

PWT

ISO series End Suction Pumps



Product Description

Pentair PWT series of end suction pumps are mechanically designed in accordance to ISO 5199 standard. Back pull out design enables pump dismantling without disturbing pipework. Mechanical seal is standard to ensure hassle free operation. Gland packing as an option to suit various applications. Testing standard complies to ISO 9906 : 1999.

Application

Available in various combinations of corrosion resistant material, PWT makes an excellent choice for all your pumping requirements. This is further highlighted, when there are different pumping needs in the same operating field. Inventory control becomes more cost effective as they have high parts interchangeability between models. Widely used in RO Plant, Industrial Water Treatment, Oil and Gas, Petrochemical, Pharmaceutical, High Pressure Cleaning, Sea water Desalination, etc..

Operating Limits

Capacity	: 5 – 1800 m ³ /hr
Head	: 2 – 250 m
RPM	: 1450 / 2900
Operating pressure	: 16 Bar / 25 Bar
Casing Test Pressure	: 1.5 times working pressure
Liquid temperature	: -20°C to 120°C
Suction DN	: 50 mm – 350 mm
Discharge DN	: 32 mm – 300 mm

Model Designation

PWT 125 - 100 - 315 DS

PWT: Pentair range of centrifugal end suction pump series

125 : Suction diameter

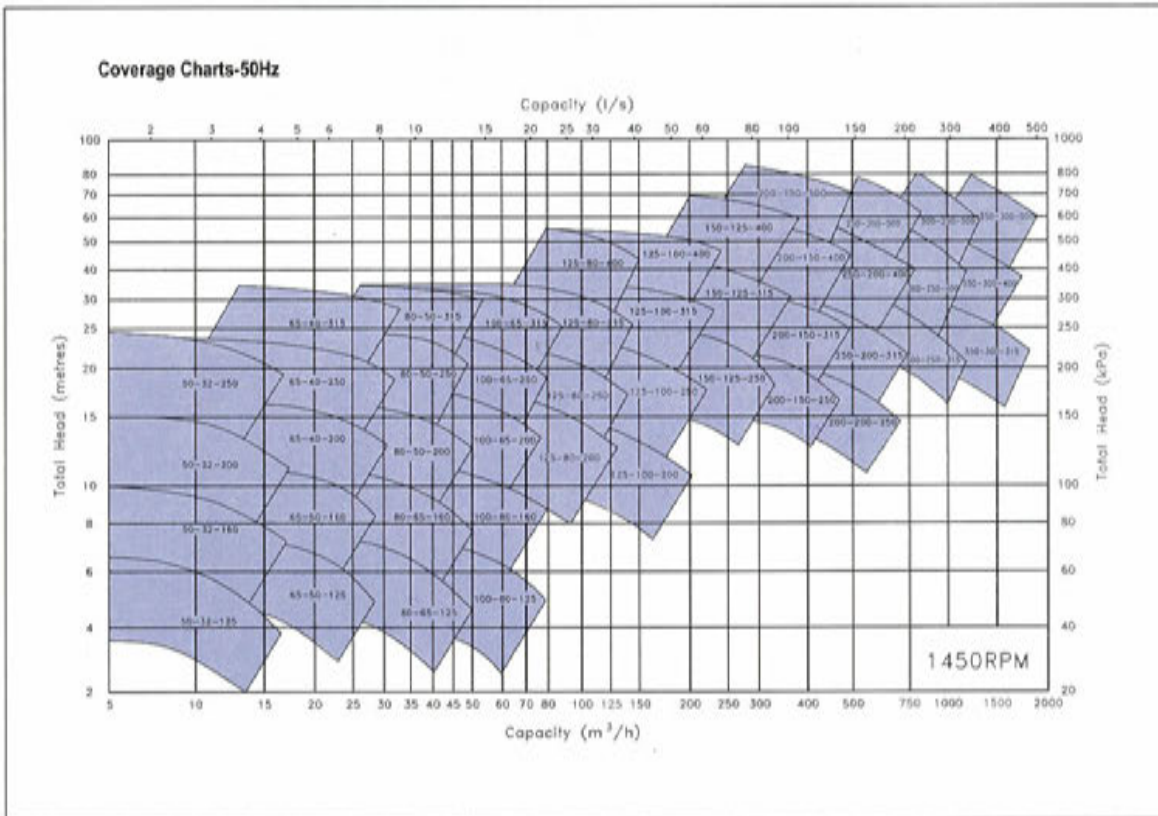
