WILO

Pumpen Intelligenz.

Mather+Platt

THE FUTURE OF PUMPS SINCE 1870

DNV

Accredited by the RvA

ISO-9001 & ISO-14001 REGISTERED FIRM
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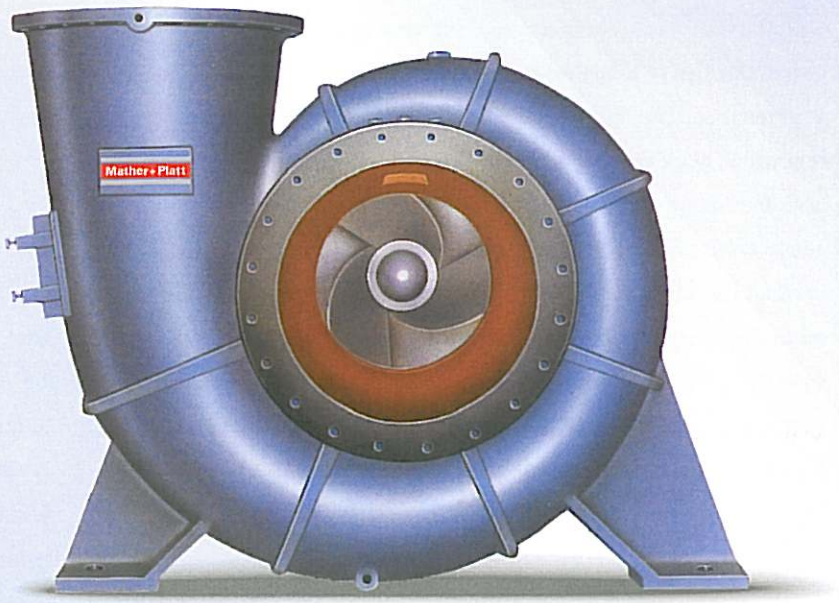


Sewage Pumps

Sewage Pumps

Mather & Platt Sewage range of pumps have been designed to handle unscreened crude sewage. In developing the range, we have incorporated the knowledge which we have gained during half a century of successful pumping of liquids containing solids and waste material throughout the world. The pumps which are described in this brochure handle flow rates from 15 to 8000 m3/hr. and cover a head range of 5 to 70 m. For duties beyond the scope of this range, other pumps are available and our engineers will be pleased to advise on your specific requirements.

Design

The pumps are available either as horizontal or vertical dry well units. Impellers are of the open shrouded pattern with supplementary vanes back and front to minimise the chance of the ragging and to eliminate the ingress of abrasive material to the stuffing box area. They have been designed with the minimum number of vanes compatible with good hydraulic performance to ensure that the maximum sizes of solid can be handled.

