

A close-up photograph of a yellow industrial pump unit. The word "DESMI" is printed in bold black letters on the upper part of the unit. Below the name is a series of vertical yellow fins. A blue circular graphic with a thin line and a small tail is overlaid on the image, partially obscuring the pump unit.

**DESMI**

MARINE & OFFSHORE PUMP SOLUTIONS

PROVEN TECHNOLOGY

**DESMI**

# DESMI Centrifugal Pumps

DESMI centrifugal pumps are used as cooling, ballast, fire, and bilge pumps for fresh as well as seawater. The pumps are available with capacities up to 5400 m<sup>3</sup>/h/23800 ft and delivery heads up to 220 mWC.

Our product range is based on the modular principle which gives interchangeability of the most commonly used items and consequently a quick and safe supply of spare parts.

DESMI pumps are also installed in many naval vessels where special requirements as to materials, shock resistance etc. apply.

Single pumps or complete packages, DESMI's staff will always find the correct solution. Our world-wide network of subsidiaries and distributors ensures prompt spare parts supply and first-class after-sales-service.

# DESMI Centrifugal Pumps (Vertical Pumps)

## DSL

Vertical In-line Double Suction Centrifugal Pump DSL	
Nominal diameter (DN)	150 to 600
Flow rate - 50 Hz	Up to 6200 m <sup>3</sup> /h (27300 US gpm)
Flow rate - 60 Hz	Up to 7400 m <sup>3</sup> /h (32580 US gpm)
Head	Up to 140 m (459 ft.)
Pressure	Up to 25 bar (363 psi)
Temperature	Up to 140°C (284°F)
Motor	Standard and EX motors
VFD	Bulkhead/Wall-mounted
ATEX approved.	
Applications: Ballast and cooling water pumping are among the many tasks that the DSL pumps solve to perfection. But also district heating and power plants together with many other industries will profit from using DSL pumps. Pump materials available in bronze and cast iron.	

### DSL Benefits:

- Suction design provides a perfect flow
- High efficiency and low NPSH values



DSL

## NSL

Vertical In-line Centrifugal Pump NSL	
Nominal diameter (DN)	65 to 400
Flow rate	Up to 1800 m <sup>3</sup> /h (7900 US gpm)
Head	Up to 220 m (720 ft)
Pressure	Up to 25 bar (363 psi)
Temperature	Up to 150°C (302°F)
Motor	Standard and EX motors
VFD	Direct or Bulkhead/Wall-mounted
ATEX approved.	
Applications: Various marine applications such as seawater cooling systems, LT-cooling systems, HT-cooling systems, ballast water pumps and fire pumps. Pump materials available in bronze, cast iron and duplex stainless steel.	



NSL

### NSL Benefits :

- High efficiency
- Low NPSH values
- Easy installation/service
- Various materials

## Priming Pump and Ejector

The DESMI priming ejector / pump is designed for mounting on non-selfpriming centrifugal pumps making the pump unit self-priming.

Max. water flow pumped to drain after completed priming :	Approx. 25 liter/min for 50 Hz / approx. 33 liter/min for 60 Hz power supply. Depending on vacuum level and rpm during priming the water temperature in the pump can rise up to approx. 70°C/158°F within 20 minutes.
Max. allowed water temperature in the pump is	80°C/176°F.



Priming Ejector



Priming Pump

# DESMI Centrifugal Pumps (Vertical Pumps)

## ESL / ESLH

Vertical In-line / Horizontal end-suction single-stage Centrifugal Pump ESL / ESLH

Nominal diameter (DN)	25 to 100
Flow rate - 50Hz	Up to 200 m³/h (880 US gpm)
Flow rate - 60 Hz	Up to 250 m³/h (1100 US gpm)
Head	Up to 65 m (210 ft)
Pressure	Up to 30 bar (435 psi)
Temperature	Up to 140°C (284°F)
Motor	Standard and EX motors
VFD	Direct or Bulkhead/Wall-mounted
ATEX approved.	
Applications: Various water applications such as hot water circulation, fresh water circulation, refrigeration, HVAC, hydrophore pump, cooling water. Pump materials available in bronze and cast iron.	

ESL Benefits :

- High efficiency
- Low NPSH values
- Compact design
- Easy installation
- Low maintenance costs



ESL



ESLH

## NSLV / NSLH

Vertical and horizontal end-suction Centrifugal Pump NSLV / NSLH

Nominal diameter (DN)	80 to 400
Flow rate	Up to 1800 m³/h (7900 US gpm)
Head	Up to 220 m (720 ft)
Pressure	Up to 25 bar (363 psi)
Temperature	Up to 150°C (302°F)
Motor	Standard and EX motors
VFD	Direct or Bulkhead/Wall-mounted
The DESMI NSLV pumps are constructed for vertical mount (with suction flange downwards) and the NSLH pump for horizontal mounting.	
Applications: The pumps are particularly suitable for the pumping of water in connection with cooling systems, cooling of diesel engines, as bilge pumps, ballast pumps, fire pumps, brine pumps, pumps for irrigation, fish farms, water works, district heating, salvage corps, army and navy, etc.	

- High efficiency
- Low NPSH values
- Easy installation/service
- Various materials and further, an attractive price.



NSLV

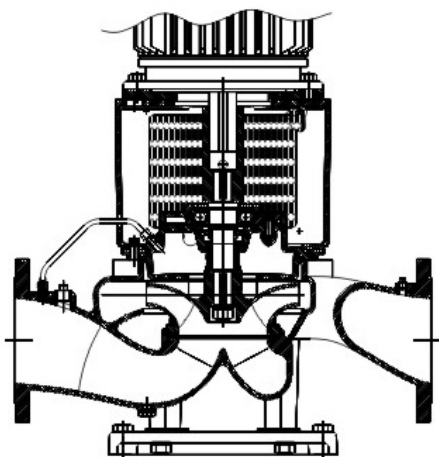


NSLH

## Design Details

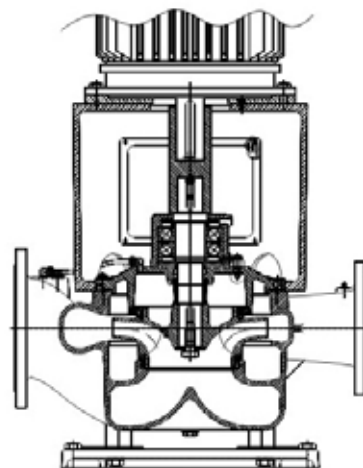
Pumps With Ø 215 And Ø 265 Impeller

Suction and discharge flange dimensions are identical. The line through inlet and outlet is flush with the centre line of the shaft. The pumps are mounted with one impeller wear ring.



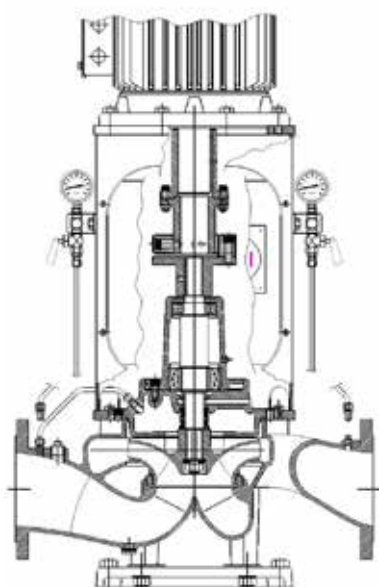
Pumps With Ø 330, Ø 415 and Ø525 Impeller

Dimension of the suction flange is one size larger than that of the discharge flange. The line through inlet and outlet is tangential offset in relation to the centre line of the shaft. The pumps have two impeller wear rings.

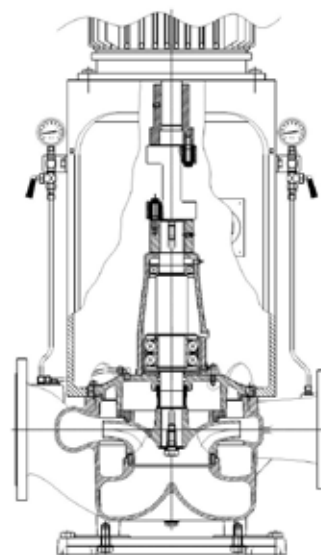


## Monobloc With Bearing

The pump is for major capacities and heavy loads, especially recommended where the advantage of the spacer coupling is of no importance and where a small overall height is required.



The pump is equipped with a separate rear cover with a ball bearing and a separate motor bracket. Dismantling of the rotating pump parts is possible without removing the pump casing from the piping.



## Spacer

The pump is for high capacities, heavy loads, and high pump speeds. As a special feature the pump is equipped with a spacer coupling which is a combined distance and flexible coupling. This makes it possible to remove the complete bearing housing with shaft, bearings, shaft seal, and impeller without dismantling or loosening the motor or piping.

For high capacities and the resulting larger and heavier electric motors we recommend this pump version because of the easy dismantling of the rotating pump parts in connection with inspection and repair. This special feature is often a requirement within the marine industry where installations must be easy to service.



# DESMI Centrifugal Pumps (Horizontal Pumps)

A DESMI speciality is horizontal, self-priming pumps where suction is based on the diffuser principle and

the pump itself is able to evacuate the suction line at suction lifts up to 8.5 m/278 ft.

## Modular S

Self-priming Horizontal Centrifugal Pump Modular S	
Nominal diameter (DN)	32 to 125
Flow rate	Up to 400 m <sup>3</sup> /h (1760 US gpm)
Head	Up to 150 m (490 ft)
Temperature	Up to 120° C (248° F)
Motor	Standard and EX motors
VFD	Direct or Bulkhead/Wall-mounted
ATEX approved.	
Applications: Bilge pumps, ballast pumps, fire pump, cooling-water pumps, deck-wash pumps and general service pumps.	



Modular S



Modular S Monobloc



SA (Monobloc)

## SA

Horizontal self-priming centrifugal pump SA / SAEN	
Nominal diameter (DN)	20 to 200
Flow rate	Up to 650 m <sup>3</sup> /h (2900 US gpm)
Head	Up to 110 m (360 ft)
Temperature	Up to 120° C (248° F)
Motor	Standard and EX motors
VFD	Direct or Bulkhead/Wall-mounted
Applications: Bilge pumps, ballast pumps, fire pumps, cooling water pumps, deck-wash pumps, fuel pumps, wellpoint pumps, irrigation pumps, circulation pumps.	

## Close Coupled Self-priming Centrifugal Pump

### NSA

Close coupled self-priming centrifugal pump NSA	
Nominal diameter (DN)	50 to 250
Flow rate	Up to 85 m <sup>3</sup> /h (374 US gpm)
Head	Up to 55 m (180 ft)
Temperature	
Motor	Standard and EX motors
VFD	Direct or Bulkhead/Wall-mounted
Applications: Bilge pumps, ballast pumps, general service pumps, emergency fire pumps, cooling water pumps	



NSA

VAC

Self-priming horizontal centrifugal pump VAC	
Nominal diameter (DN)	65 to 100
Capacity	Up to 85 m³/h (374 US gpm)
Head	Max 2 bar
Suction head	Up to 92%
Motor	Standard and EX motors
VFD	Direct or Bulkhead/Wall-mounted
Applications: (Emergency) bilge pumps, bilge-ballast pumps, general service pumps, vacuum pumps, gland-leaking water pumps, chemical industries, draining holds, emptying vessels, well point systems	



VAC

DESLUBE Submerged Lubrication Oil Pump

The DESLUBE series is a submerged deep-well pump designed for main engine lube oil supply for large two-stroke engines.

