

WARMAN®
Centrifugal Slurry Pumps

Centrifugal slurry pumps type SCH C and SCH M

Slurry
Equipment
Solutions



Warman SCH C range Rubber lined pumps

Design features

Warman SCH C type rubber lined pump design, makes maintenance quick and easy. With our 2 parts casing, replacement of impeller and liners can be done in the field.

Applications

Warman SCH C rubber lined pumps are the ideal choice when transferring non sharp solids below 6 mm sphere, providing a higher service life than when using metal pumps.



SCH C150

The thick rubber section at the most sensitive areas allows absorption of the solids particles inertia without erosion unlike with the use of metallic parts. These types of pumps are widely used in the sand treatment industry handling the various grades of sand. For corrosive applications alternative materials such as Neoprene, Butyl or Hypalon can be used.

Limitations

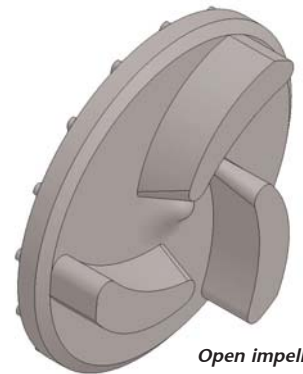
For handling slurries with large or sharp particles, or where high temperatures are involved, hard metal pumps such as the Warman M range would be preferable (for advice on selection please contact one of our support engineers).



1. Vertical cantilever pumps have no 'wetted' bearings, as bearings are mounted above the mounting plate allowing the ability to run dry, resulting in minimal maintenance.



2. Submersible pumps suitable for deep sumps.



Open impeller



Adjustment

Cartridge type bearing housing allows simple axial adjustment of the clearance between impeller and suction liner.

Accessories

Motor support plate may be mounted on the bearing pedestal

Pump frame

One piece cast bearing support cradle with a drain recovery chamber.

Back liner

The back liner has vanes moulded in to increase the expeller performance.

Assembly

The casing assembly utilizes bolts located in slotted holes (quick disassembly) with a metal/metal tightening to ensure control over internal clearance.

Casing

The casing halves are thick cast iron, maintaining the structural integrity of the pump. The casing can be rotated to meet different discharge positions.

Liners

Replaceable liners are bolted to the casing for ease of maintenance. The elastomer liners are pressure-moulded on to a steel reinforcing frames and can be completely worn out.

Casing

assembly bolts located in slotted holes allow for ease of dismantling

Bearing assembly

Large diameter shaft fitted with grease lubricated heavy duty taper roller bearings are mounted in a removable cast iron bearing cartridge.

Expeller Cover

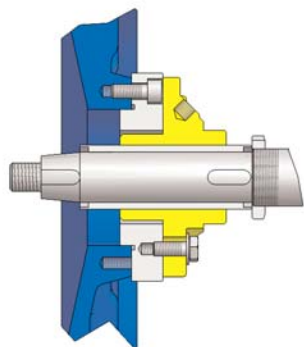
Cast iron with elastomer lining or high chrome iron (optional).

Expeller

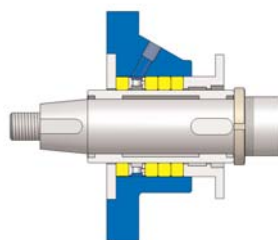
High efficiency hydrodynamic sealing offers full sealing without the need for a seal water supply when the pump is running. The high chrome iron expeller is keyed to the shaft. Other sealing options include packing gland (1), or various mechanical seal arrangements (2).

Impeller

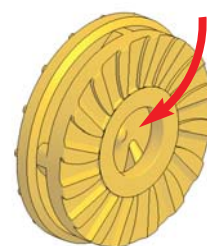
The high efficiency impeller is an elastomer pressure moulded over a metallic frame, screwed on to the shaft. Impellers are large diameter (lower speed) with both front and rear vanes to increase the efficiency and life.



