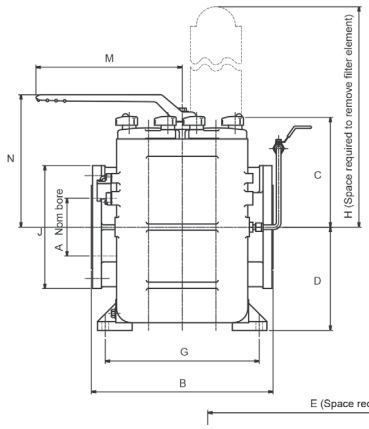


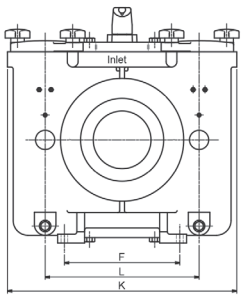


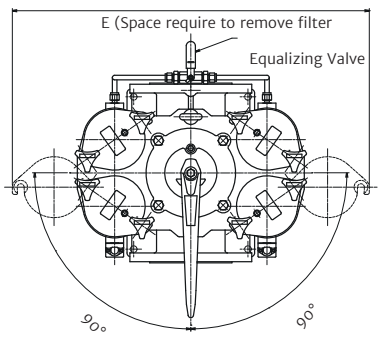


FLANGED DRILLED BS10, BS4504, ANSI, DIN OR JIS (SIZES IN

A DIA. BORE	B	C	D	E	F	G	H	J	K	L	M	N	WEIGHT (CAST IRON)	BASKET AREA PER CHAMBER
150 (6")	472	286	268.5	937.5	300	400	575	320	596	400	380	344.5	250 kg	2065 cm²







SPECIFICATIONS

	OW/O (OIL DUTY ONLY)	OW/WB	OW/S (OIL DUTY ONLY)	OW/S/WB
Body & cover material	Cast Iron EN1561/EN-JL 1030	Cast Iron EN1561/EN-JL 1030	Cast Steel EN10213-2/1.0625	Cast Steel EN10213-2/1.0625
Sleeve	–	Gunmetal (Bronze) BS1400 Grade LG4C	–	Gunmetal (Bronze) BS1400 Grade LG4C
Change over cocks	SG Iron EN1563 EN-JS1020	Gunmetal (Bronze) BS1400 Grade LG4C	SG Iron EN1563 EN-JS1020	Gunmetal (Bronze) BS1400 Grade LG4C
Internal machine part	Mild Steel BS970 220 M07	Stainless Steel BS970 303 S31	Mild Steel BS970 220 M07	Stainless Steel BS970 303 S31
Baskets	Stainless Steel BS1449 316			
Drain plugs	Brass	Brass	Stainless steel	Brass
Vent	Steel	Brass	Steel	Brass
Seals	Viton® (-20°C to +200°C)			
Maximum working pressure	17 bar at 50°C		22 bar at 50°C	
Maximum working temperature	260°C	150°C	260°C	150°C
	All maximum working temperatures remain dependant on seal selection			
Body colour	Red	Blue	Silver	Silver

	OW/C	OW/GM	OW/SS	OW/S & SS A300 SERIES
Body & cover material	Cast Iron EN1561/EN-JL 1030	Gunmetal (Bronze) BS1400 Grade LG4C	Stainless Steel BS1504 Grade 316 C16	Cast Steel EN10213-2/0.625 (S)
				Stainless Steel BS1504 Grade 316 C16 (SS)
Sleeve	–			
Change over cocks	Stainless Steel BS1504 Grade 316 C16	Gunmetal (Bronze) BS1400 Grade LG4C	Stainless Steel BS1504 Grade 316 C16	SG Iron EN1563 EN-JS1020 (S)
				Stainless Steel BS1504 Grade 316 C16 (SS)
Internal machine part	Stainless Steel BS970 303 S31	Phosphor Bronze BS1400 Grade PBI	Stainless Steel BS970 303 S31	Mild Steel BS970 220 M07 (S)
				Stainless Steel BS970 303 S31 (SS)
Baskets	Stainless Steel BS1449 316			
Drain plugs	Stainless Steel	Phosphor Bronze	Stainless Steel	Stainless Steel
Vent	Steel	Brass	Stainless steel	Stainless Steel
Seals	Viton® (-20°C to +200°C)			
Maximum working pressure	17 bar at 50°C	17 bar at 50°C *)	22 bar at 50°C	50 bar at 50°C (S) 48 bar at 50°C (SS)
Maximum working temperature	50°C	260°C	260°C	260°C
	All maximum working temperatures remain dependant on seal selection			
Body colour	Red	Natural	Natural	Silver (S) / Natural (SS)

Please Note

1 These specifications refer to standard products. Other materials for body (e.g, monel, hastelloy) and seals (e.g. Nitrile, EP, PTFE) are available, please ask.