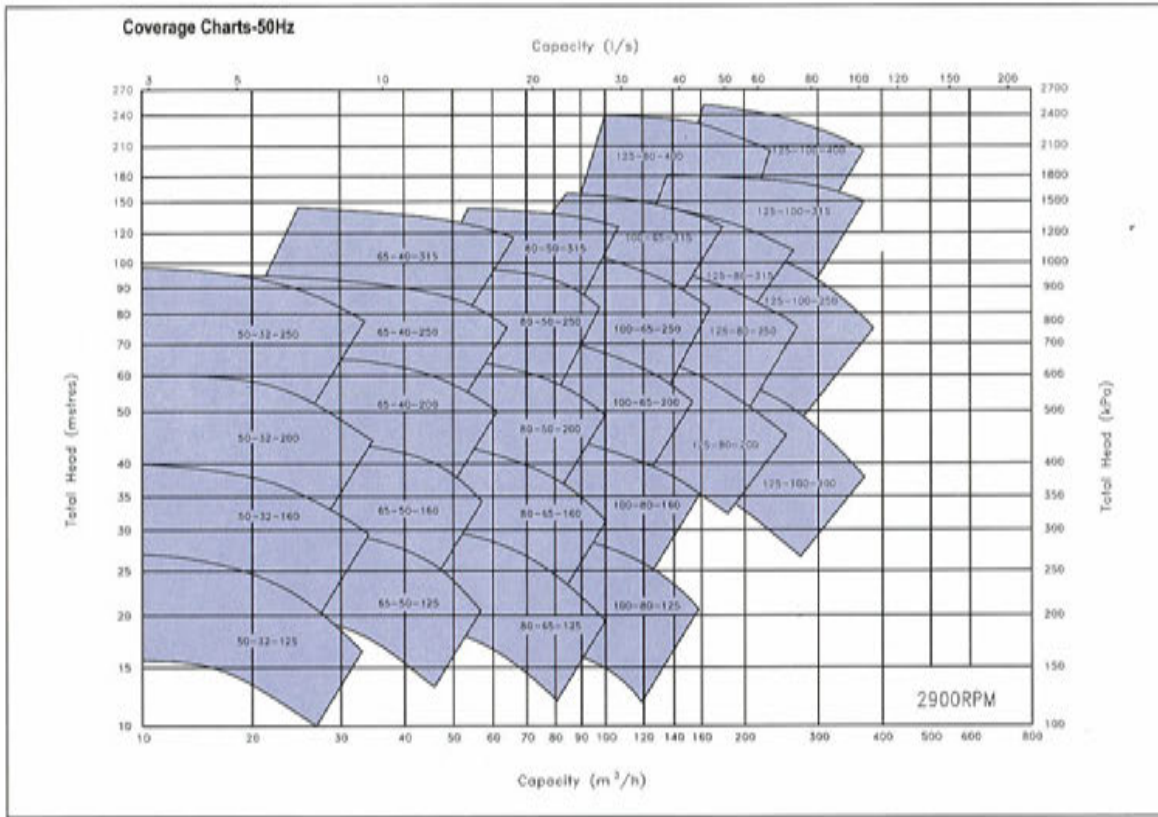
100 : Discharge diameter

315 : Nominal impeller diameter

D : Double volute design

S : Stainless Steel Construction, without , Cast Iron casing as standard

Selection Chart



Features

16 Bar casing working pressure is standard. 25 bar casing working pressure is also available as option.

Corrosion Allowance of 3mm is incorporated into the design to further extend the life of the pump when uses in corrosive application.

Impellers are balanced to ISO 1940 – 1973 G6.3

Back Pull Out Design is standard. Ease in service is assured without disturbing the piping and motor.

Heavy Duty Solid Shaft Design with low L3/D4 ratio reduces the shaft deflection at the seal face to be less than 0.05 mm under all operating condition.

Twin Volute Design is available for selected pump models. This greatly reduces the magnitude of the unbalanced resultant force with substantially enhances pump life and reduces noise and vibration at the same time.

Heavy Duty, Deep-Grooved Bearing with minimum 50,000 hours operating life under normal condition. Bearing is greased lubricated and seal-for-life, no maintenance is required.

DIN suction and discharge flange is standard. ANSI, JIS flanges are available as option.

Inventory level is to be minimized with the excellent parts interchangeability between models.