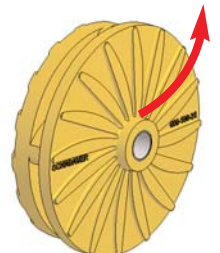
(2) Various mechanical seal options are available.



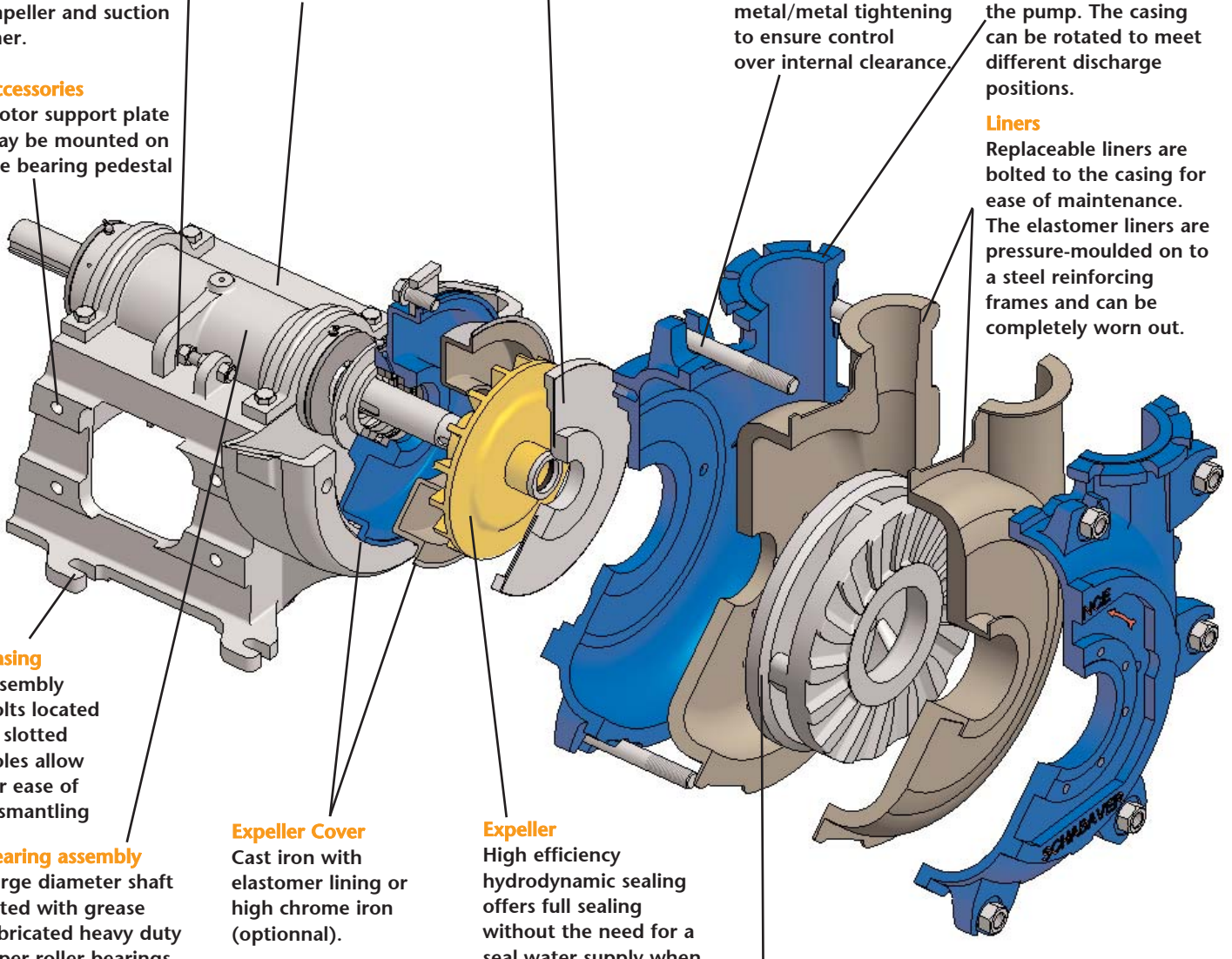
(1) Packed gland sealing on a shaft sleeve which is keyed to the shaft.



