

# ARMSTRONG

## Series 4280



LEAFLET NO:	K4.100
DATE:	March 1998
SUPERSEDES:	K3.1
DATE:	Sept. 1995

*Close Coupled End Suction Pumps*

---

# MOTOR MOUNTED CENTRIFUGAL PUMPS

**MOTOR** The motor is equipped with heavy duty, grease-lubricated ball bearings adequately rated to accommodate impeller radial loads and residual hydraulic thrusts.

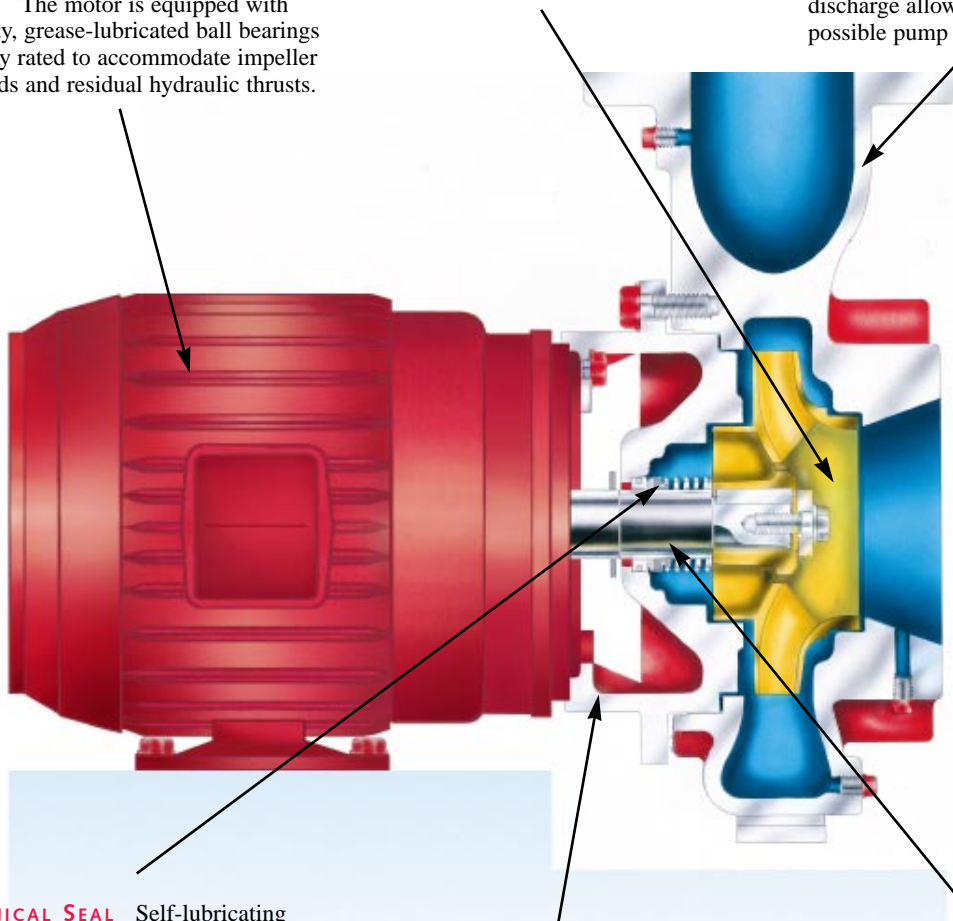
**IMPELLER** Balanced impeller designed with balancing chamber and pressure relief holes in the impeller reduce axial thrusts to a minimum, ensuring smooth performance and long life.

**CASING** Radially-split casing with centre-line discharge can be left in the line while servicing the pump, eliminating needless disconnecting of pipes. Tapped openings are provided for draining and gauge connections. Double volute design where radial loads demand. Centre-line discharge allows self venting preventing possible pump failures due to vapour lock.

**MECHANICAL SEAL** Self-lubricating mechanical seal prevents liquid seepage.

**BRACKET** A heavy cylindrical bracket with 360 degree register on both flanges provides a rigid connection of pump and motor and establishes perfect alignment.

