

**WARMAN®**  
Centrifugal Slurry Pumps

Slurry  
Equipment  
Solutions



**SHW Submersible slurry pump**



**Weir Minerals are specialists in delivering and supporting Slurry Equipment Solutions including pumps, hydrocyclones, valves and wear resistant linings for global mining and mineral processing, the power sector, and general industry.**

**We use our specialist slurry knowledge and experience from around the world to deliver reliable product and service solutions.**

**Our global network ensures that we are close to our customer wherever they base their local operations.**

The strength of Weir Minerals products lies in the superiority of our hydraulic designs and wear and corrosion resistant materials.

To maintain this number one position Weir Minerals has invested heavily in an ongoing programme of research and development focussed on the areas of hydraulic design, materials technology and shaft sealing.

Weir Minerals are renowned for innovative designs for heavy duty submersible slurry pumps used in aggressive abrasive applications.

During the design process of the WARMAN SHW pump extensive use was made of finite element stress analysis software in conjunction with unigraphics solid modelling to ensure maximum mechanical integrity of the major pump components.

Combined with the use of an A05 28% high chrome alloy wet end mounted on a heavy duty iron motor housing, the WARMAN SHW pump represents the most dependable, long lasting and rugged submersible slurry pump available.

This dependability results in the lowest cost of ownership.



## Design features of the WARMAN SHW heavy duty, all chrome, double sealed, submersible slurry pump

### A - Advanced cable entry

The advanced cable entry offers double protection against moisture. The power and control cables enter through individual cable glands that act as strain relief while sealing the cable jacket. Both cable cores are also sealed using barrier connector embedded in epoxy sealant.

### B - Heavy duty thrust bearings

High capacity, angular contact duplex bearings are generously sized to handle thrust loads associated with high specific gravity slurries.

### C - Temperature sensor

Over temperature sensors protect the motor by sounding an alarm or shutting down the unit if internal temperatures exceed safe operating limits.

### D - Moisture detector

A twin electrode system provides double protection by detecting moisture intrusion in either the motor housing or the mechanical seal chamber.

### E - Mechanical shaft seals

The WARMAN SHW pump incorporates a proven balanced double seal arrangement in which both sets of seal springs are enclosed in the oil reservoir. Silicon carbide seal faces are subject to submergence pressure only for greatly extended wear life.

### F - Heavy duty pump wet end

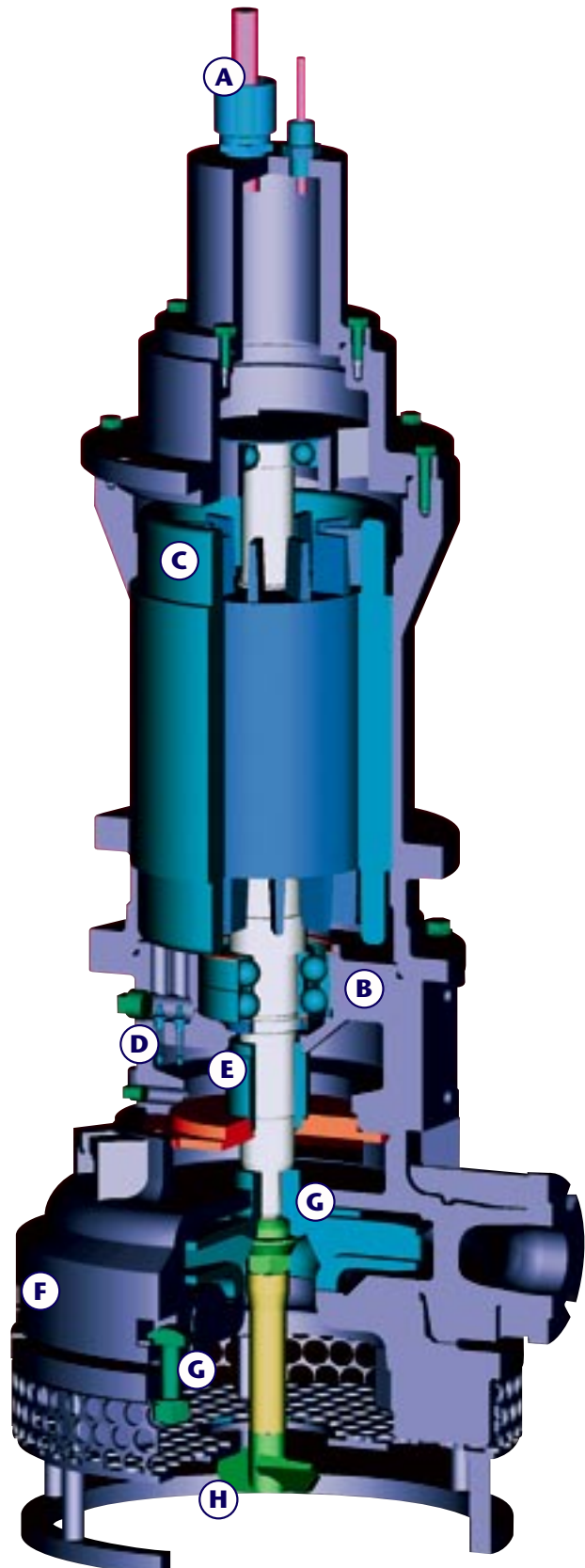
As standard the 28% high chrome alloy construction coupled with heavy section thickness provides the ultimate in protection against abrasive wear in heavy slurries.