2 Working pressure is stated at 50°C. To verify suitability of this equipment above this temperature or below 0°C, please contact us for more information.

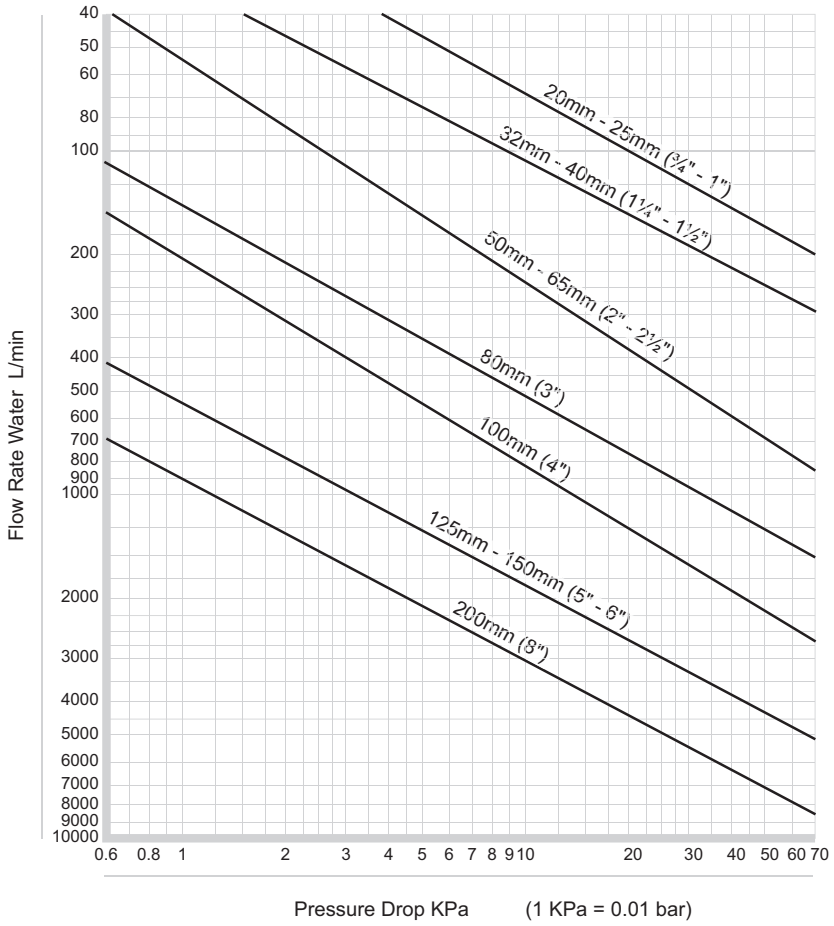
3 Whilst alternative seal materials e.g. Nitrile, EP, PTFE are available and can be used to offer a wide range of chemical compatibility and working temperatures up to 260°C, it is recommended that such applications are again discussed with us. **Viton is a registered trademark of DuPont Performance Elastomers.**