The design is based on our long-time experience of manufacturing deep-well pumps as well as the design features from our in-line centrifugal series.

The discharge socket is bolted to the dome flange and thus carries the pump without further suspension to the tank.

The DESLUBE pump should be used where good reliability and flexibility are required.

The DESLUBE pump from DESMI puts the advantage of a centrifugal pump into the main engine lube oil supply pump.

If the lube oil pressure is dropping, a DESLUBE pump will increase the flow to reduce the risk of severe damage and eventually break down of the main engine.

Benefits:

- Low NPSH
- Low noise
- Low vibration
- Low maintenance costs
- High reliability
- High flexibility



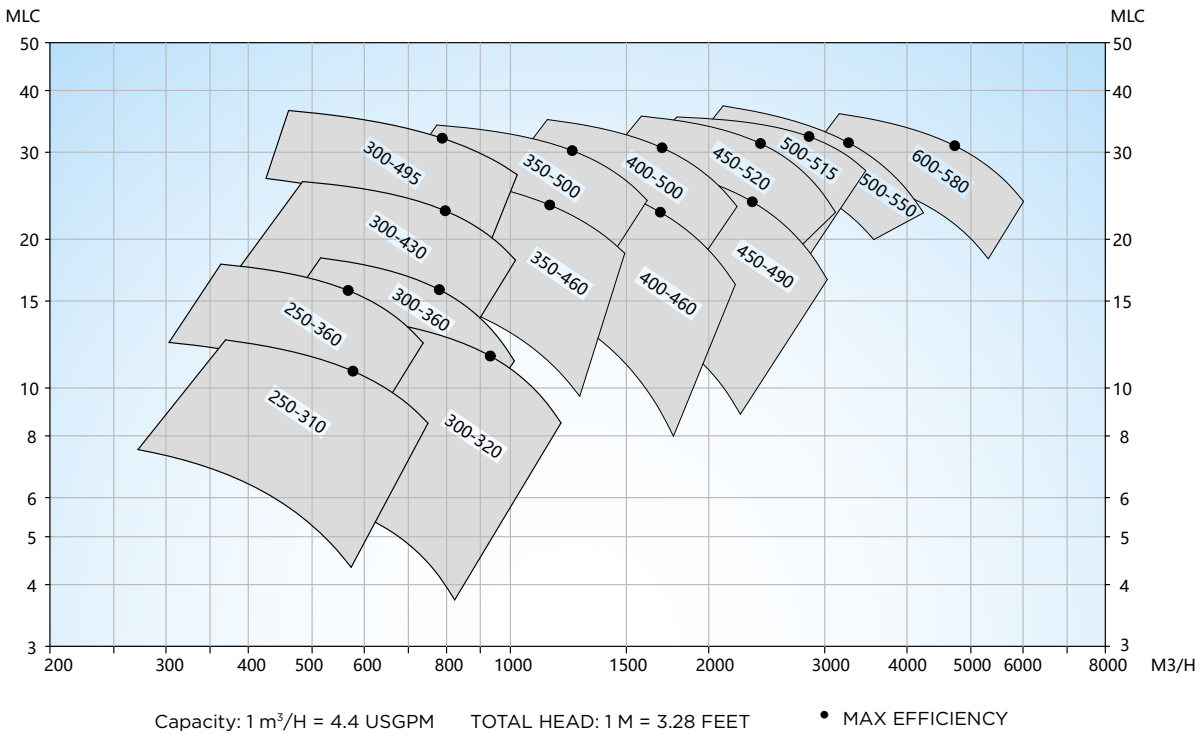
DESLUBE

DESLUBE

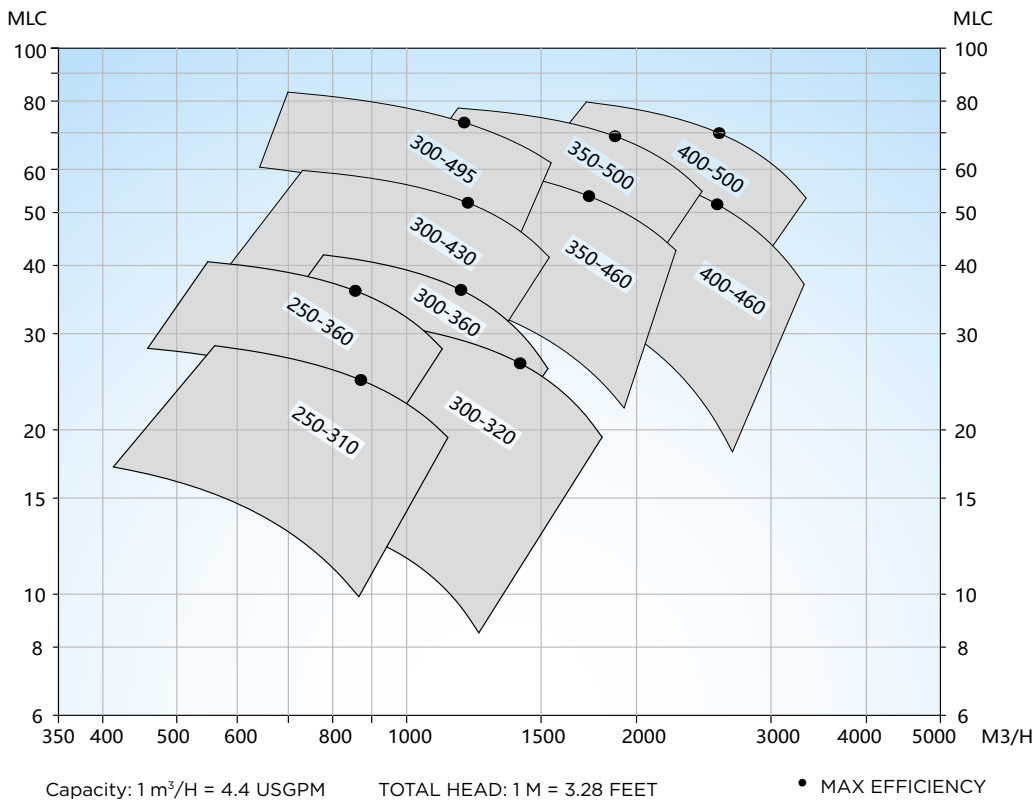
DESLUBE - Deep well pump	
2-pole	2, 4, 6, 10, 15, 25, 40, 60, 85, 125
4-pole	15, 25, 40, 60, 85, 125
Capacity range (m³/h)/(gpm)	0.5-193/2-849
Maximum pump pressure (m)/(ft)	5/16 to 400/1312
Temperature range medium	-20 - +140° C / -4 - 284° F
Applications: The DESLUBE series is a submerged deep well pump designed for main engine lubrication oil supply for especially large two-stroke engines.	