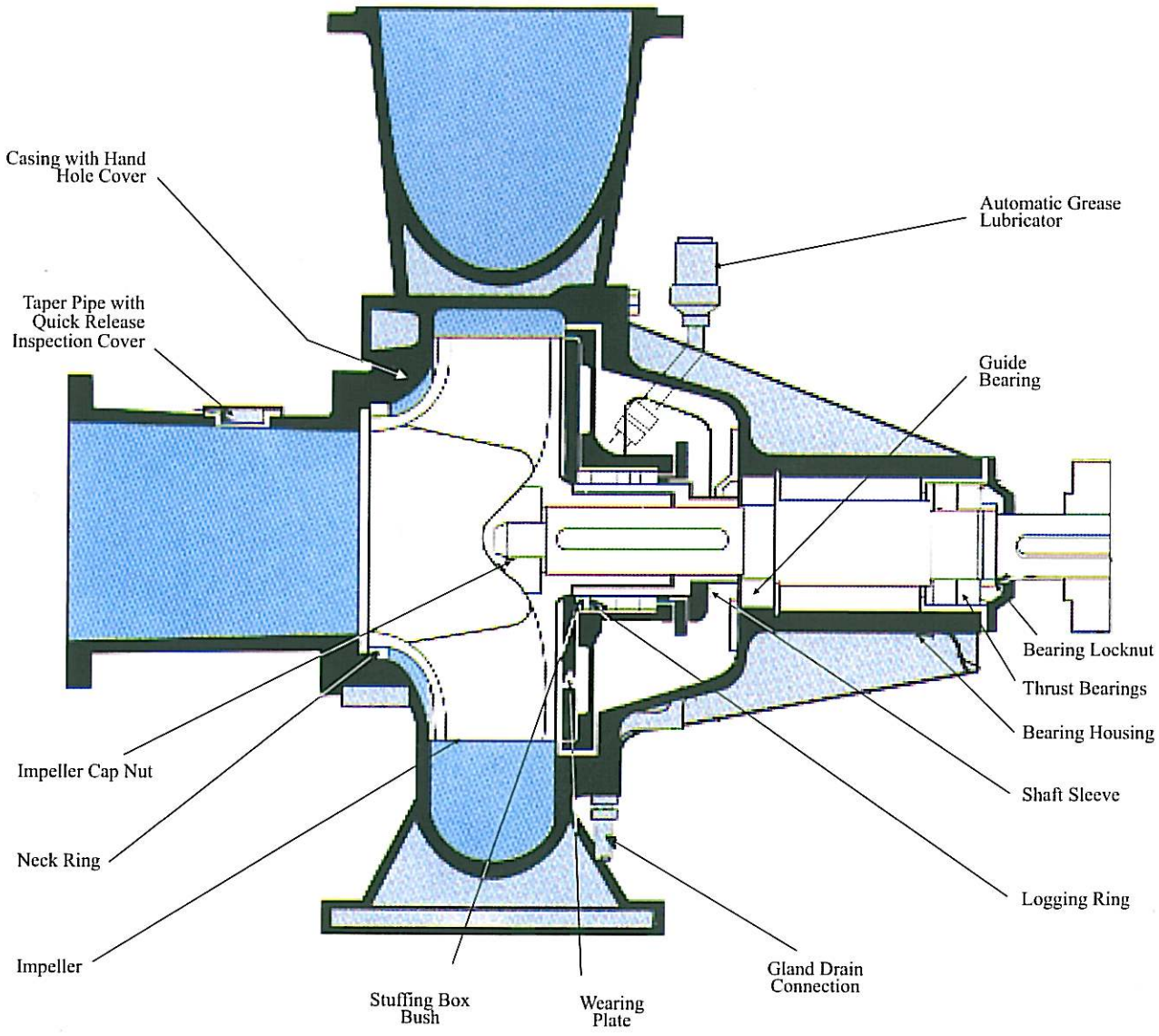
To further reduce the possibility of ragging, eye velocities have been kept deliberately low. The stuffing box, which is fitted with a logging ring, is of the grease - packed type to prevent abrasive particles from coming into contact with the renewable shaft sleeve. This arrangement gives maximum sleeve life, thus reducing the cost of maintenance. The solid volute casing is protected by a renewable neck ring at the front. To facilitate cleaning, both the casing and the suction pipe are provided with easily removable hand-hole inspection covers. The vertical form is available with the motor mounted directly on to the pump or with it at a higher floor level in which case it is connected through intermediate shafting to the pump. Dependent upon the length involved, this shafting may have intermediate bearings of the plummer block type.

Quality Assurance

Mather and Platt pumps are subjected to stringent inspection at all stages of manufacture and comply with the appropriate international quality assurance and inspection standards. The procedures used have been developed over many years, in collaboration with our clients in public authorities and private companies and our inspection facilities comply with the requirements of all major international inspectorates.