Front vanes. The impeller front shroud has profiled pump-out vanes that reduce recirculation and increase wear life.



Back vanes. The impeller back shroud has pump-out vanes designed to reduce pressure on the packing gland and increase expeller efficiency.



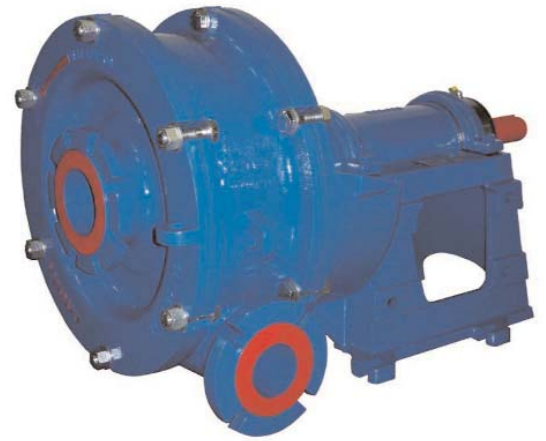
Warman SCH M range Hard metal pumps

Design features

Warman SCH M type design makes maintenance quick and easy. Replacement of wearing parts can be done in the field. With the two parts casing, it is possible to replace the worn front cover without changing the complete casing.

Applications

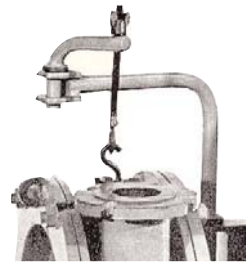
Metal pumps are recommended for handling slurries with large or sharp particles. The pump can run with higher tip speed to reach heads up to 70 meters. It can work with hydrocarbons or high temperature. This pump is currently used in Alumina plants (bauxite + caustic soda at 90°C), sand treatment, sugar factories, and other industrial process with abrasive applications.



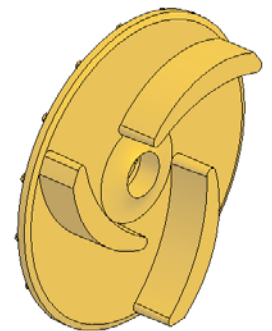
SCH M100

Limitations

For highly corrosive chemical applications alternative materials may be required, please contact our engineers to verify compatibility.



Handling device



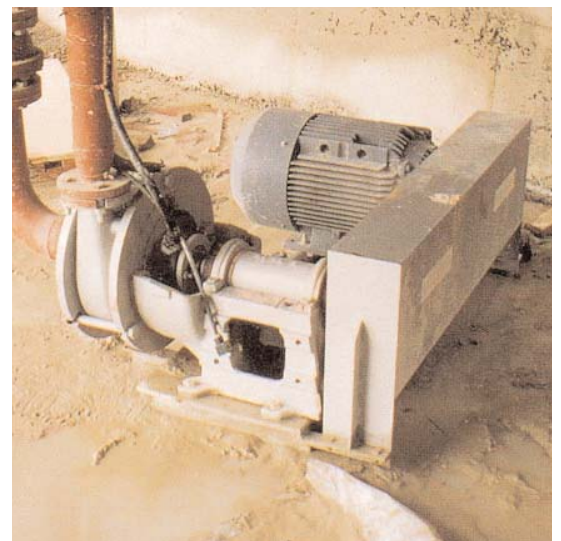
Open impeller



1. Vertical cantilever pumps have no 'wetted' bearings, as bearings are mounted above the mounting plate allowing the ability to run dry, resulting in minimal maintenance.



2. Vertical pumps with compact dimensions



Adjustment

Cartridge type bearing housing allows simple axial adjustment of the clearance between impeller and suction liner.