DSL Centrifugal Pump, 960 rpm, **50 HZ**

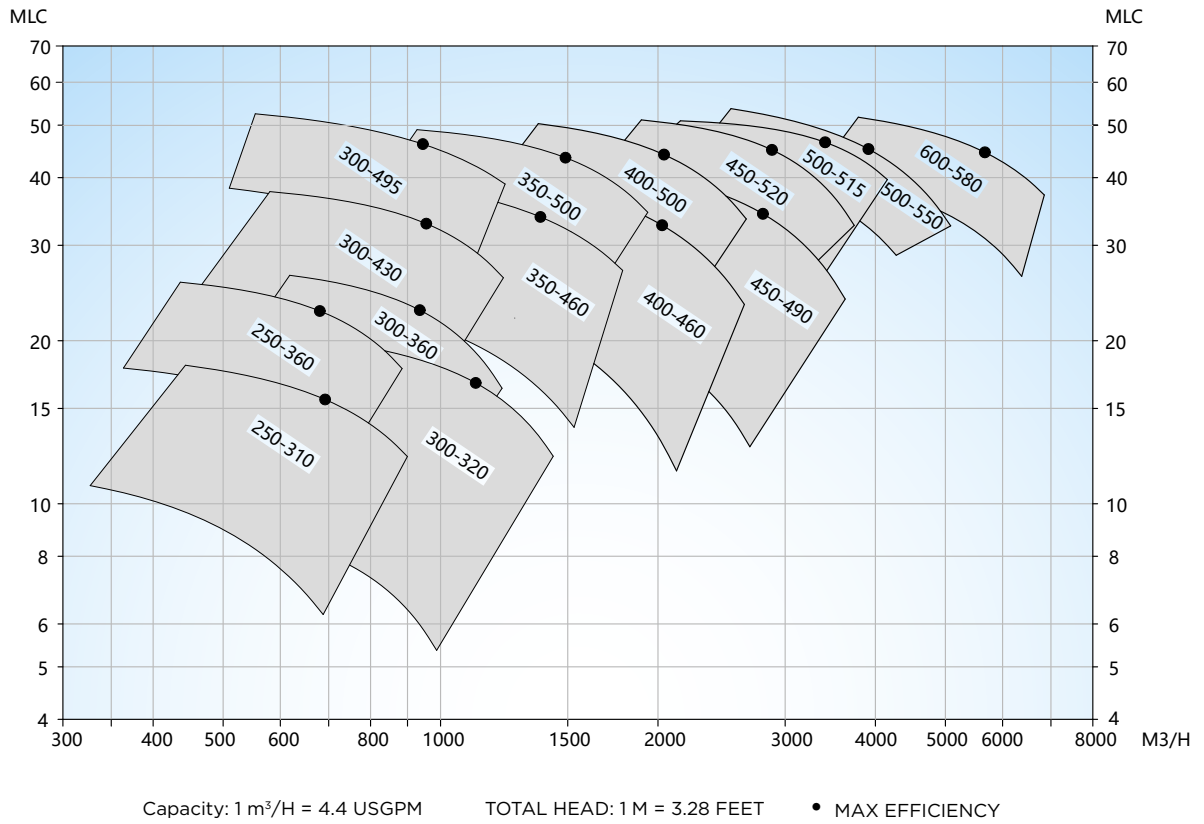


DSL Centrifugal Pump, 1450 rpm, **50 HZ**

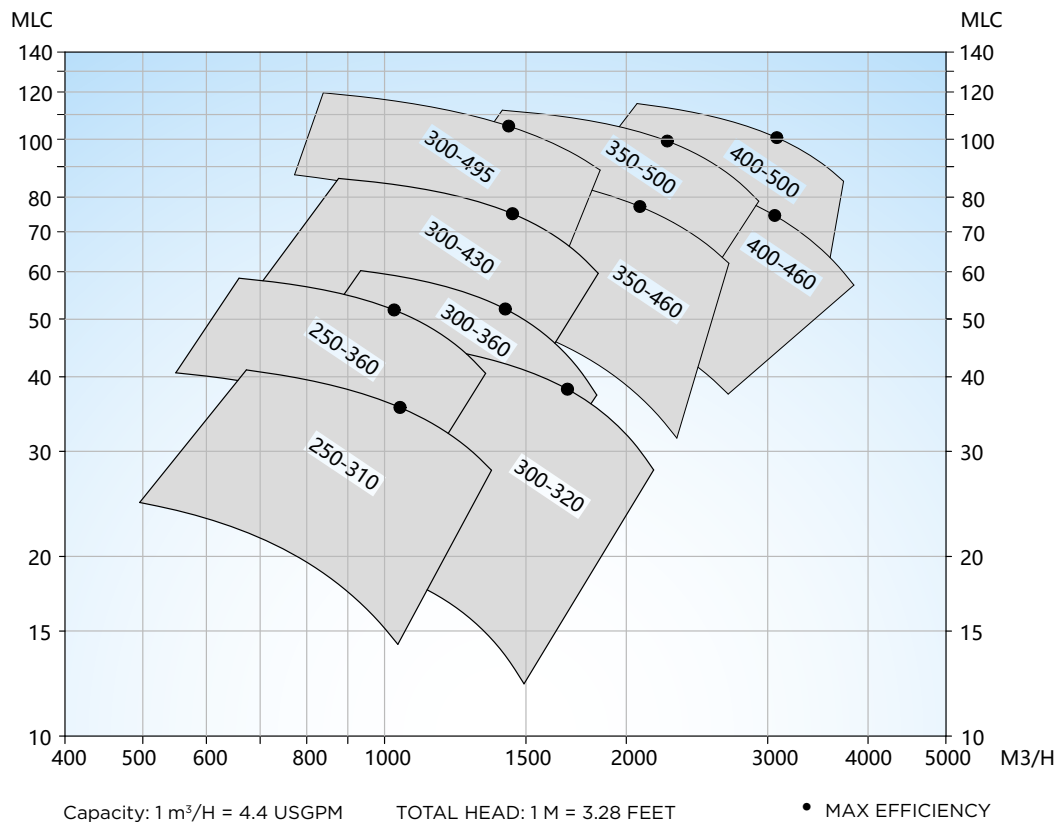




DSL Centrifugal Pump, 1152 rpm, **60 Hz**

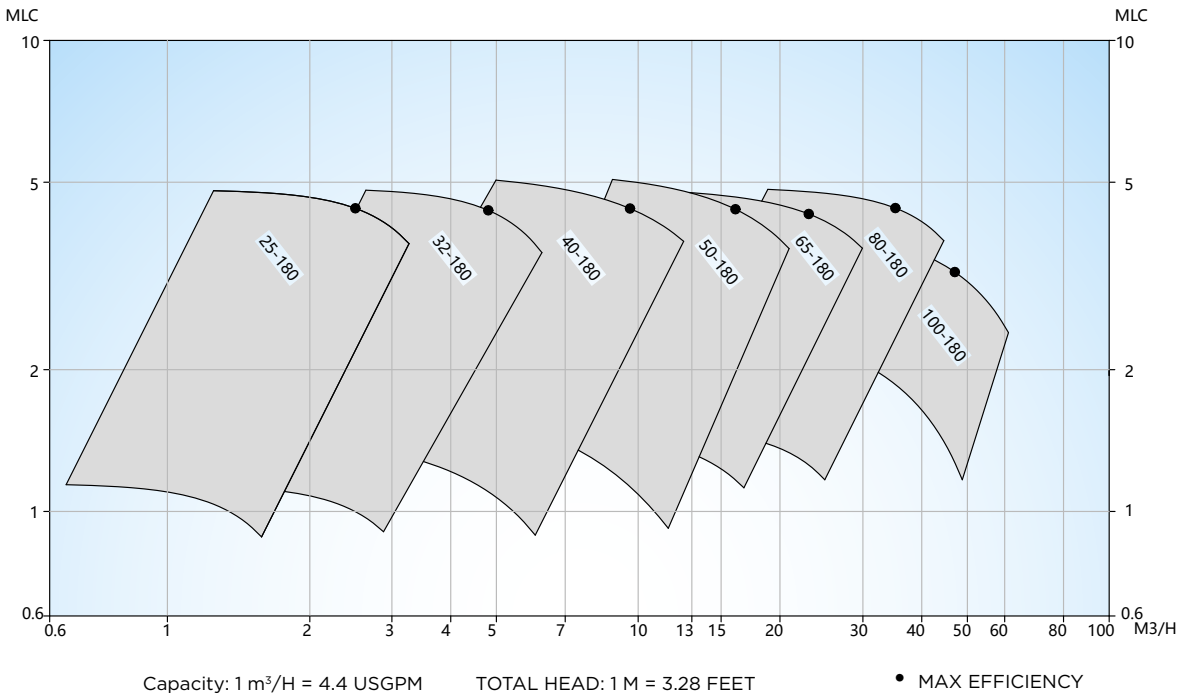


DSL Centrifugal Pump, 1740 rpm, **60 Hz**

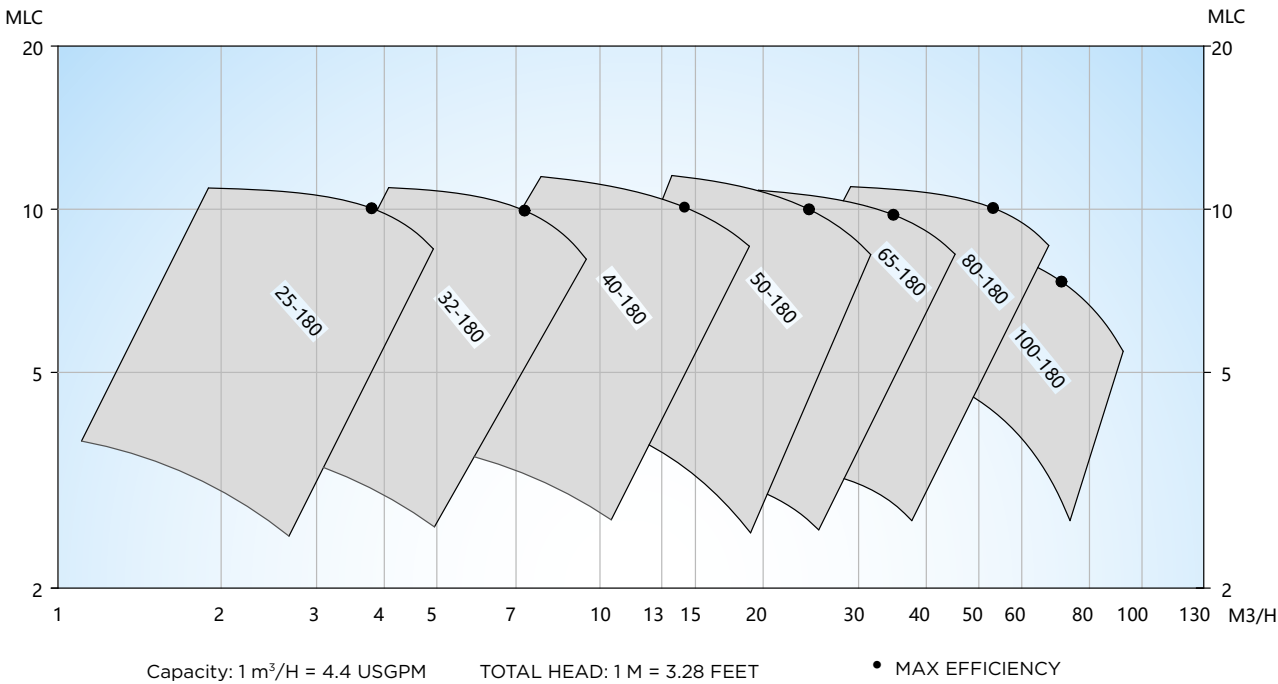




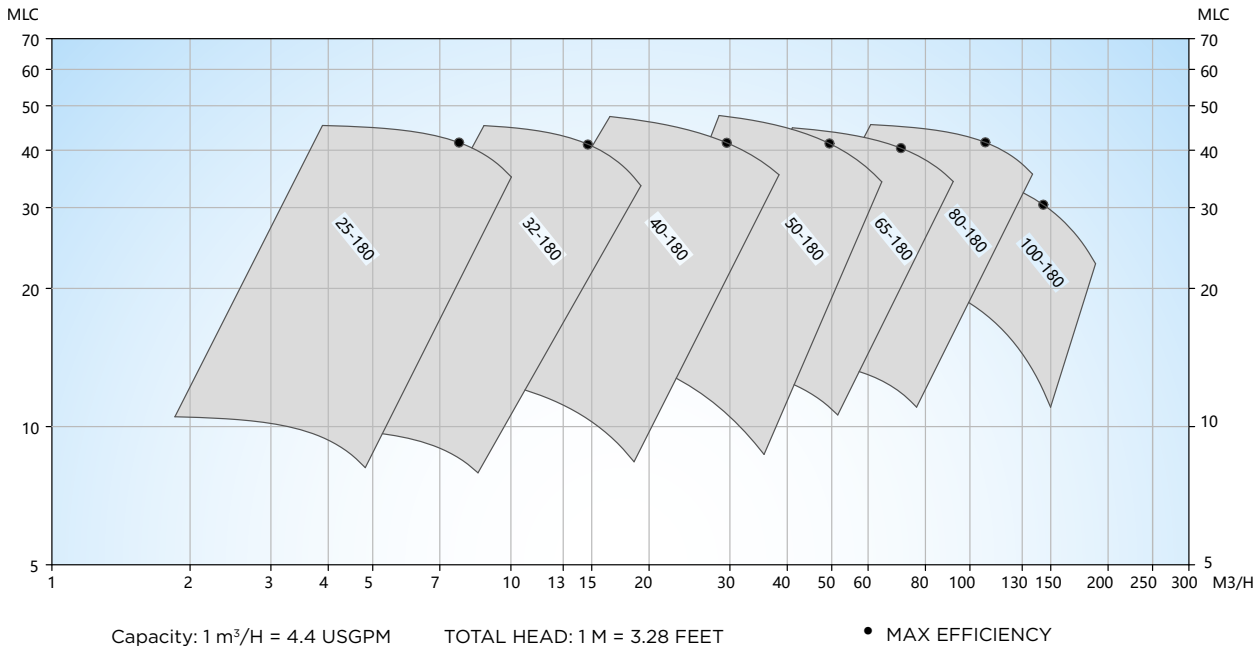
ESL Centrifugal Pump, 960 rpm, **50 Hz**