Specifications

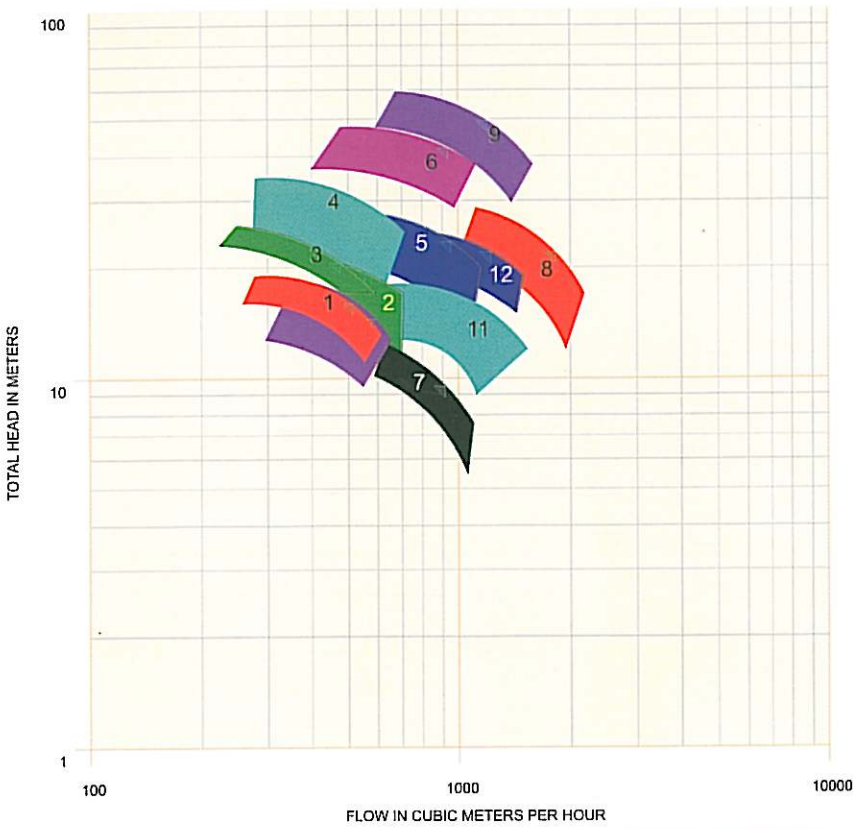
The standard material of construction for the casing, impeller, wearing plate, neck ring, bearing housing and suction pipe is close grained, high grade cast iron. The spindle is manufactured from high quality carbon steel and is protected where it passes through the stuffing box by a renewable sleeve. To contain the high transient bearing loads inherent in sewage pumps, a cylindrical roller journal bearing is utilised in conjunction with a heavy duty thrust bearing. Suction and delivery flanges are normally machined and drilled to IS 1538 dimensions but, if required, they can be produced to other standards. A wide range of variations to the above material specification can be incorporated to suit special applications on the selection of the most suitable materials.