Accessories

Motor support plate may be mounted on the bearing pedestal

Pump frame

One piece cast bearing support cradle with a drain recovery chamber.

Casing Back Plate

Cast iron. Cast vanes are included when the expeller option is selected.

Casing (volute)

Long life cast high chrome iron. Casing can be rotated to allow different discharge positions. Cast in lifting eye. Casing assembly bolts located in slotted holes allow for ease of dismantling

Suction cover

Thick cast high chrome iron cover fitted with cast in lifting eye. Assembly bolts located in slotted holes allow for ease of dismantling.

Casing

assembly bolts located in slotted holes allow for ease of dismantling

Bearing assembly

Large diameter shaft fitted with grease lubricated heavy duty taper roller bearings are mounted in a removable cast iron bearing cartridge.

Expeller Cover

High chrome iron expeller cover or cast iron with elastomer lining (optional).

Gaskets

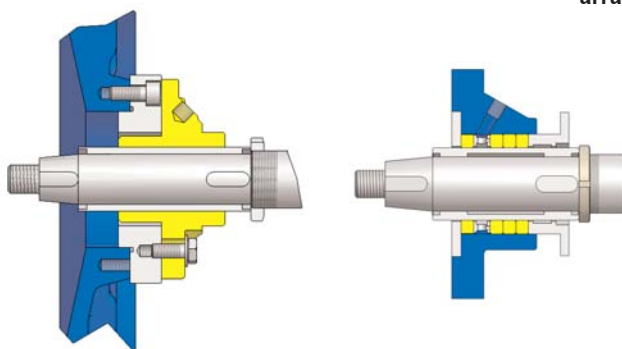
Elastomer gaskets for sealing of hydraulic components.

Expeller

High efficiency hydrodynamic sealing offers full sealing without the need for a seal water supply when the pump is running. The high chrome iron expeller is keyed to the shaft. Other sealing options include packing gland (1), or various mechanical seal arrangements (2).

Impeller

Large diameter (lower speed), high efficiency, high chrome iron impeller. Fitted with rear and front pump-out vanes; keyed on a conical shaft secured with a nut.

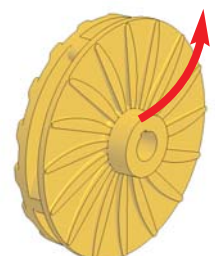


(2) Various mechanical seal options are available.

(1) Packed gland sealing on a shaft sleeve which is keyed to the shaft.



Front vanes. The impeller front shroud has profilled pump-out vanes that reduce recirculation and increase wear life.

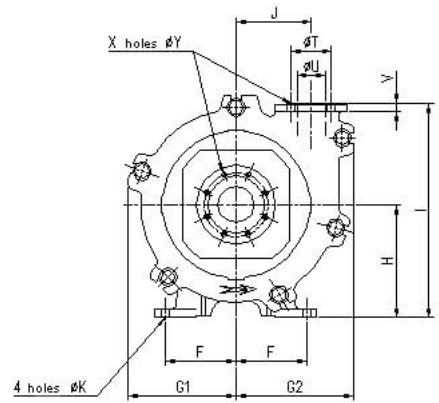
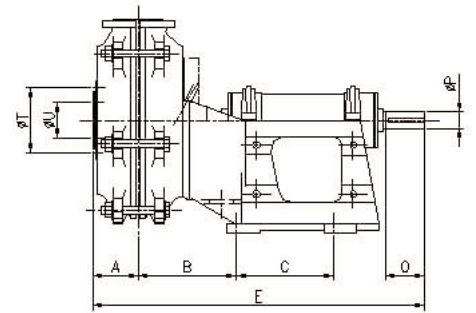


Back vanes. The impeller back shroud has pump-out vanes designed to reduce pressure on the packing gland and increase expeller efficiency.