ESL Centrifugal Pump, 1450 rpm, **50 Hz**



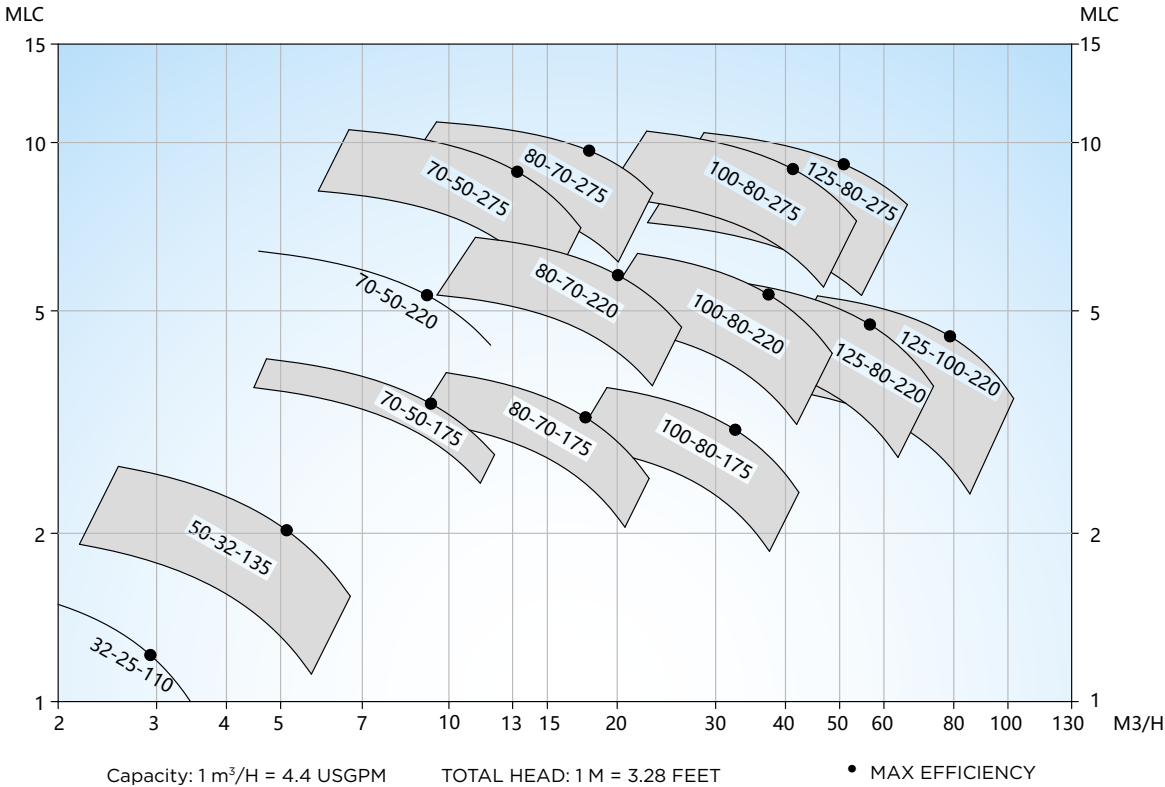
ESL Centrifugal Pump, 2950 rpm, **50 Hz**