Optional Features

For heavy duty application, oil lubricated angular-contact ball bearing with minimum of 50,000 hours can be supplied with the option of oil temperature indicator to indicate the oil temperature.

Extra cooling for the bearing housing is available if the pumping fluid exceeds 110 ° C.

Labyrith Seal is available as option to prevent intrusion of contaminants and water into the bearing chamber.

For high temperature service application, extra cooling for stuffing box is offered as option.

Strict Quality Control at all stages of production



Wax mould – parts



Wax mould – Impeller



Finished Casting

- Wax injection moulding, great care is taken so that every part is flawless
- After the wax mould is removed from the metal mould, the parts are assembled together to form complete pump body or parts.
- Once the wax mould takes shape, it'll go through shell building process for up to ten layers. This is to form very hard outer casing.
- The next step is Dewax. This process is to remove the wax inside the shell made. Thus creating a hollow cast of the complete part.
- This shell is then filled with molten metal, such as Stainless Steel, Bronze, Cast Iron or Duplex Stainless Steel.
- Finally one solid casting is formed when the metal is cooled down. Knockout and polishing to obtain the finished casting.
- Based on project requirement, the pump can either be sent out as a pump unit or coupled with matching motor mounted onto a common baseplate.



Final product

-All the pumps are tested to ensure the hydraulic efficiency and performance prior to delivery

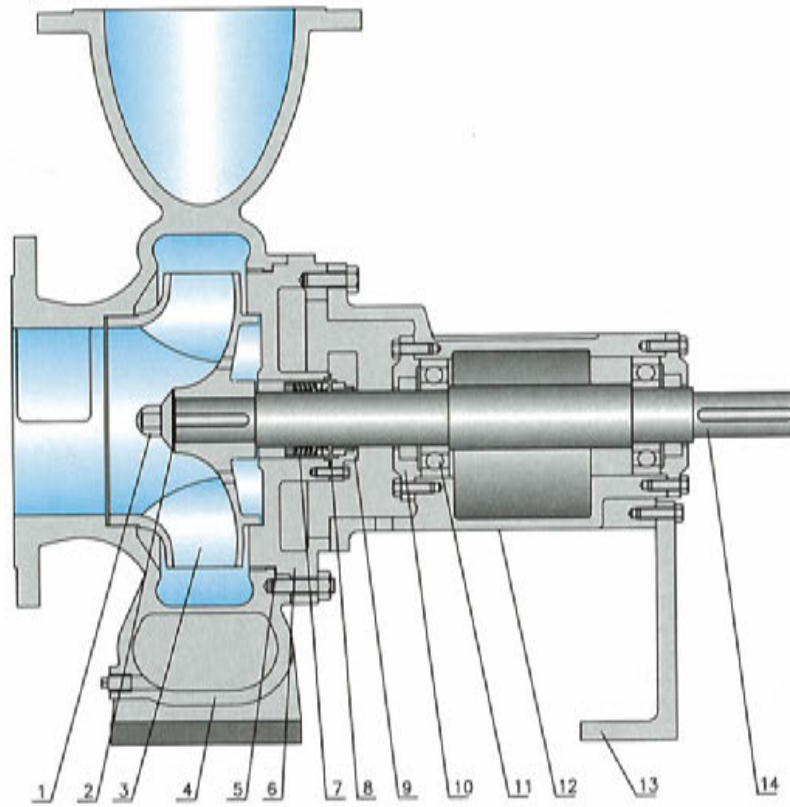
Testing facilities complies to Hydraulic Institute and BS 5316 testing standard.

* Test certificate are available upon request at certain charges.