Dimensions

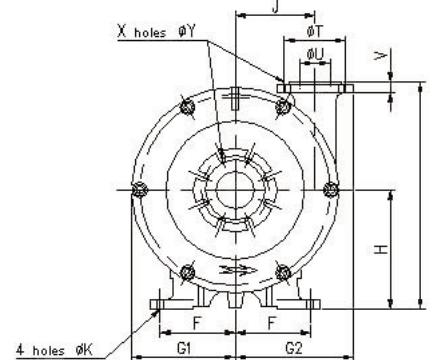
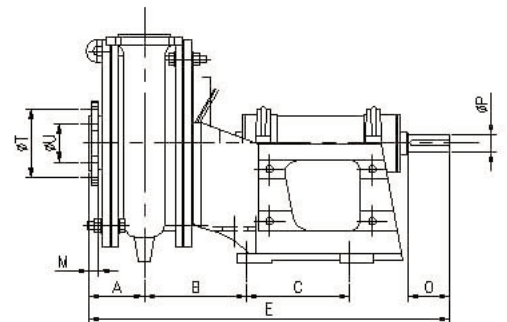
SCH C Type

Pumps Size	(mm)										
	A	B	C	E	F	G1	G2	H	I	J	K
SCH C40	83	210	170	621	128	175	195	200	390	124	14
SCH C65	103	235	215	751	153	220	245	250	474	160	16
SCH C100	128	267	267	917	198	290	325	315	600	209	20
SCH C150	165	311	342	1130	253	380	420	400	770	285	24
SCH C250	212	390	430	1380	325	480	535	500	950	360	30
Pumps Size	Shaft end		Suction Flange				Discharge Flange				
	O	P	T	U	X	Y	T	U	V	X	Y
SCH C40	60	25	110	40	4	16	100	32	18	4	20
SCH C65	80	32	145	65	4	16	125	50	20	4	20
SCH C100	110	45	180	100	8	16	160	80	22	4	20
SCH C150	140	60	240	150	8	20	210	125	24	8	20
SCH C250	140	70	350	250	12	20	295	200	26	8	24