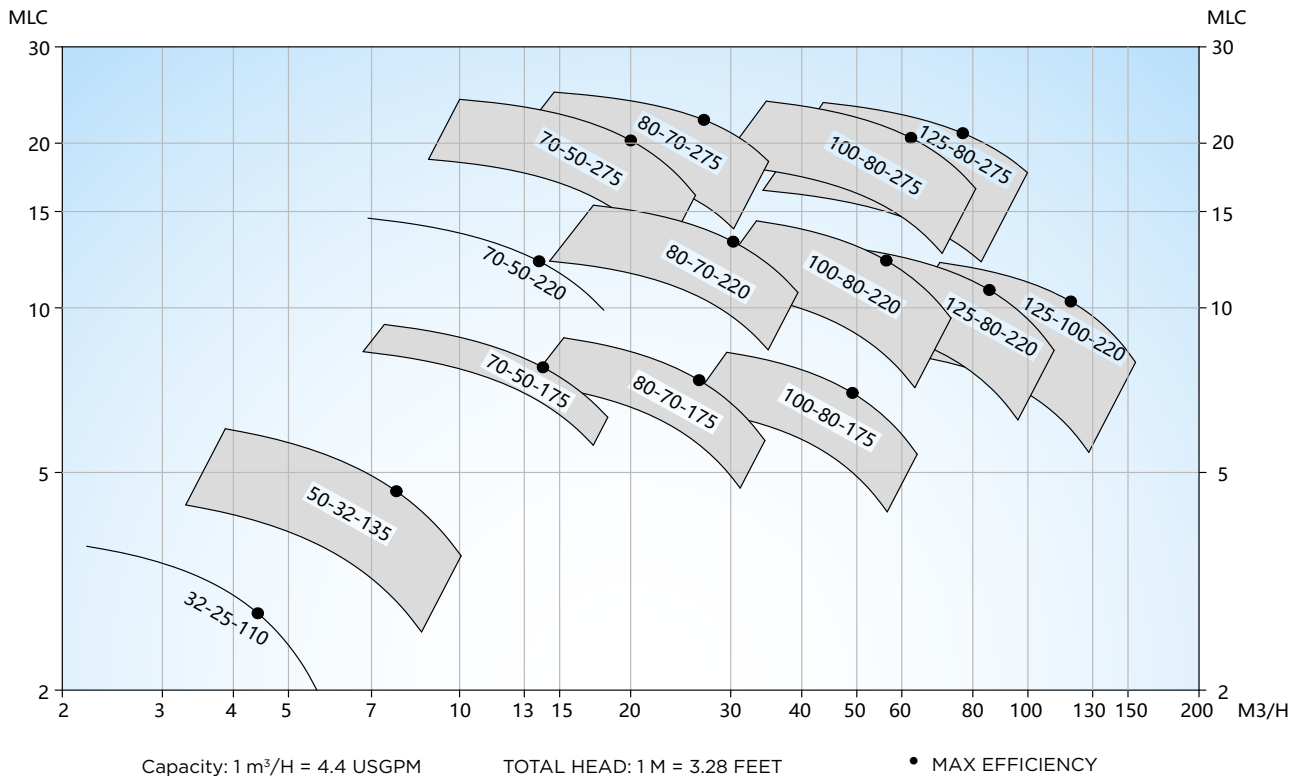
# DESMI Centrifugal Pumps - Modular S



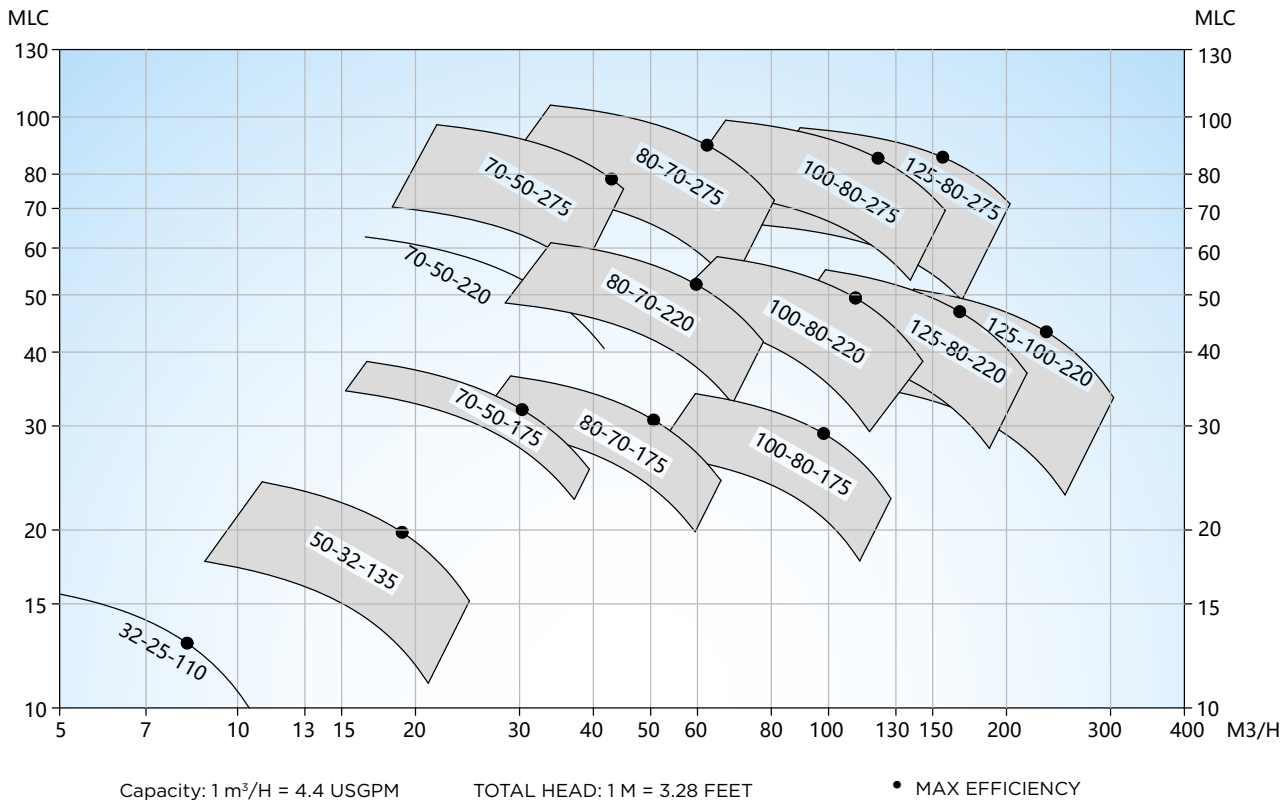
S Centrifugal Pump, 960 rpm, **50 Hz**



S Centrifugal Pump, 1450 rpm, **50 Hz**



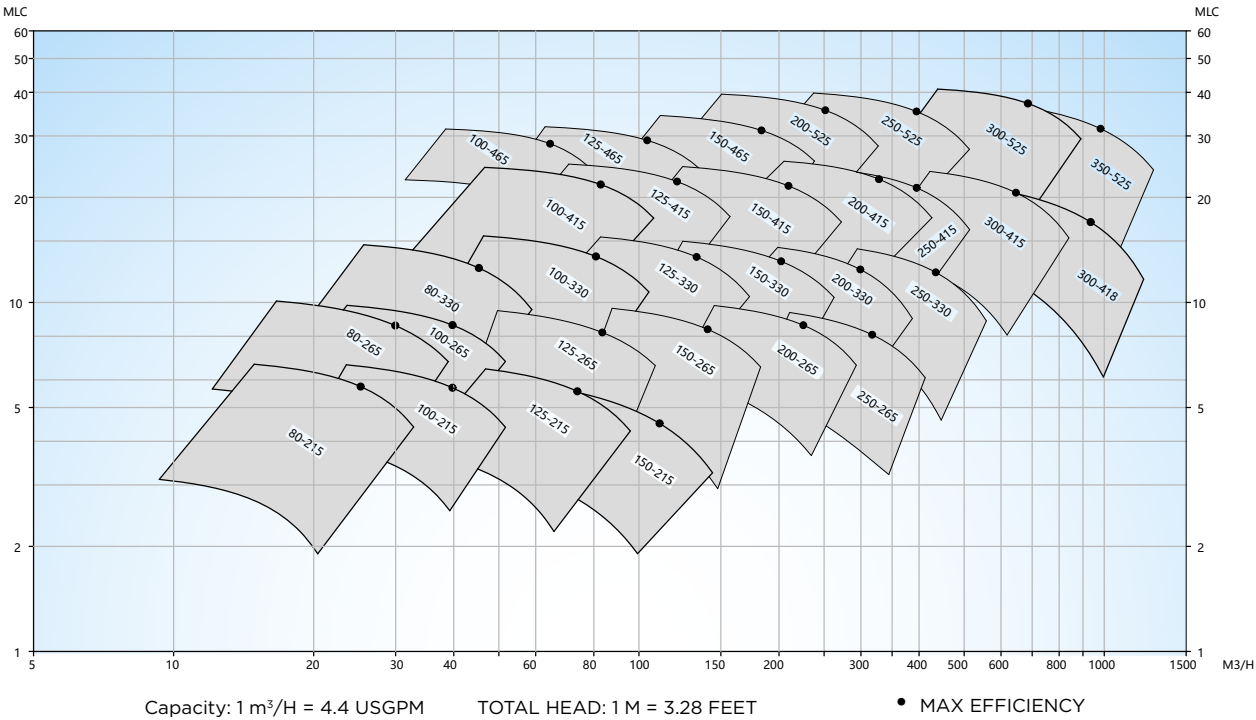
S Centrifugal Pump, 2950 rpm, **50 Hz**



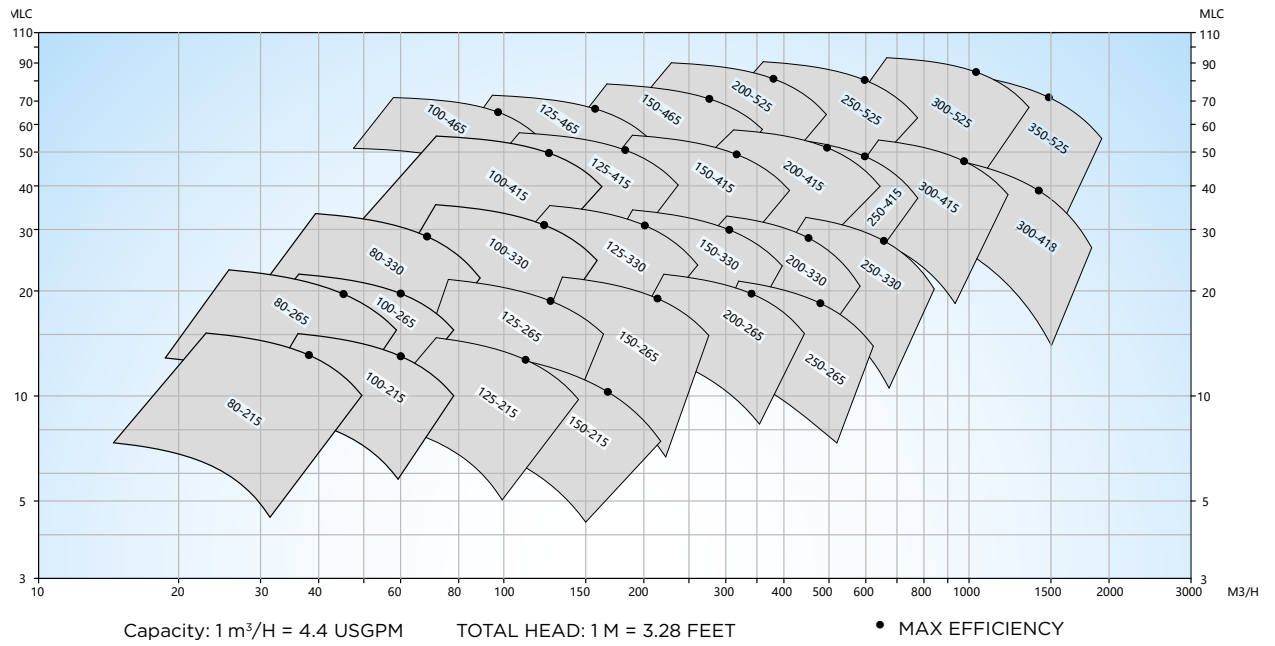




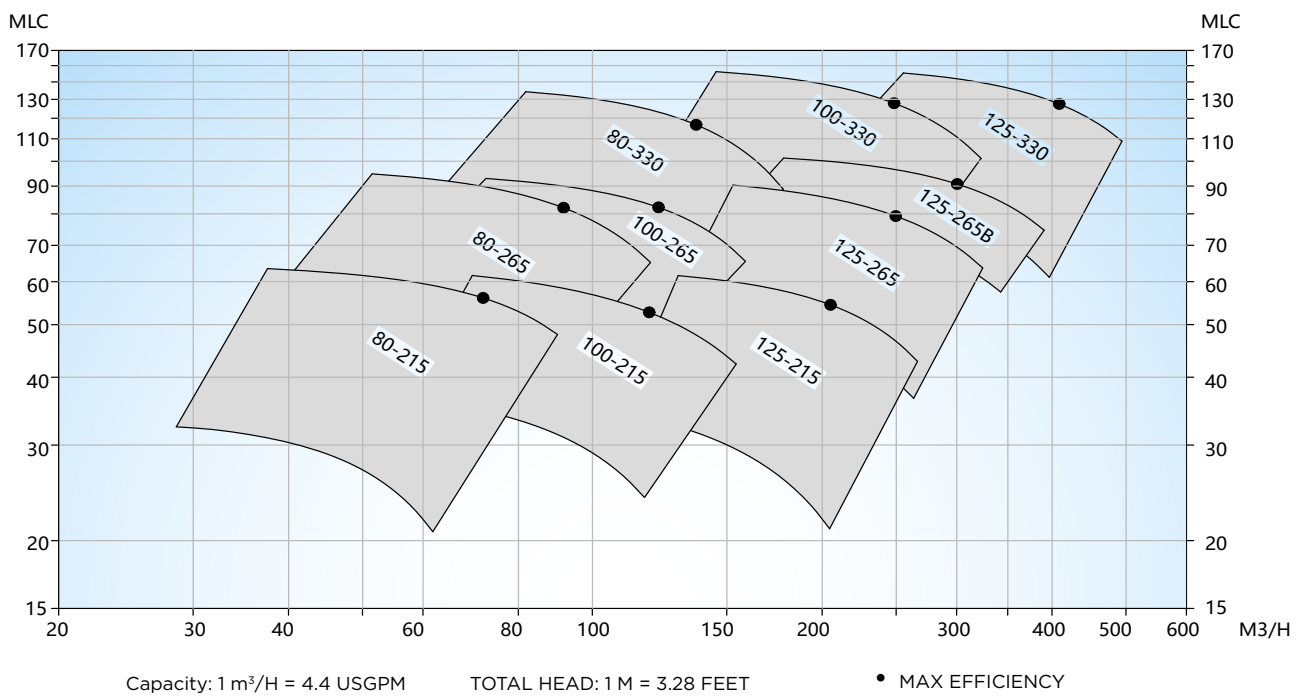
NSL Centrifugal Pump, 960 rpm, **50 Hz**