Typical cross section of Vertical Sewage pump

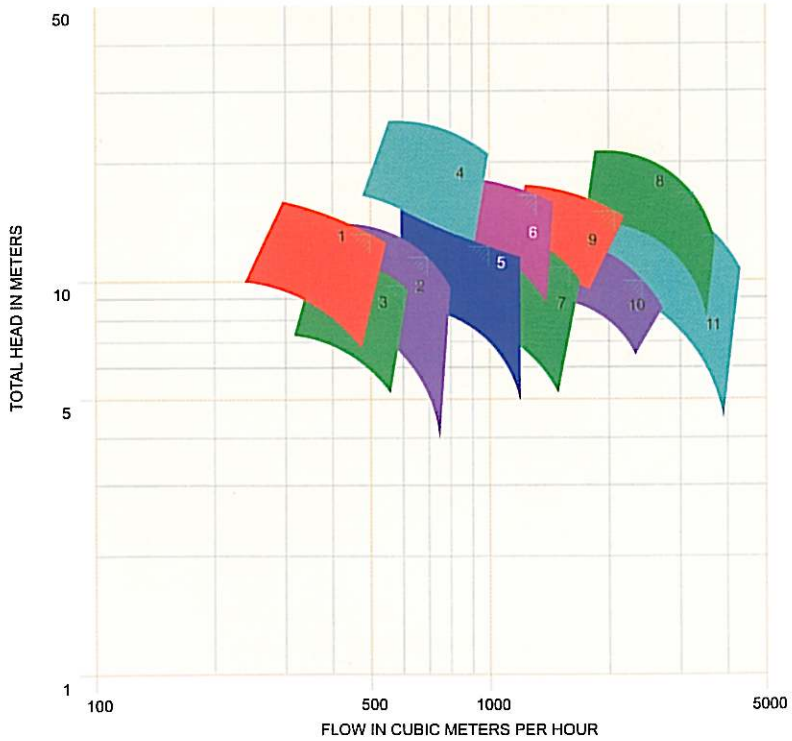
Selection Charts

KN Pump Selection Chart



SR. NO.	PUMP	RPM
1	8/10 AKN	980
2	8/10 BKN TB Mk-1	970
3	8/10 BKN	980
4	8/10 CKN	980
5	10/12 BKN	980
6	10/12 CKN	980
7	12/12 AKN	980
8	14/16 BKN	980
9	14/16 CKN	980
10	200/250 CKN	730
11	12/16 BKN	730
12	15/16 BKN	730

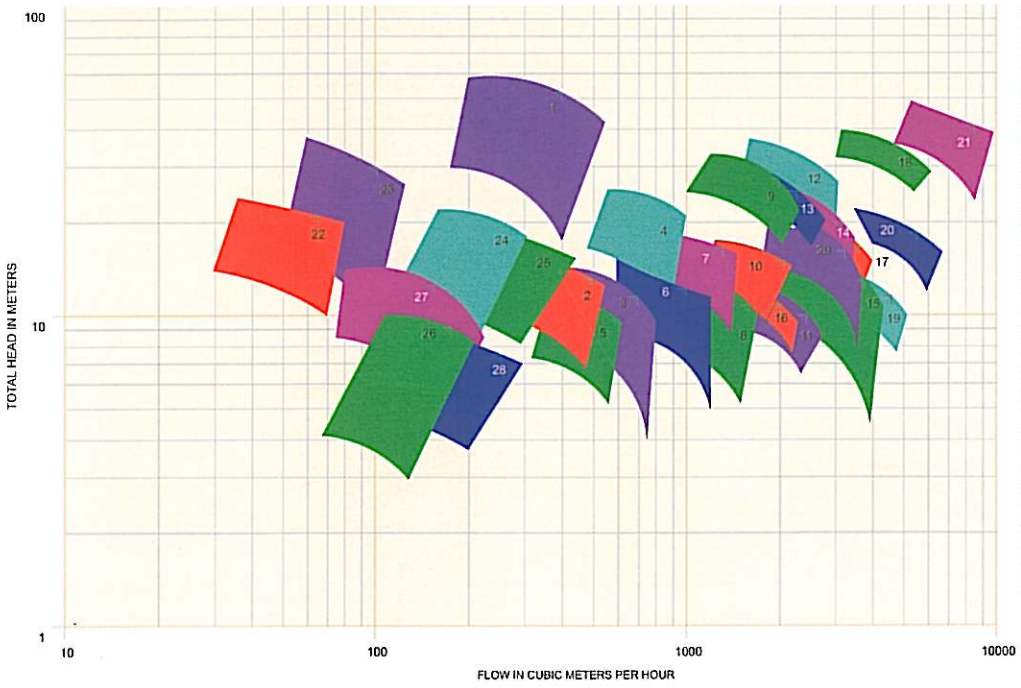
MFV Pump Selection Chart



SR. NO.	PUMP	RPM
1	8/8 MFV	1460
2	10/10 MFV1	1460
3	10 MFV3	980
4	10 MFV3	1440
5	12/12 MFV	960
6	14 MFV	960
7	15/15 MFV1	970
8	500 MFV	980
9	18 MFV	740
10	500 MFV	740
11	24/30 SW T3 MK-1	750