**SHAFT** The impeller is mounted on a stainless steel stub shaft.



## SERIES 4280 DESIGN FEATURES

- ◆ Easy maintenance due to back pull-out design
- ◆ Extensive interchangeability of parts
- ◆ Manufactured and tested to rigid standards
- ◆ Quiet operation
- ◆ Self venting centre-line discharge
- ◆ Confined casing gasket
- ◆ Drilled and tapped gauge connections are standard on suction and discharge ports
- ◆ Mount with motor feet only, or motor and pump feet for convenience

# MATERIALS OF CONSTRUCTION

PUMP	Flange Rating (psig)	Construction	Casing	Impeller	Capscrew (Impeller)	Washer (Impeller)	Gasket (Casing)	Adapter Bracket	Stubshaft	Water Slinger	Seal Face	Seal Seat	Seal Trim	Seal Elastomer	Seal Spring
4280	PN16	BF	CI	BZ	SS-5	SS-2	F	CI	SS-4	N	C	SiC	SS-2	EP	SS-5
4280	PN16	AI	CI	CI	SS-5	SS-2	F	CI	SS-4	N	C	SiC	SS-2	EP	SS-5
4280	PN16	AB	BZ	BZ	SS-5	SS-2	F	BZ	SS-4	N	C	SiC	SS-2	EP	SS-5
4280	PN16 PN25	DBF	DI	BZ	SS-5	SS-2	F	DI	SS-4	N	C	SiC	SS-2	EP	SS-5

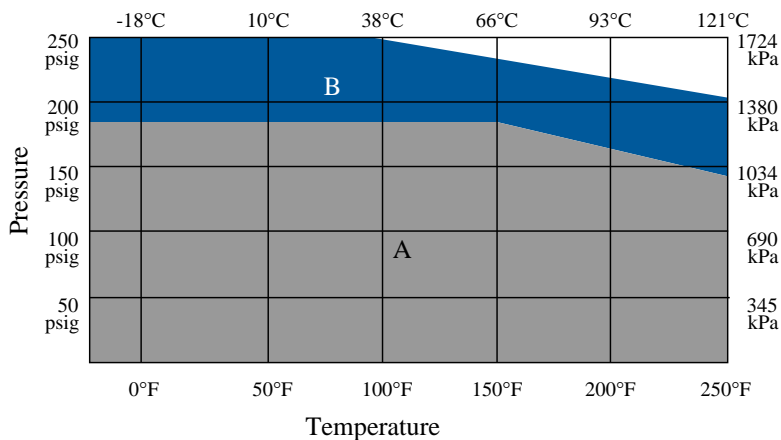
## MATERIALS OF CONSTRUCTION CODE:

BF - Bronze Fitted (Standard)  
 AI - All Iron (Option)  
 AB - All Bronze (Option)  
 DBF - Bronze Fitted, Ductile Casing and Adapter Bracket

## MATERIAL SPECIFICATION:

BZ	Cast Bronze BS1400 Grade LG1	DI	Cast Ductile Iron BS2789 Grade 500/7	SiC	Silicon Carbide
CI	Cast Iron BS1452 Grade 220	EP	EPDM elastomer	SS-2	Stainless Steel Type 18-8
C	Carbon	F	Fiber	SS-4	Stainless Steel Type 304
		N	Neoprene	SS-5	Stainless Steel Type 316

# PRESSURE / TEMPERATURE CHART SERIES 4280



A - CAST IRON - PN16 flanges

B - DUCTILE IRON - PN16 flanges up to 1600 kPa, PN25 flanges 1600-1724 kPa

### Notes:

- All values are based on clear, clean water. Values may change with other liquids.
- Hydrostatic test pressure at ambient temperature is 150% maximum working pressure.

# TYPICAL SPECIFICATION

## 1.0 Pumps - Close Coupled End Suction

**1.1** Provide Armstrong single stage, single end suction, close coupled centrifugal pumps, with rising head characteristics to pump shut off.