4. Special alloys on request

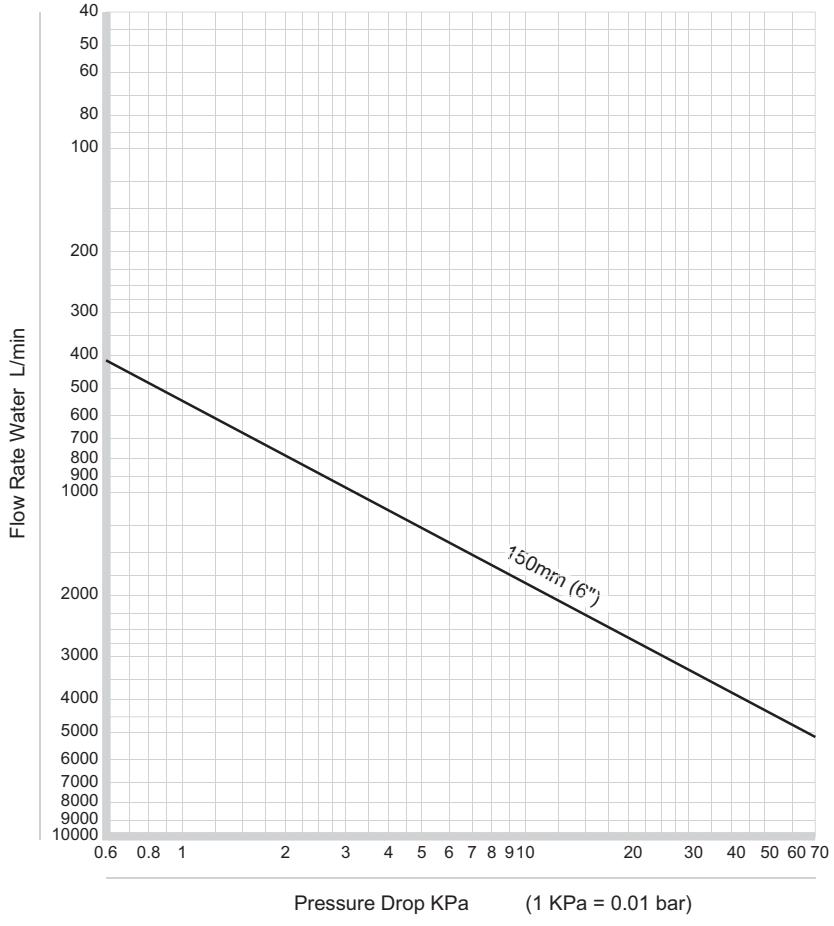
EQUIVALENT MATERIAL SPECIFICATIONS

	CAST IRON	CAST STEEL	GUNMETAL (BRONZE)	STAINLESS STEEL
European Standard	BS EN1561/EN-JL 1030	BS EN10213-2/1.0625	BS 1400 GRD LG4C	BS 1504 316 C16
American Standard	ASTM A48/76 Class 35	ASTM A216 Grade WCB	–	ASTM A351 CF8M

OW DUAL FILTER SIZING CHART



OW DUAL MULTIBASKET SIZING CHART



OPTIONAL EXTRAS WITH FILTERS

DIFFERENTIAL PRESSURE INDICATOR (D.P.I)
The Differential Pressure Indicator is designed to monitor basket conditions and provide visual warning that cleaning is required.

HEATING JACKET
For constant temperature processes to aid flow of viscous liquids.

100% SHUT OFF ON DUAL FILTER CHANGE OVER
This can be achieved by use of a special seal within the change over cock mechanism and eliminates leakage between chambers during cleaning.

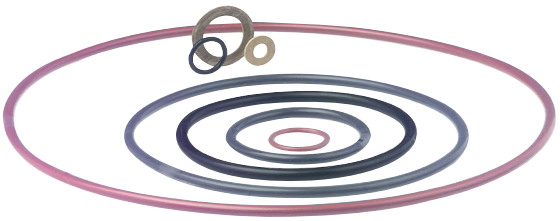
AUTOMATIC AIR ELIMINATORS
To vent air from filter e.g. after element cleaning.

MAGNETIC INSERTS
Suspended from the cover to capture metallic particles. Magnets can be nylon coated if required.

PRESSURE EQUALISING VALVES (DUAL FILTER ONLY)
Are fitted to sizes 100, 125, 150 and 200mm as standard but can be fitted to other sizes on request.

ALTERNATIVE O-RING MATERIALS
To suit chemical or low/high temperature applications

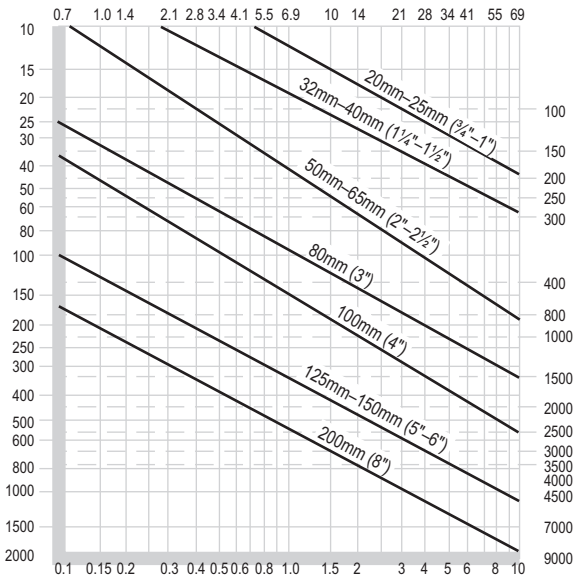
CUSTOM-DESIGNED ELEMENTS & BASKETS
Made according to process needs