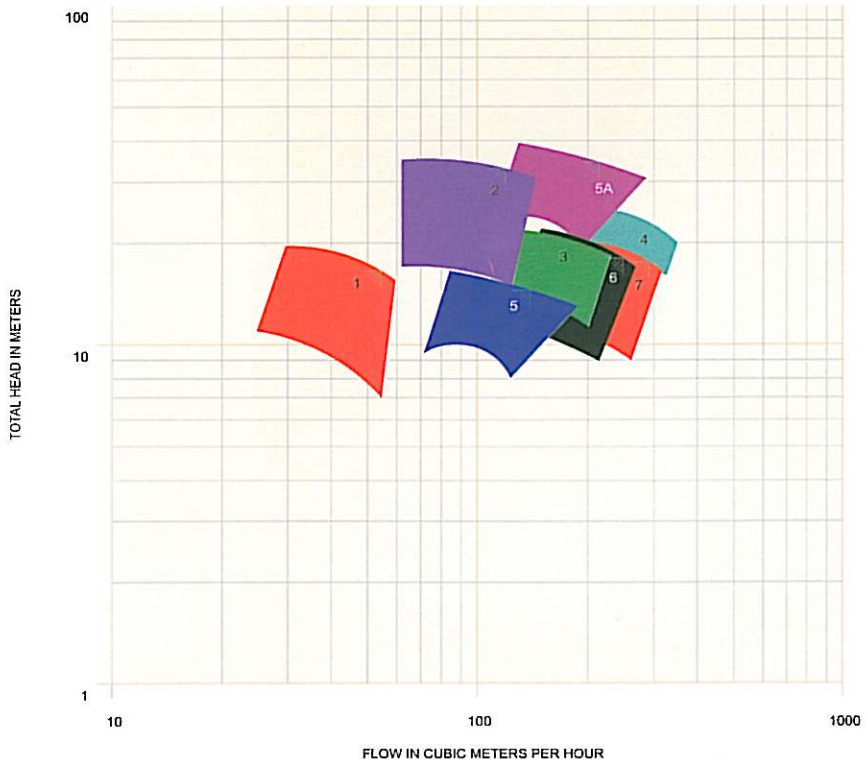
Note : Tombstone Charts given above are meant for tentative selections only. For details, individual pump family curves must be referred to. Due to continuous design improvements being implemented, we reserve the right to change the above without notice.

SW Pump Selection Chart



SR.NO.	PUMP	RPM
1	150/200-400 SW	1480
2	8/8 MF-SW	1460
3	10/10 MF-SW1	1460
4	10 MF-SW3	1440
5	10 MF-SW3	980
6	12/12 MF-SW	960
7	14 MF-SW	960
8	15/15 MF-SW1	970
9	400/450 SW	750
10	18 MF-SW	740
11	500 MF-SW	740
12	20/24 SW	735
13	500/600 SW	740
14	600/600 SW	750
15	24/30 SW T3 MK-I	750
16	500/500 SW	575
17	600/675 SW	588
18	24/30 SW-T2	750
19	24/30 SW-T1	490
20	32/32 SW	490
21	30/36 SW	600
22	SK 50/26	1450
23	SK 65/32	1450
24	100/26 SK	1450
25	150/26 SK	1450
26	100/26 SK	980
27	100/32 SK	980
28	150/26 SK	980
29	500 MF-SW	980