Refer to the schedule for pump flows and heads and motor speed, efficiency, enclosure and power requirements.

**1.2** The pumps shall be Armstrong Series 4280 close coupled end suction pump.

**1.3** Pump Construction:

- .1 Pump casing shall be cast iron, suitable for 12.05 bar working pressure at 65°C. (Ductile Iron for pressures to 17.24 bar)  
The casing shall be hydrostatically tested to 150% maximum working pressure.

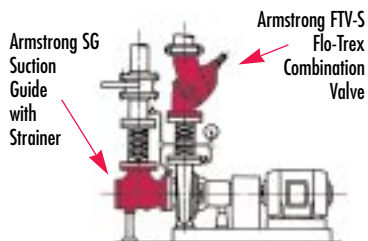
The casing shall be radially split to allow removal of the rotating element without disturbing the pipe connections.

The casing shall be equipped with a drilled and tapped drain connection. Suction and discharge connections shall be provided with drilled and tapped pressure gauge connections.

- .2 Pump impeller shall be fully enclosed type. Dynamically balanced.
- .3 The pump shaft shall be stainless steel.
- .4 Mechanical Seal shall be single spring inside type.

## NEED TO REDUCE SPACE REQUIREMENTS AND INSTALLATION COSTS

### ARMSTRONG

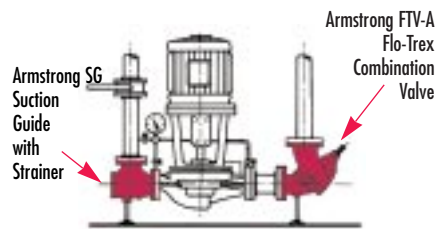


Base mounted pump with Suction Guide and Flo-Trex valve.  
Eliminates cost and space of:

Suction: Y-Strainer  
Long Radius Elbow  
Min. Straight Pipe Run

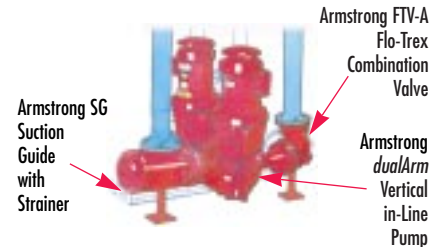
Discharge: Long Radius Elbow  
Check Valve  
Isolating Valve  
Throttling Valve

### ARMSTRONGER



Vertical In-Line with Suction Guide and Flo-Trex Valve.  
Eliminates cost and space of:  
All the items listed under base mounted pump, also saves:  
Inertia Base with spring mounts  
Flexible Pipe Connectors  
Grouting  
Field Alignment  
Split Couplings available for ease of mechanical seal replacement

### ARMSTRONGEST



*dualArm* Vertical In-Line  
Incorporates two pumps in a casing with single inlet and outlet connections. Enables standby or parallel operation with only one set of piping. Casing design and port valves allow one pump to be removed for service with the second pump still operating. When installed with Suction Guide and Flo-Trex valve the *dualArm* represents the greatest Life Cycle Value in today's commercial HVAC market.

Our policy is one of continuous improvement and we reserve the right to alter our dimensions, designs and specifications without notice.

**Armstrong Pumps Limited**  
Peartree Road, Stanway  
Colchester, Essex  
United Kingdom, CO3 5JX  
Tel.: 01206-579491  
Fax: 01206-760532

**S.A. Armstrong Limited**  
23 Bertrand Avenue  
Toronto, Ontario  
Canada, M1L 2P3  
Tel.: (416) 755-2291  
Fax: (416) 759-9101



**Armstrong Pumps Inc.**  
93 East Avenue  
Buffalo, New York  
U.S.A., 14120-6594  
Tel.: (716) 693-8813  
Fax: (716) 693-8970

**Armstrong Darling Inc.**  
2200 Place Transcanadienne  
Montreal, Quebec  
Canada, H9P 2X5  
Tel.: (514) 421-2424  
Fax: (514) 421-2436