### G - Easy maintenance access

The T-bolt construction allows rapid disassembly of the pump wet end for maintenance access. The heavy duty impeller is not screwed on, but keyed to the shaft for easy removal and protection against movement during reverse rotation.

### H - Optional robust agitator

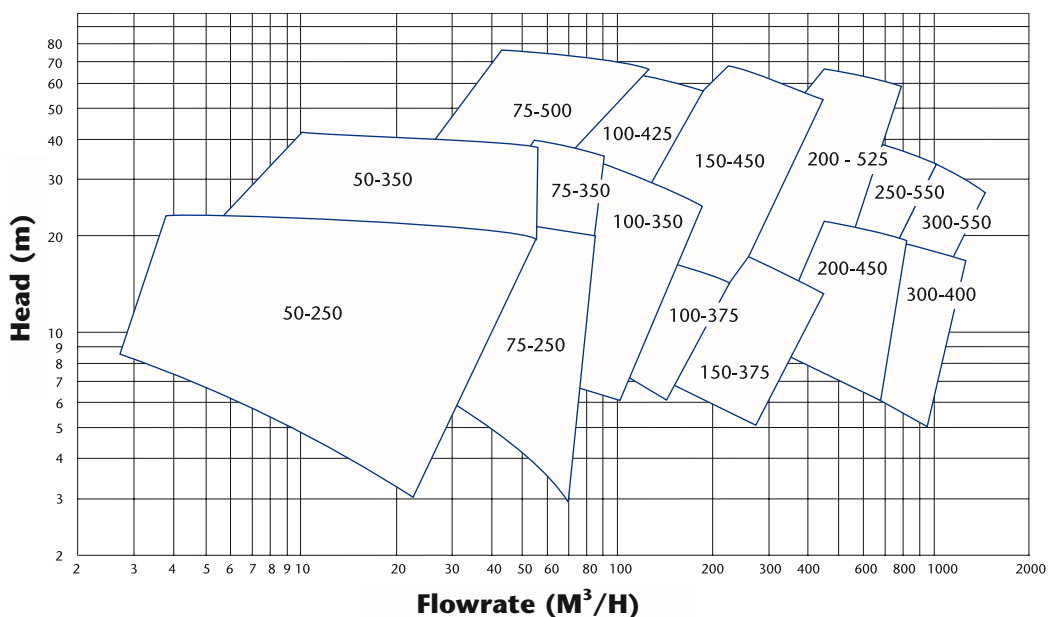
A robust agitator can be fitted to the suction eye allowing the pump to handle high concentrations of solids.



**For your next submersible application, get the heavy duty, all chrome WARMAN SHW pump ... long-lasting dependability at a standard price.**

## Pump selection chart

50 Hz supply – 1000 rpm & 1500 rpm



### Materials of construction

Part		
Casing	A05 Chrome alloy	ASTM A532, class III, Type A
Impeller	A05 Chrome alloy	ASTM A532, class III, Type A
Impeller nut	450 HT	ASTM A747 Hardened
Shaft	17-4 PH	ASTM A564
Shaft sleeve	450 HT	ASTM A747 Hardened
Fasteners	316 SS	ASTM A276 & A314 or CF8M
Motor housing	Cast iron	ASTM A48, class 30
Agitator (optional)	A05 Chrome alloy	ASTM A532, class III, Type A
Shaft extension (optional)	17-4 PH	ASTM A564

### European sales offices :

BeNeLux (Belgium)	014 4709 60
Czech Republic	05 435 18300
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### Weir Minerals Europe Limited

Halifax Road  
Todmorden  
Lancashire OL14 5RT  
United Kingdom

Tel: +44 1706 814 251  
Fax: +44 1706 815 350  
sales.uk@weirminerals.com  
www.weirminerals.com

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