Test bay at the factory

Parts List

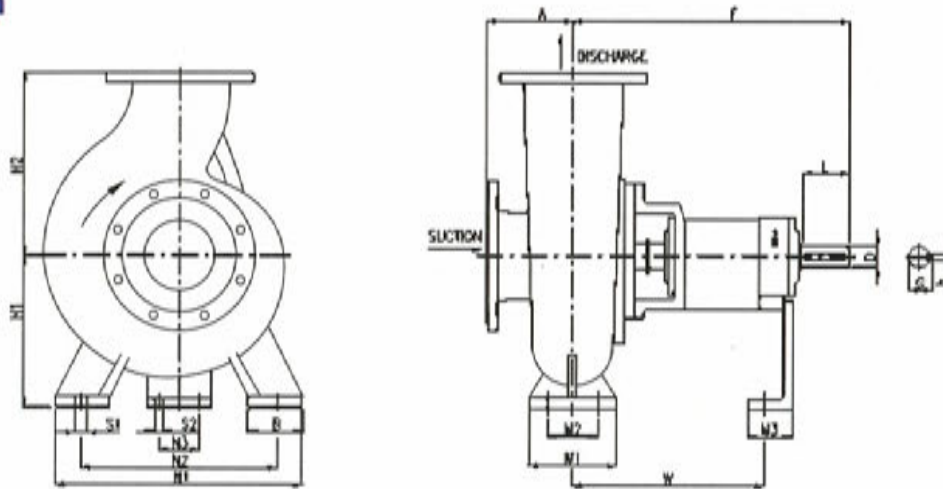


- | | |
|------------------------|---------------------------------|
| 1. Impeller Nuts | 8. Mechanical Seal Gland O ring |
| 2. Impeller nut gasket | 9. Mechanical Seal gland |
| 3. Impeller | 10. Bearing Gland |
| 4. Pump Casing | 11. Bearing |
| 5. Gasket | 12. Bearing bracket |
| 6. Pump Cover | 13. Support foot |
| 7. Mechanical Seal | 14. Shaft |

Materials of construction

Components Materials	Pump casing / Pump Cover	Impeller	Shaft	Power Frame	Others
Standard	Cast Iron SS 316	SS 304 SS 316	SS 420	Cast Iron	SS 420
Option	Cast Steel SS 304 SS 316L Duplex SS Alloy 20 Haynes Alloy	Cast Steel SS 316 L Duplex SS Alloy 20 Haynes Alloy	Duplex SS	Cast Steel	Cast Steel SS 304 SS 316 SS 316L Duplex SS Alloy 20 Haynes Alloy