NSL Centrifugal Pump, 1450 rpm, **50 Hz**

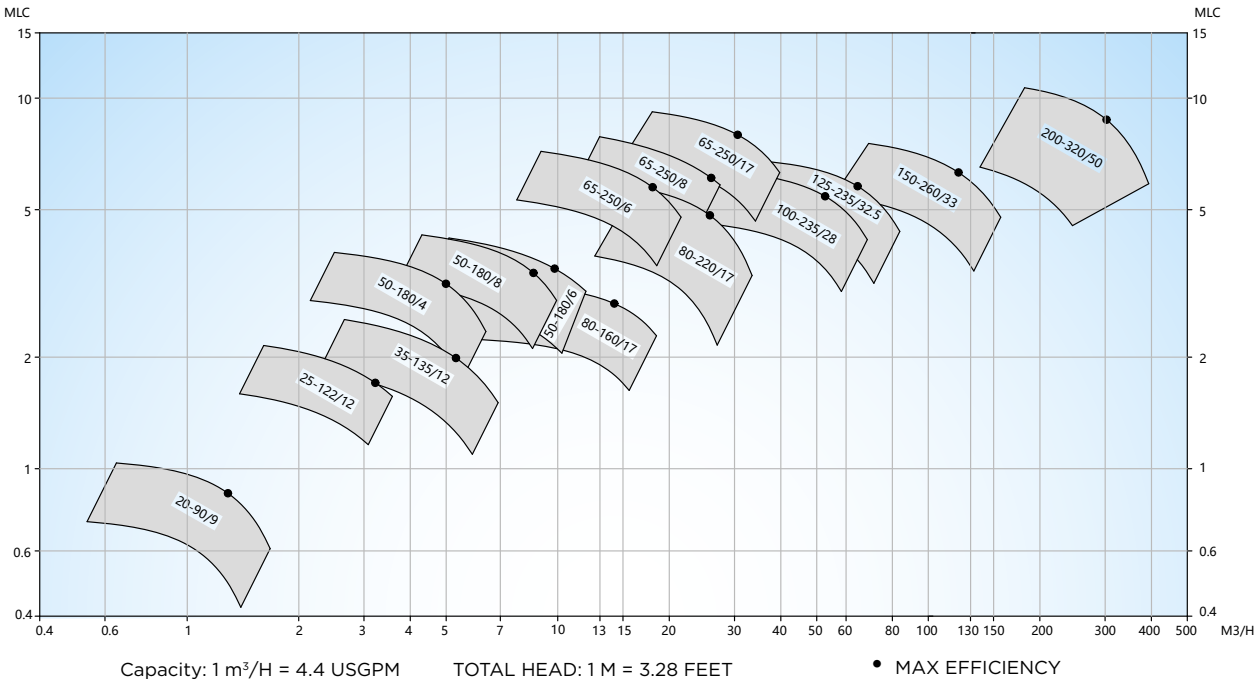


NSL Centrifugal Pump, 2950 rpm, **50 Hz**

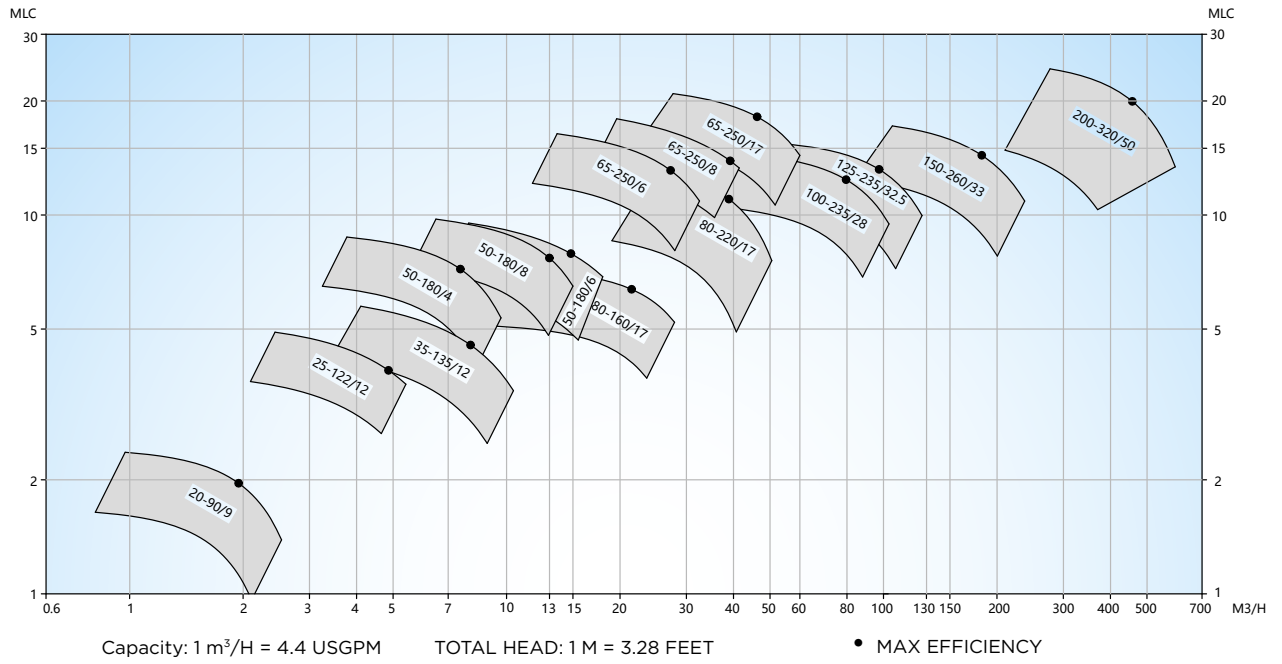




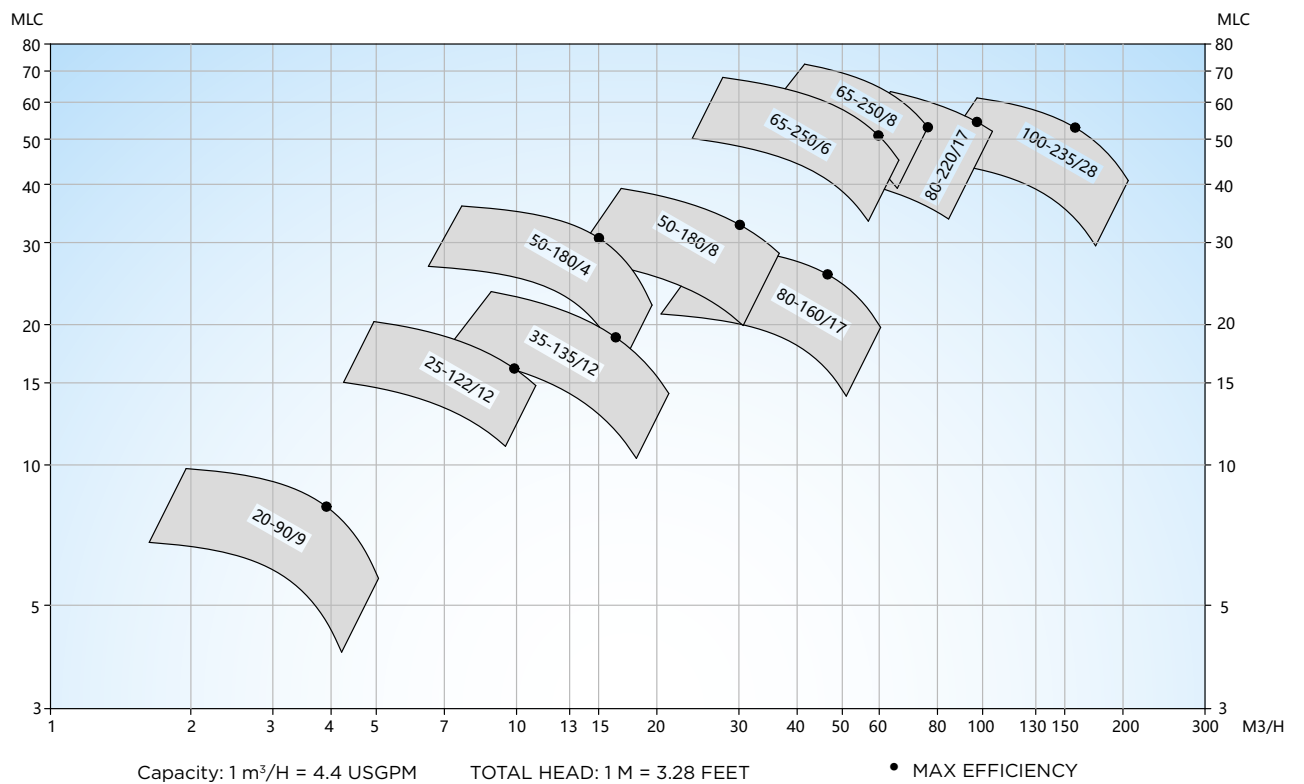
SA Centrifugal Pump, 960 rpm, **50 Hz**



SA Centrifugal Pump, 1450 rpm, **50 Hz**

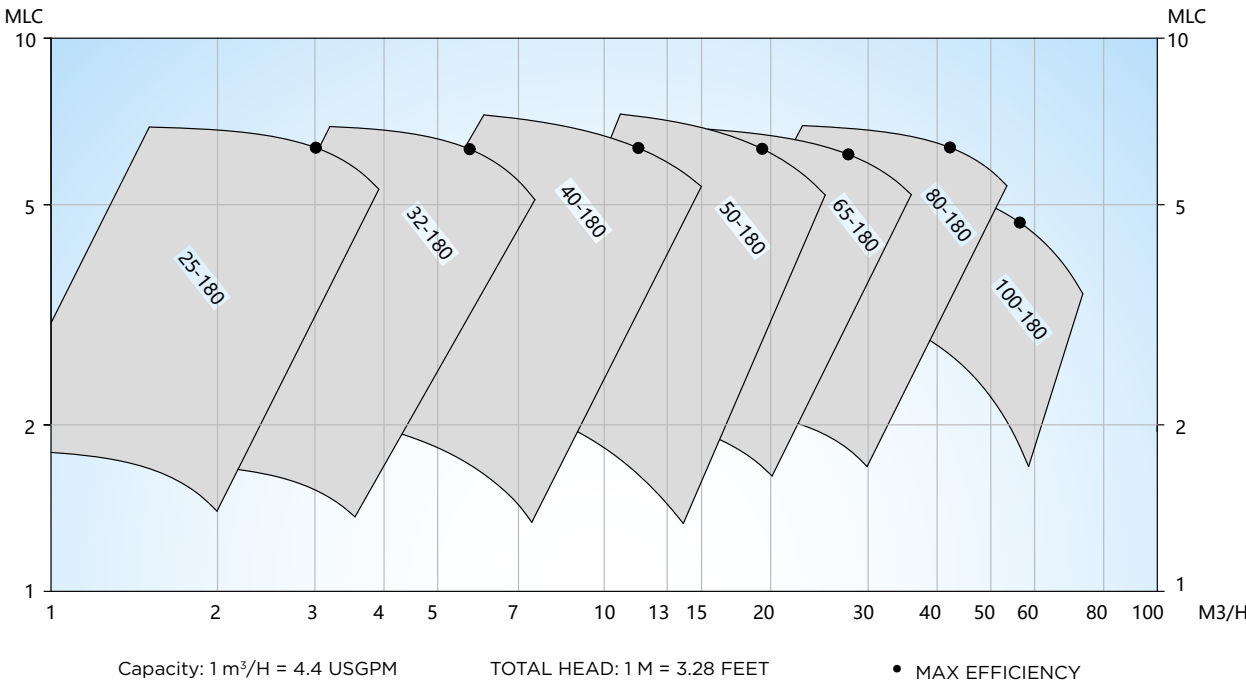