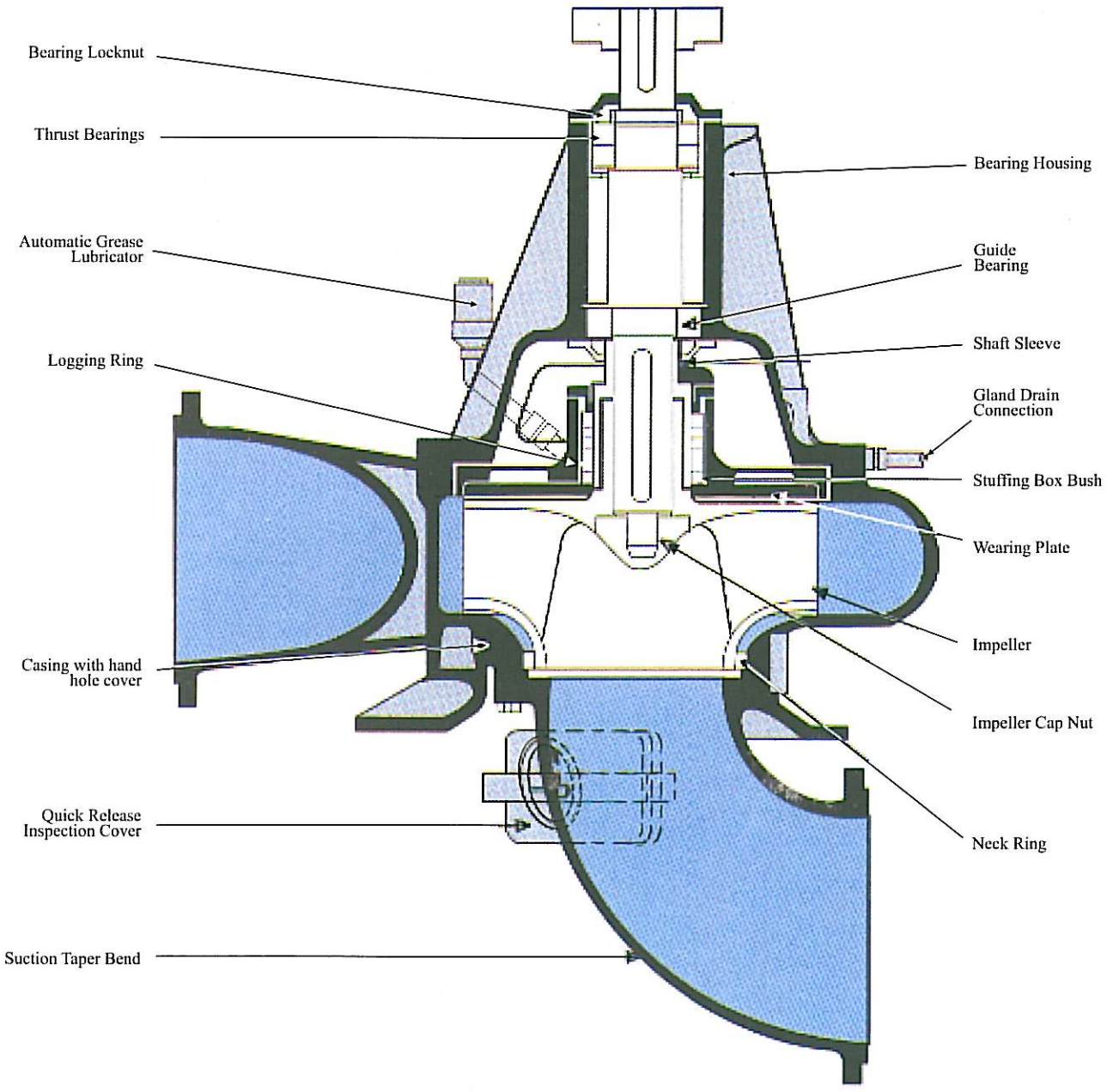
SK Pump Selection Chart



SR.NO.	PUMP	RPM
1	3/2 SK	1450
2	4/3 SK	1480
3	5/4 SK	960
4	6/5 SK	960
5	5/5 SKM	960
5A	5/5 SKM	1480
6	5/5 SKL	960
7	6/6 SK	960

Note : Tombstone Charts given above are meant for tentative selections only. For details, individual pump family curves must be referred to. Due to continuous design improvements being implemented, we reserve the right to change the above without notice.

Typical Cross Section



Typical cross section of horizontal Sewage pump

Manufacture

We produce within our own organisation all the major fabrications and castings required for our Sewage range. We have our own ferrous and non-ferrous foundries and are able to produce iron, carbon steel, stainless steel and bronze castings to the highest quality standards. In addition, the foundries are fully equipped to carry out ultrasonic and radiographic examination of castings appropriate international specifications. The main fabricated components are produced in our own factory, using welding procedures to standards necessary to meet the requirements of ASME and other authorities.