SIZING DATA DUAL FILTERS

A dual basket OW filter is required to filter particles the size of 80 microns from lubricating oil which has a viscosity of 230 centistokes at 40°C. The flowrate of oil is 150 litres/min at a pressure of 10 bar g. A clean basket pressure drop of no more than 41 kPa is acceptable.

1. Check temperature/pressure rating of filter and suitability for application, i.e. 40°C temperature at 10 bar g: Standard Cast lron Filter suitable.
2. Selection of Mesh: Protection to 80 microns or less would require a 200 mesh basket. (See Standard Basket Data).
3. Mark flowrate of 150 litres/min on chart to intersect diagonal "filter selection line" and read vertically to obtain pressure drop in kPa. 150 litres/min intersects 50mm (2") – 65mm (2.1/2") filter and will have a pressure drop of 5.5 kPa.
4. Apply correction factor for oil at 230 centistokes with 200 mesh lined basket:
   Pressure drop = 5.5 kPa x 3.75 = 20.6 kPa. (This falls within acceptable pressure at 41 KPa).
5. Selection for application would be 50 mm (2") or 65mm (2½") cast iron OW filter with a 200 mesh lined basket.



OW BASKET IDENTIFICATION

Code numbers are used to identify the basket as shown on the end plate. Typical example:

E-GA	2	S	80
SIZE	MARK	MATERIAL	MESH
A = ¾"–1	MK1–1	S = ST.ST	
B = 1¼"–1½"	MK2–2		
C = 2"–2½"			
D = 3"			
E = 4"			
F = 6" (OW)			
FT= 6" MULTI			
FV = 6" (OV)			
G = 8" (OV)			
GA/GB = 8"/10" (OV)			

PRESSURE DROP CHART

The charts are for water flowing through a filter without an element. Use the following correction factors for the chosen filtration rating and for liquids of higher viscosity.

CORRECTION FACTORS FOR OW

Either – multiply the pressure drop for water shown in the chart by the following correction factors to obtain the actual pressure drop. (Water has a viscosity of 1 centistoke at 20°C) Or – divide the acceptable pressure drop by the necessary correction factor in the table below and then use the chart to determine the filter size and flow rate.

FILTRATION

VISCOSITY CENTISTOKES	UNLINED PERFORATED BASKETS	20 MESH (910µM)	80 MESH (190µM)	120 MESH (130µM)	200 MESH (80µM)
1	1	1	1.1	1.25	1.35
50	1.6	1.7	2.1	2.3	2.5
230	2.0	2.3	3.0	3.35	3.75
370	2.2	2.6	3.4	3.8	4.3

STANDARD BASKET DATA OW

Baskets are constructed from stainless steel perforated plate. Welding the appropriate grade of stainless steel mesh to the basket provides the relevant degree of filtration. Pleated elements giving filtration down to 10 microns are also available.

FILTRATION

PERF. PLATE HOLES PER SQUARE INCH	DIAMETER OF HOLE			MATERIAL REF	PERCENTAGE CLEAR AREA
	INCHES	MM	µM		
11	0.25	6.35	6350	S11	54
33	0.125	3.17	3170	S33	39
124	0.063	1.60	1600	S124	38

SQUARE MESH MESHES PER LIN-EAR INCH	DIAMETER OF HOLE			MATERIAL REF	PERCENTAGE CLEAR AREA
	INCHES	MM	µM		
20	0.036	0.91	910	S20	53
30	0.022	0.56	560	S30	42
40	0.015	0.38	380	S40	40
60	0.01	0.25	250	S60	35
80	0.0075	0.19	190	S80	34
120	0.005	0.13	130	S120	32
200	0.003	0.08	80	S200	36
300	0.002	0.05	50	S300	32

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SPEED
EXCELLENCE
PARTNERSHIP

AIRPEL®