SA Centrifugal Pump, 2950 rpm, **50 Hz**



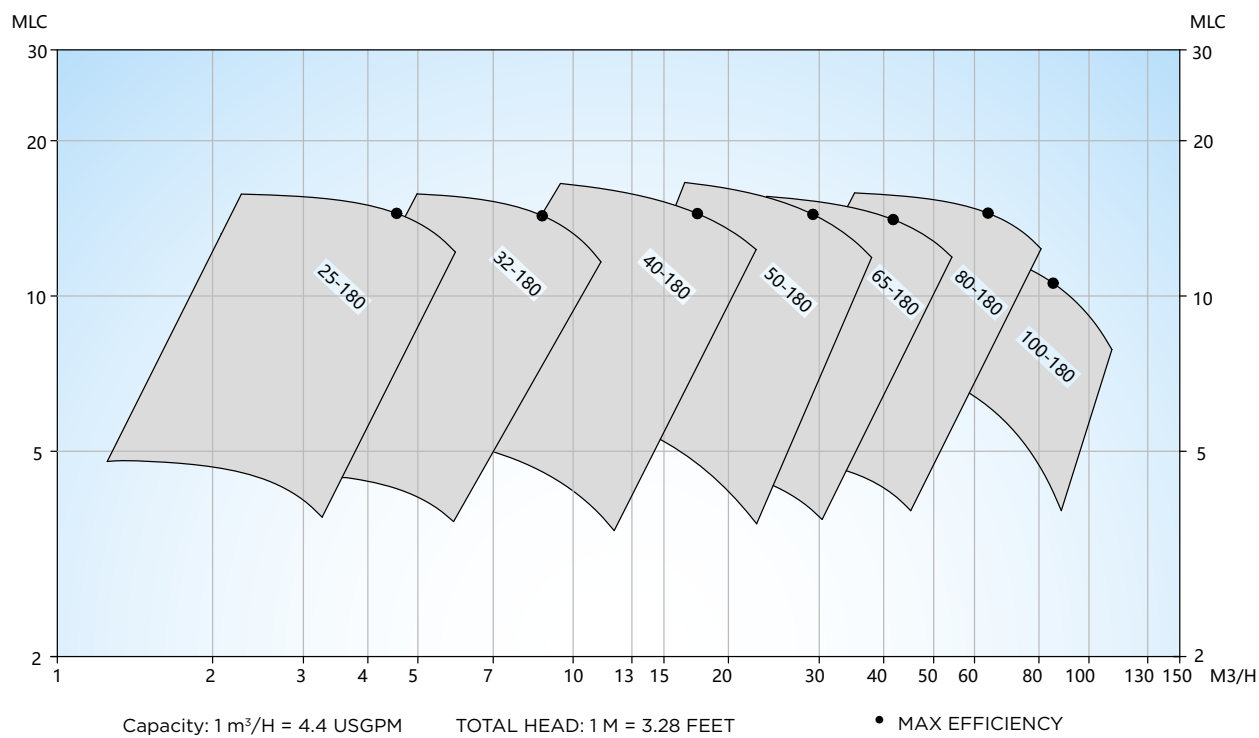


ESL Centrifugal Pump, 1152 rpm, **60 HZ**

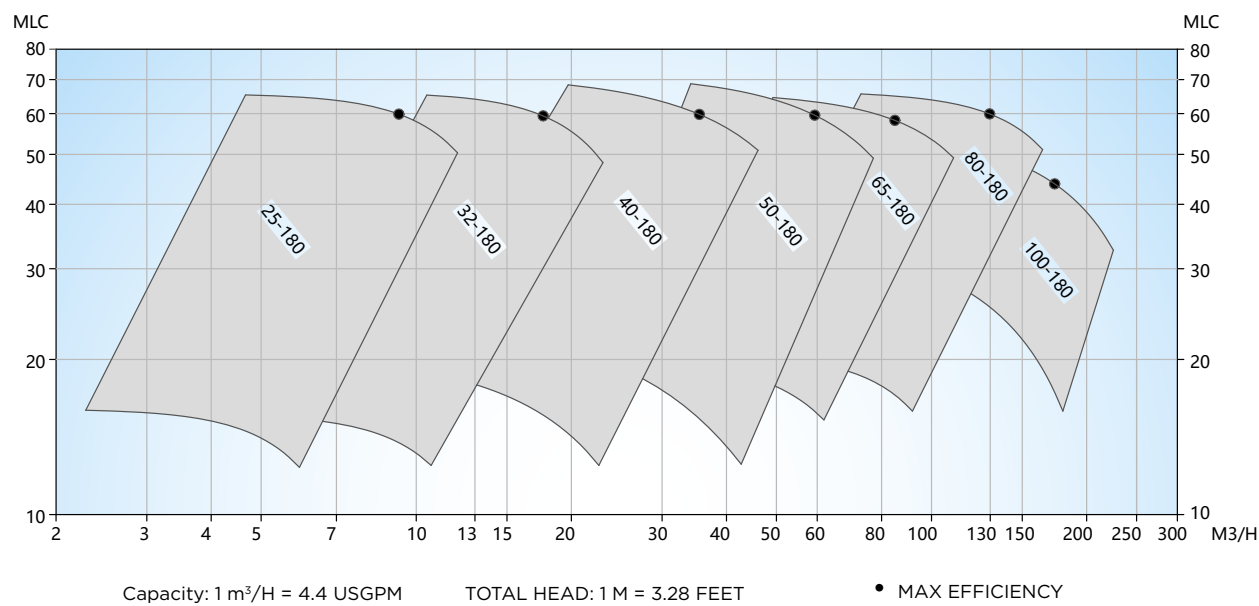




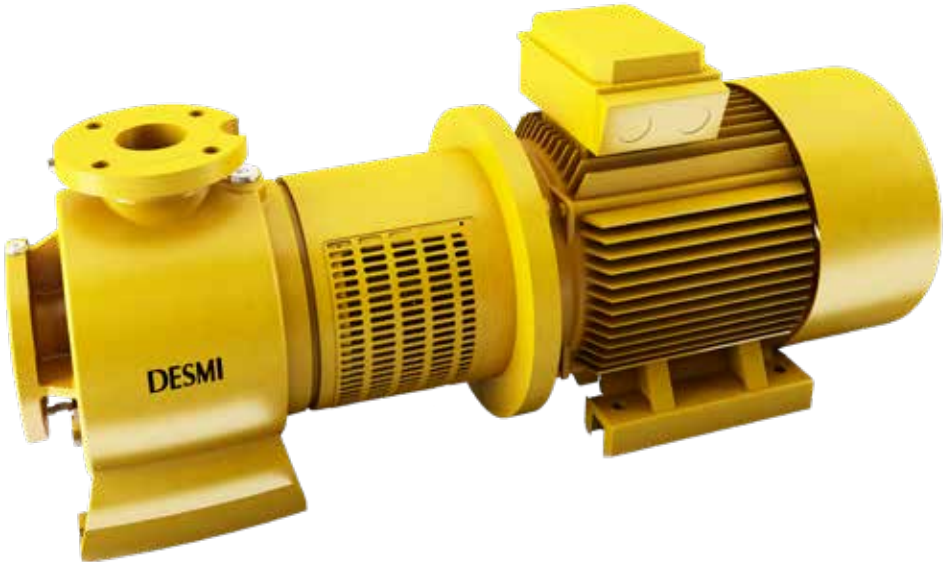
ESL Centrifugal Pump, 1740 rpm, **60 Hz**



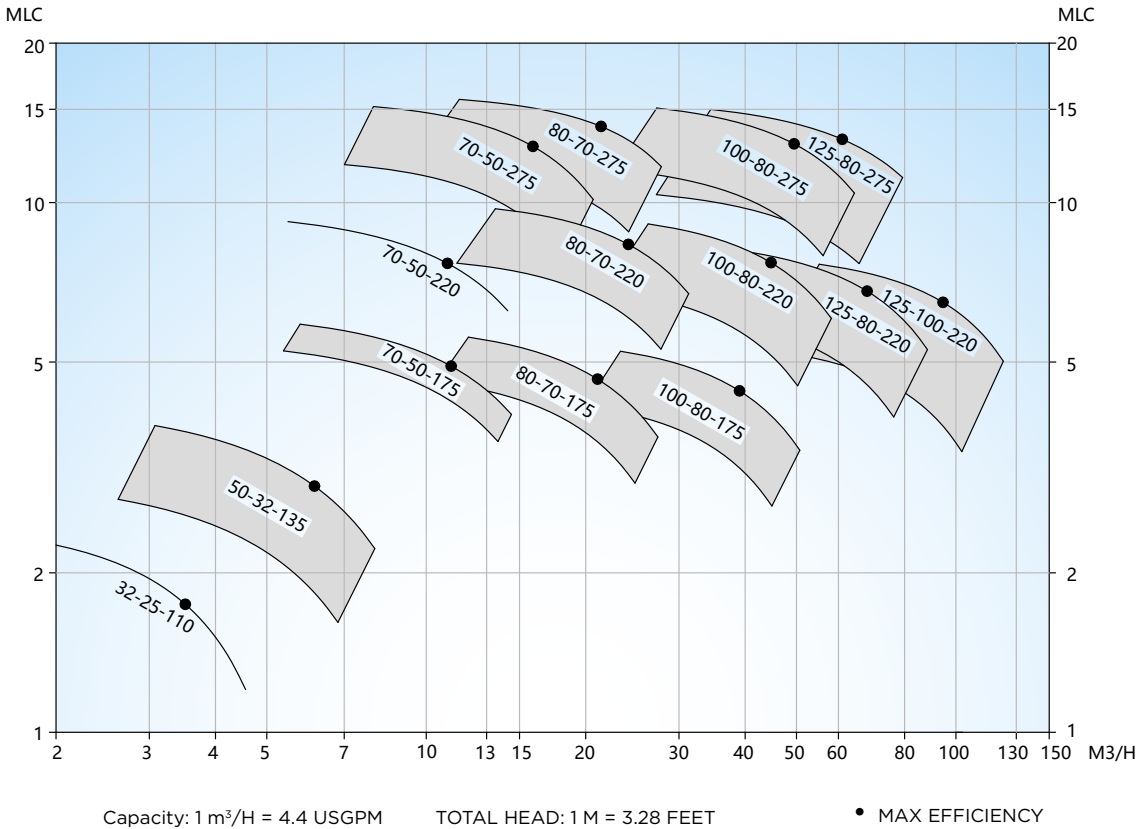
ESL Centrifugal Pump, 3450 rpm, **60 Hz**