Main Contractor Service

In addition to supplying pumpsets, Mather and Platt has the expertise to undertake the role of main mechanical and electrical contractor for fitting sewage pumping stations. Our experts are available to give free advice on sewage pumping installations and we are prepared to accept the responsibility for the supply, erection and commissioning of all the mechanical and electrical plant within the pumping station. In addition, we can undertake to carry out surge submit proposals for overcoming it. We can then supply and install the necessary equipment.

Performance Test

The Sewage range of pumps is tested on our fully equipped test bed to ISO. 2548 Class 'C' / Indian Standards IS 9137 Class 'C' We are equipped to undertake testing to alternative standards as per the customer's requirement.

Spares and Service

An essential consideration while purchasing pumps is the after - sale service which can be expected. All Mather & Platt pumps are backed by an effective spares and service organisation and can draw upon the full engineering resources of Mather & Platt. This organisation offers: a fast and efficient replacement parts service, with top priority for parts required in emergency. Servicing on site by competent factory trained personnel, overhaul and reconditioning of pumps at Mather & Platt factories. Also an advisory service for operational problems anywhere in the world, provided by a team of experienced technical service engineers. In addition to all these after-sales functions, our Spares, Repairs and Service Department can provide technical and drawing office services for surveys of existing plant, modification or up-dating of existing plant and recommendations on stock-holding of strategic spare parts.

Vertical Sewage Pumps

Product Range

Pump Type	 Axially Split	 End Suction	 Multi-stage	 Multi-stage	 Vertical Wet Pit	 Extraction	 Mix-Flow / Sewage / Non-Clog	 Paper Stock
Ranges	ST / SN , LE / ME, GST, GSN, GME	ET, PN PNC	PB, PJ, FB, RN	PB, FB, FG	VMF	CNE	SK, KN, MF, SW	KF
Capacity upto (cu. m / hr)	17,000	750	1,000	350	30,000	2,000	8,000	950
Head upto (m)	220	170	1,100	1,800	250	450	70	60
Construction features	• Double entry impellers for single stage • Single entry opposed impellers for two stage	• Back pull-out • PN - Temperatures upto 150°C	• Bolted segment • Diffuser design • Axial thrust balanced by hydraulic balancing valve	• Bolted segment • Diffuser design • Axial thrust balanced by hydraulic balancing valve	• Diffuser design • Single & multi-stage pumps • Above or below floor discharge	• Diffuser design • Multi-stage pumps with caisson • Above or below floor discharge	• Horizontal / Vertical units • Special non-clog impellers	• Casing and bearing cover split at an angle to facilitate easy maintenance • Specially designed for high consistency stock
Options	• Vertical execution • Centreline suspension • Mechanical seals	• Vertical execution • Centreline suspension • Oil lubricated bearings • Semi-open / Open impellers • Mechanical seals	• Low NPSH impellers • Multi-outlet design • Mechanical seals	• Low NPSH impellers • Stuffing box cooling • Bearing cooling • Mechanical seals	• Oil lubrication • Shaft enclosing tube • Pull-out design • Open impellers	• Double suction first stage impeller design for low NPSH applications.	• Vertical execution • Hand hole covers • Grease packed stuffing box	• Mechanical seal • V-belt drives
Applications	• Water supply • Water circulating systems • Injection water • Spray pond • Air-conditioning • Water treatment • Sprinkler & drip irrigation • Fire fighting • Juices • Mine Dewatering	• General water service • Chemical process • Sprinkler and drip irrigation • Condensate transfer • Drainage • Fire fighting • Juices / Syrups	• Boiler feed services • Mine de-watering • Water supply • Jockey • Condensate transfer	• Boiler feed services • Descaling operations • Hydraulic plants	• Cooling tower • Condensate circulating • Irrigation and water supply • Fire fighting • General industrial water supply	• Condensate extraction for thermal and nuclear power plants • Low NPSH requirements	• Municipal sewage stations • Effluent treatment plants • Unscreened Juices /Syrups	• Paper stock

Mather+Platt

THE FUTURE OF PUMPS SINCE 1870

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