Dimension



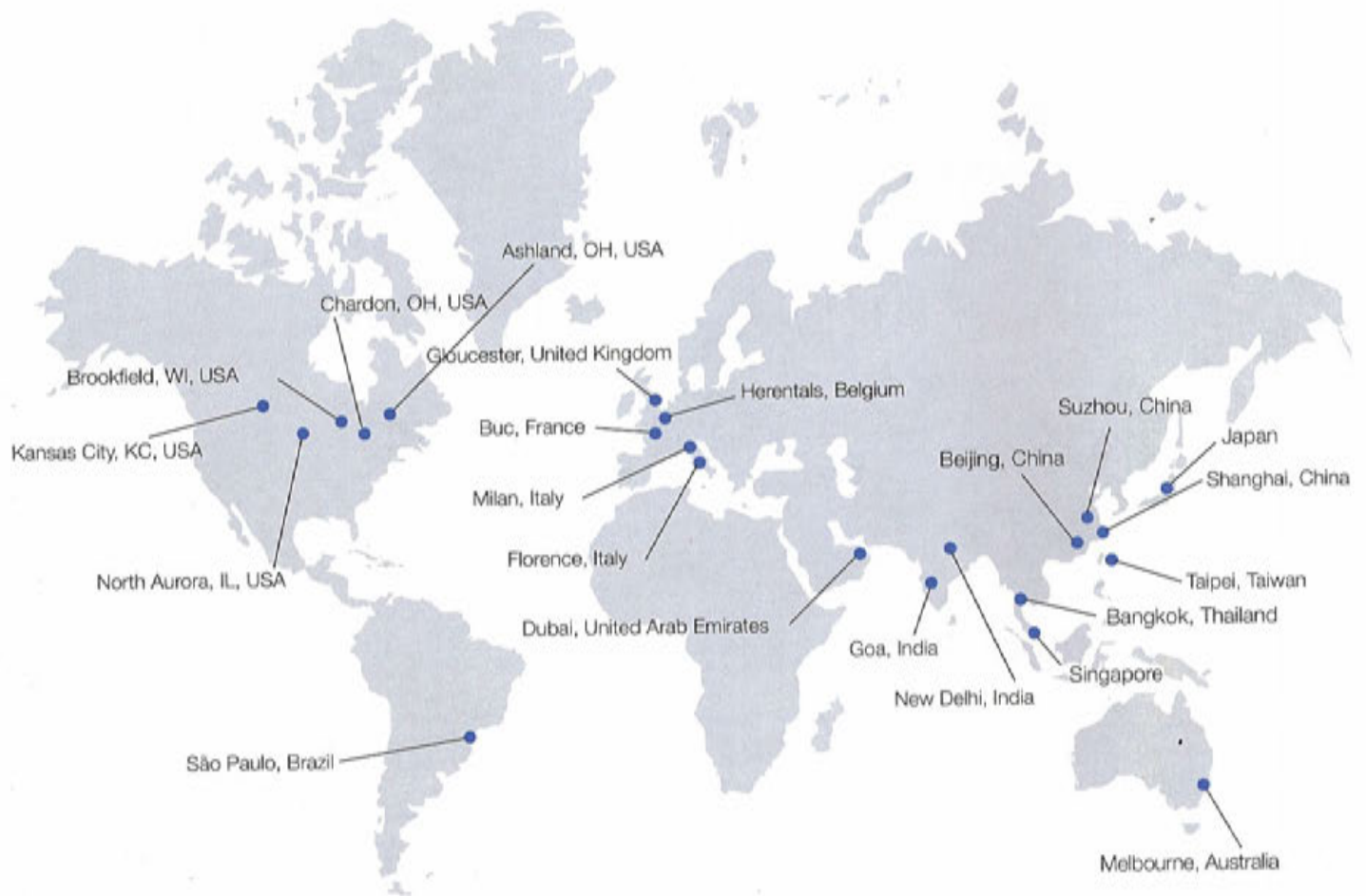
Model	Frame Size	Pump Dimension				Mounting Dimension								Shaft					Wt. (kg)	
		A	F	H1	H2	B	M1	M2	M3	N1	N2	N3	W	ØS1	ØS2	ØD	L	b		G
50-32-125	S	80	385	112	140	50	100	70	54	190	140	110	285	14.5	14.5	24	50	8	27.3	55
60-50-125	S	80	385	112	140	50	100	70	54	210	160	110	285	14.5	14.5	24	50	8	27.3	58
80-65-125	S	100	385	132	175	50	100	70	54	265	212	110	285	14.5	14.5	24	50	8	27.3	66
100-80-125	S	100	385	160	190	65	125	95	54	280	212	110	285	14.5	14.5	24	50	8	27.3	73
50-32-160	S	80	385	132	160	50	100	70	54	240	190	110	285	14.5	14.5	24	50	8	27.3	59
60-50-160	S	80	385	132	160	50	100	70	54	240	190	110	285	14.5	14.5	24	50	8	27.3	61
80-65-160	S	100	385	160	180	50	100	70	54	265	212	110	285	14.5	14.5	24	50	8	27.3	74
100-80-160	M	100	500	160	205	65	125	95	54	280	212	110	370	14.5	14.5	32	80	10	35.3	104
50-32-200	S	80	385	160	180	50	100	70	54	240	190	110	285	14.5	14.5	24	50	8	27.3	64
60-50-200	S	100	385	160	180	50	100	70	54	265	212	110	285	14.5	14.5	24	50	8	27.3	73
80-65-200	S	100	385	160	200	50	100	70	54	265	212	110	285	14.5	14.5	24	50	8	27.3	78
100-80-200	M	100	500	180	225	65	125	95	54	320	250	110	370	14.5	14.5	32	80	10	35.3	115
125-80-200	M	125	500	180	250	65	125	95	54	345	280	110	370	14.5	14.5	32	80	10	35.3	125
125-100-200	M	125	500	200	280	80	160	120	54	360	280	110	370	18.5	14.5	32	80	10	35.3	135
50-32-250	M	100	500	180	225	65	125	95	54	320	250	110	370	14.5	14.5	32	80	10	35.3	103
60-50-250	M	100	500	180	225	65	125	95	54	320	250	110	370	14.5	14.5	32	80	10	35.3	116
80-65-250	M	125	500	180	245	65	125	95	54	320	250	110	370	14.5	14.5	32	80	10	35.3	116
100-80-250	M	125	500	200	250	80	160	120	54	360	280	110	370	18.5	14.5	32	80	10	35.3	129
125-80-250	M	125	500	225	260	80	160	120	54	400	315	110	370	18.5	14.5	32	80	10	35.3	145
125-100-250	L	140	530	225	260	80	160	120	54	400	315	110	370	18.5	14.5	42	110	12	45.3	196
150-125-250	L	140	530	250	355	80	160	120	54	400	315	110	370	18.5	14.5	42	110	12	45.3	223
200-150-250	L	160	530	280	375	100	200	150	54	500	400	110	370	24	14.5	42	110	12	45.3	270
200-200-250	XL	180	625	315	450	100	200	150	54	550	400	140	455	24	14.5	48	110	14	51.8	291
80-65-315	M	125	500	200	250	65	125	95	54	345	300	110	370	14.5	14.5	32	80	10	35.3	145
80-65-315	M	125	500	225	280	65	125	95	54	345	280	110	370	14.5	14.5	32	80	10	35.3	151
*100-65-315	L	125	530	225	280	80	160	120	54	400	315	110	370	18.5	14.5	42	110	12	45.3	204
**100-65-315	XL	125	600	225	280	80	160	120	54	400	315	110	440	18.5	14.5	42	110	12	45.3	204
**125-80-315	L	125	530	250	315	80	160	120	54	400	315	110	370	18.5	14.5	42	110	12	45.3	210
**125-80-315	XL	125	600	250	315	80	160	120	54	400	315	110	440	18.5	14.5	42	110	12	45.3	210
*125-100-315	L	140	530	250	345	80	160	120	54	400	315	110	370	18.5	14.5	42	110	12	45.3	213