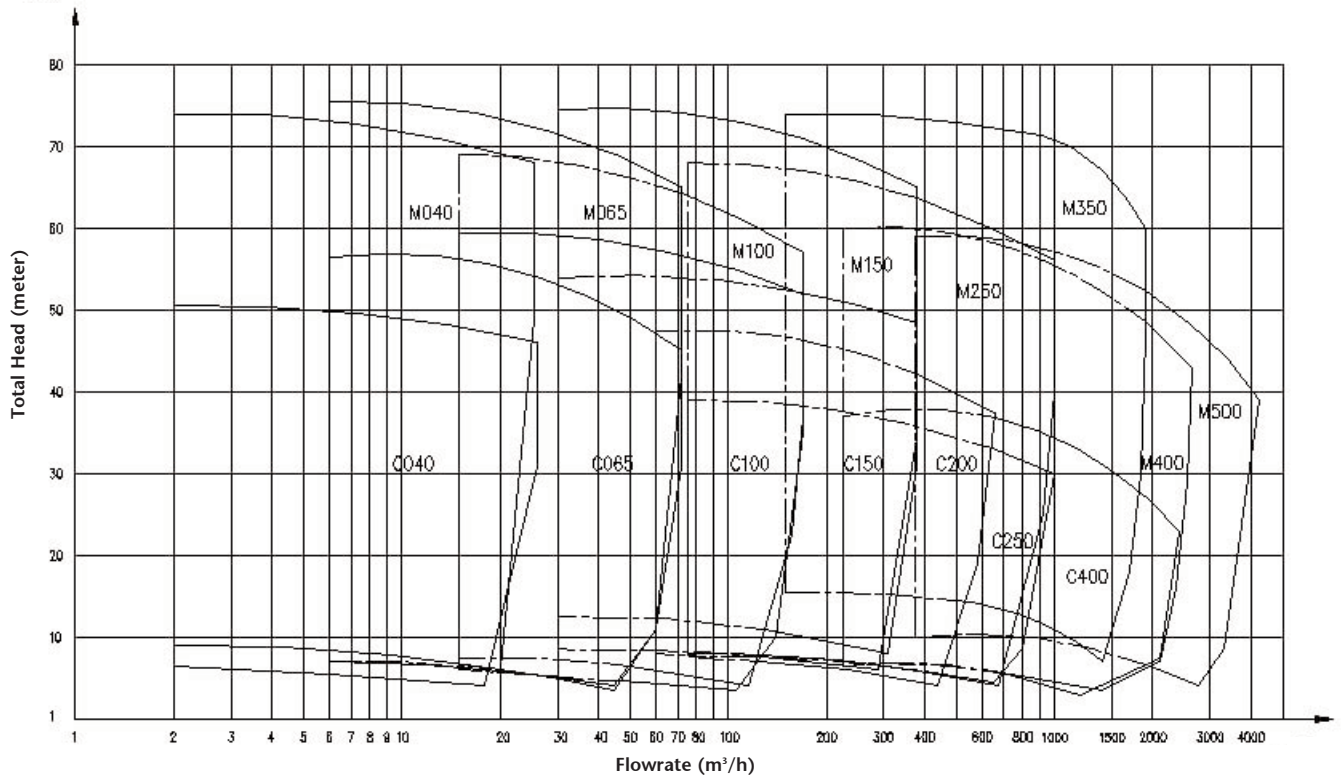


SCH M Type

Pumps Size	(mm)											
	A	B	C	E	F	G1	G2	H	I	J	K	
SCH M40	93	210	170	631	128	185	195	200	386	127	14	
SCH M65	115	235	215	763	153	230	245	250	478	160	16	
SCH M100	143	267	267	935	198	275	310	315	600	211	20	
SCH M150	180	311	342	1145	253	335	400	400	758	275	24	
SCH M250	212	390	430	1400	325	405	535	500	953	367	30	
Pumps Size	Shaft end		Suction Flange				Discharge Flange					
	O	P	T	U	V	X	Y	T	U	V	X	Y
SCH M40	60	25	110	40	18	4	20	100	32	18	4	20
SCH M65	80	32	145	65	20	4	20	125	50	20	4	20
SCH M100	110	45	180	100	22	8	20	160	80	22	4	20
SCH M150	140	60	240	150	24	8	24	210	125	24	8	20
SCH M250	140	70	350	250	28	12	24	295	200	26	8	24



WARMAN pumps type SCH C and SCH M - Quick Selection Chart
Approximate clear water performance - to be used for preliminary selection only



Weir Minerals France produce the Type SCH C and SCH M in its manufacturing plant located in Castres near Toulouse in the southwest of France.

This range of centrifugal slurry pumps has been designed to be the simplest rotating machines on the market, built with a minimum number of components to give the lowest maintenance cost in slurry applications.

The development of the range is supported by the Research and Development department of the Weir Minerals Division. Many improvements has been completed to improved weir life, hydraulic performance, sealing systems etc ... to continue achieving lowest cost of ownership.



WARMAN® Centrifugal Slurry Pumps
GEHO® PD Slurry Pumps
CAVEX® Hydrocyclones
ISOGATE® Slurry Valves
VULCO® Wear Resistant Linings

For further information on any of these products or services contact your nearest sales office or via:

www.weirminerals.com

Sales Offices :

<i>Lyon</i>	<i>04.72.81.06.36</i>
<i>Paris</i>	<i>01.60.70.88.14</i>
<i>Bordeaux</i>	<i>05.56.57.03.33</i>
<i>Nantes</i>	<i>02.40.72.89.82</i>
<i>Nancy</i>	<i>03.83.54.37.63</i>
<i>Lille</i>	<i>03.20.82.76.93</i>
<i>Marseille</i>	<i>04.42.11.56.45</i>
<i>Casablanca (Maroc)</i>	<i>02.298.30.79</i>

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