**125-100-315	XL	140	600	250	345	80	160	120	54	400	315	110	440	18.5	14.5	42	110	12	45.3	213
150-125-315	L	140	530	280	355	100	200	150	54	500	400	110	370	24	14.5	42	110	12	45.3	263
200-150-315	XL	160	625	315	400	100	200	150	54	550	450	110	455	24	14.5	48	110	14	51.8	293
250-200-315	XL	200	625	355	450	100	200	150	54	550	450	140	455	24	14.5	48	110	14	51.8	362
300-250-315	XL	250	625	400	550	120	240	180	54	680	580	140	455	27	14.5	48	110	14	51.8	452
350-300-315	XXL	250	710	400	600	120	240	180	54	680	580	140	510	27	14.5	60	140	20	64.4	553
*125-80-400	L	125	530	280	355	80	160	120	54	435	355	110	370	18.5	14.5	42	110	12	45.3	267
**125-80-400	XXL	125	685	280	355	80	160	120	54	435	355	110	485	18.5	14.5	60	140	18	64.4	322
*125-100-400	L	140	530	280	375	100	200	150	54	500	400	110	370	24	14.5	42	110	12	45.3	284
**125-100-400	XXL	140	685	285	375	100	200	150	54	500	400	110	485	24	14.5	60	140	18	64.4	415
150-125-400	L	140	530	315	400	100	200	150	54	500	400	110	370	24	14.5	42	110	12	45.3	281
200-150-400	XL	160	625	315	450	100	200	150	54	550	450	140	455	24	14.5	48	110	14	51.8	348
250-200-400	XL	180	625	355	500	100	200	150	54	550	450	140	455	24	14.5	48	110	14	51.8	423
300-250-400	XXL	200	710	375	550	120	240	180	54	600	500	140	510	27	14.5	60	140	18	64.4	536
350-300-400	XXL	240	710	450	650	140	300	200	54	700	600	140	510	27	14.5	60	140	18	64.4	602
200-150-500	XL	180	825	375	500	100	200	150	54	650	450	140	455	24	14.5	48	110	14	51.8	437
250-200-500	XXL	200	710	400	550	100	200	150	54	650	550	140	510	27	14.5	60	140	18	64.4	530
300-250-500	XXXL	200	710	425	620	120	240	180	54	700	600	140	510	27	14.5	75	140	20	79.9	671
350-300-500	XXXL	250	710	450	700	140	300	200	54	650	750	140	510	27	14.5	75	140	20	79.9	753

Notes: First figure in model indicates suction diameter and second figure indicated discharge diameter in mm

* 1450 rpm models

* 2900 rpm models

Worldwide Locations



Pentair Water, (Asia Pacific HQ)
21 F of Cloud Nine Plaza
No. 1118 West Yan an Road
200052 Shanghai
Tel: (86) 21 32114588
Fax: (86) 21 32114580
www.pentairwater.com.cn

Pentair Water, Singapore
25, International Business Park
#01-68/71 German Centre
Singapore 609916
Tel: (65) 6562 7979
Fax: (65) 6562 7899
Email.singapore.sales@pentairwater.com

Pentair Water, Thailand
TPS Building, 1023 Patanakarn Road,
Suanluang, Bangkok, Thailand 10250
Tel: (66) 2717 8153
Fax: (66) 2717 8155
Email.singapore.sales@pentairwater.com

www.pentairwater.com



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