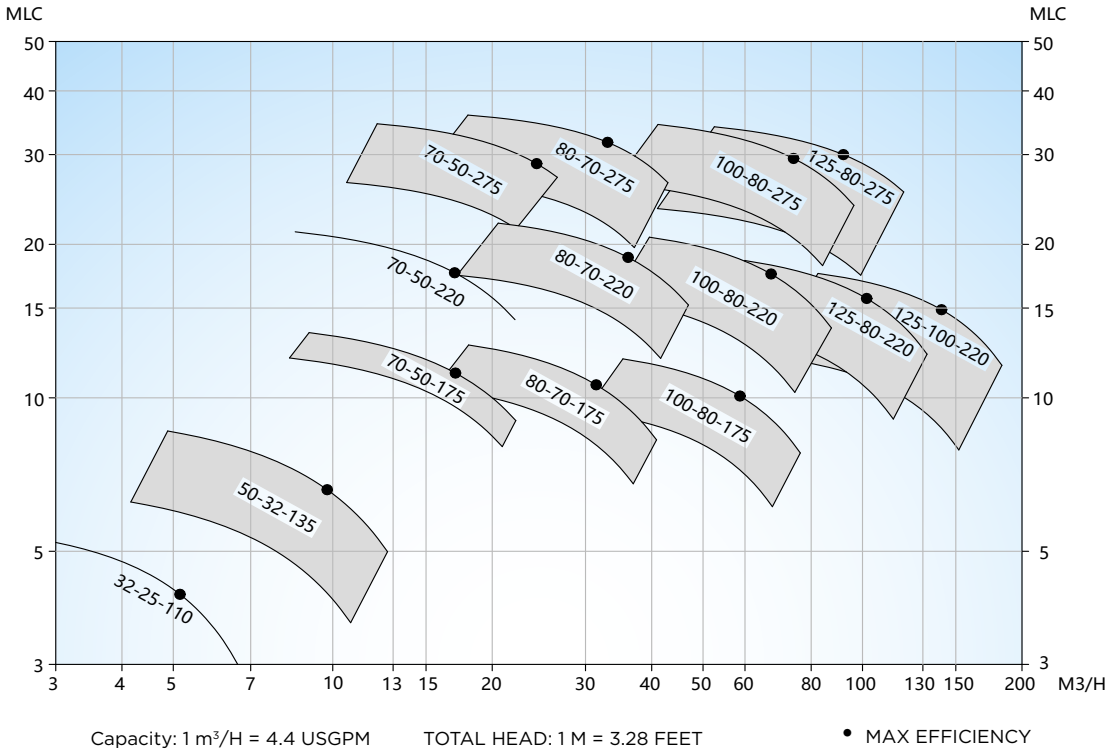
# DESMI Centrifugal Pumps - Modular S



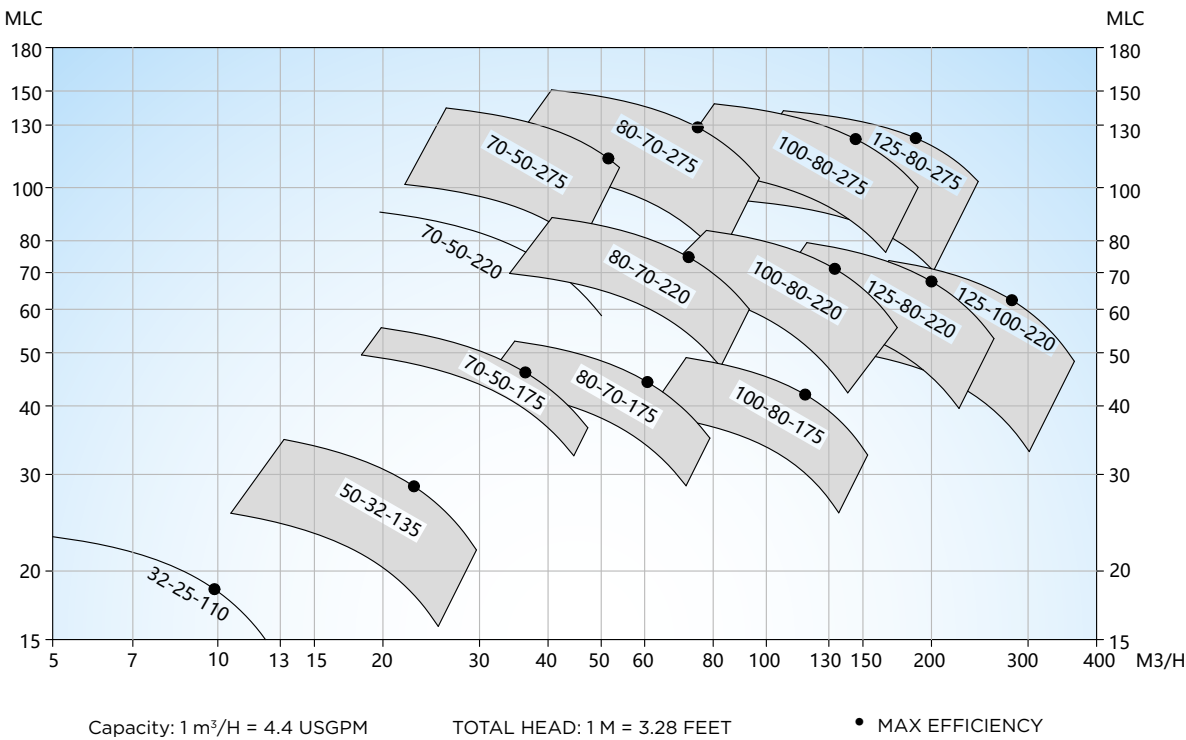
S Centrifugal Pump, 1152 rpm, **60 Hz**



S Centrifugal Pump, 1740 rpm, **60 Hz**

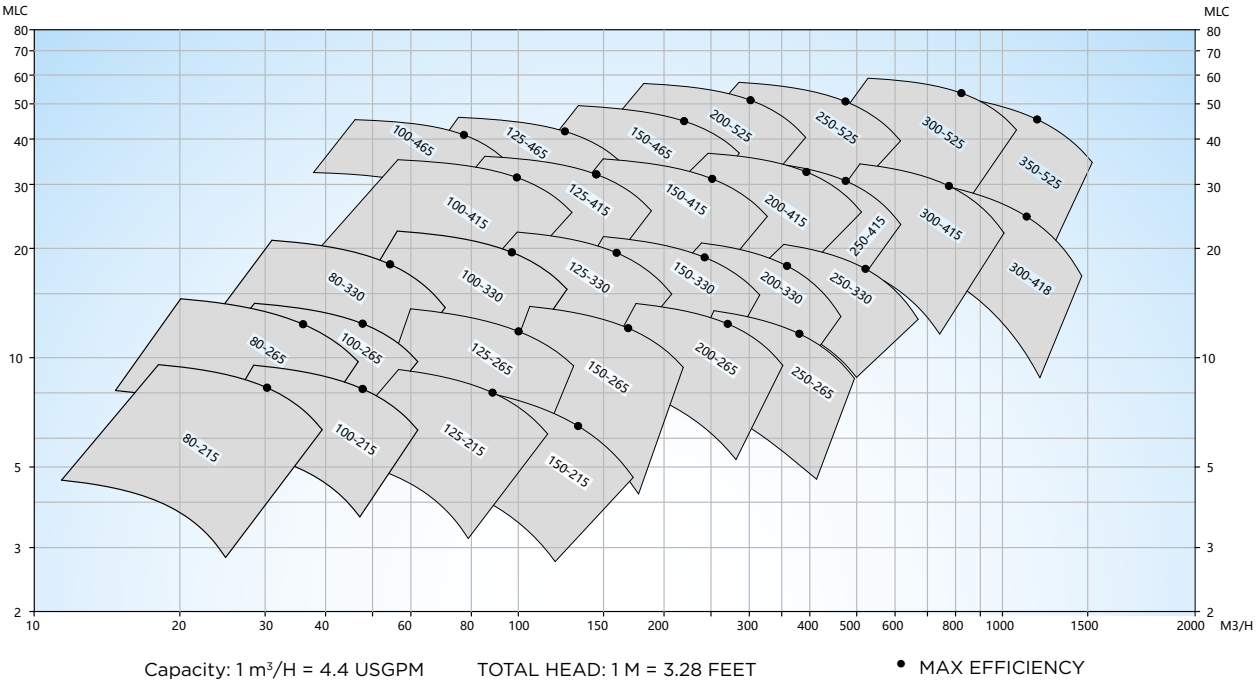


S Centrifugal Pump, 3450 rpm, **60 Hz**

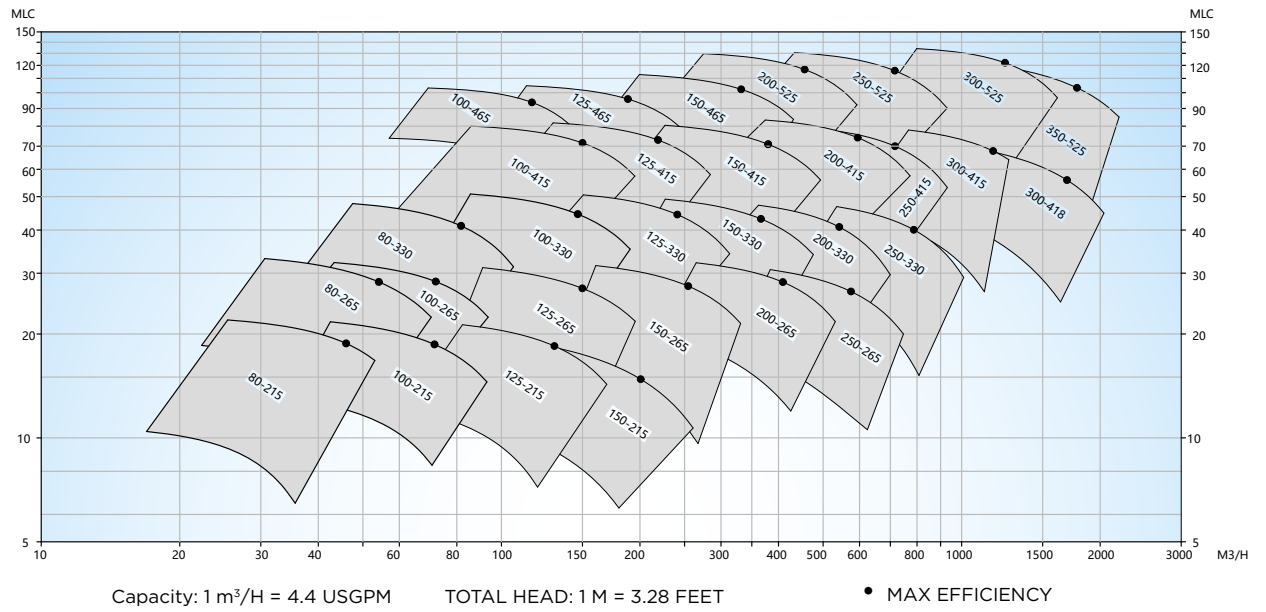




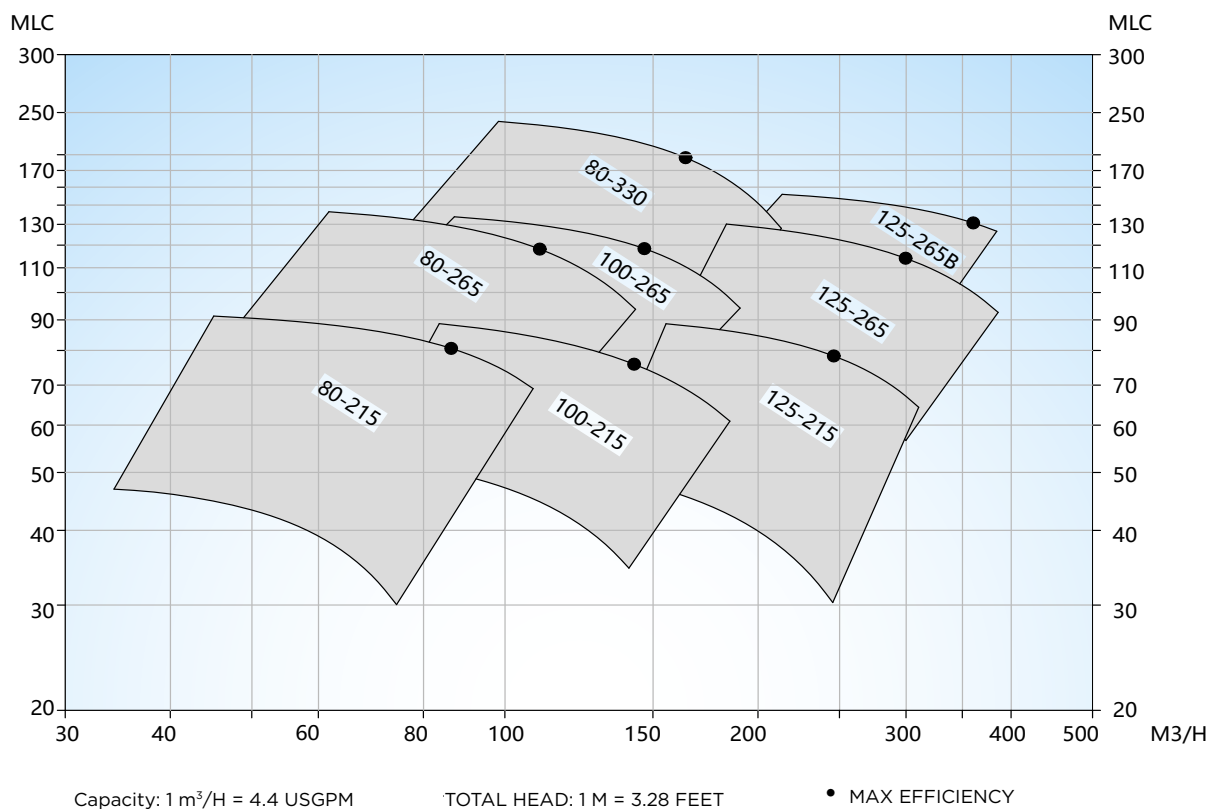
NSL Centrifugal Pump, 1152 rpm, **60 Hz**



NSL Centrifugal Pump, 1740 rpm, **60 Hz**



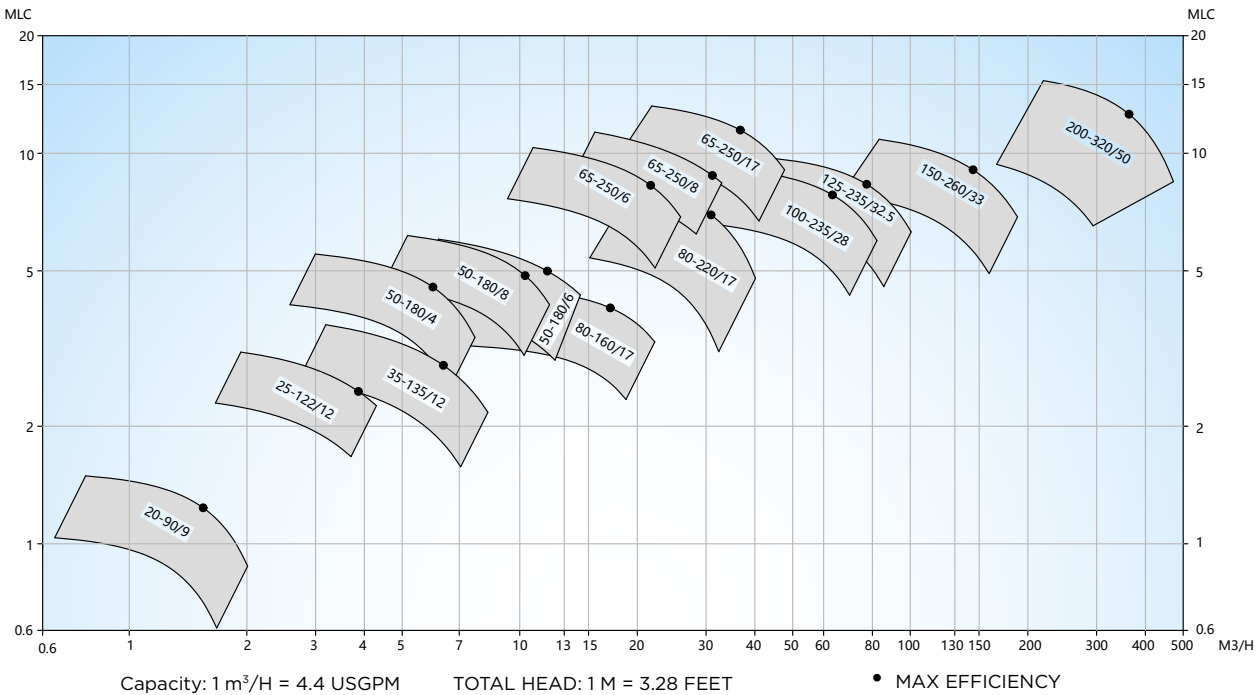
NSL Centrifugal Pump, 3450 rpm, **60 Hz**



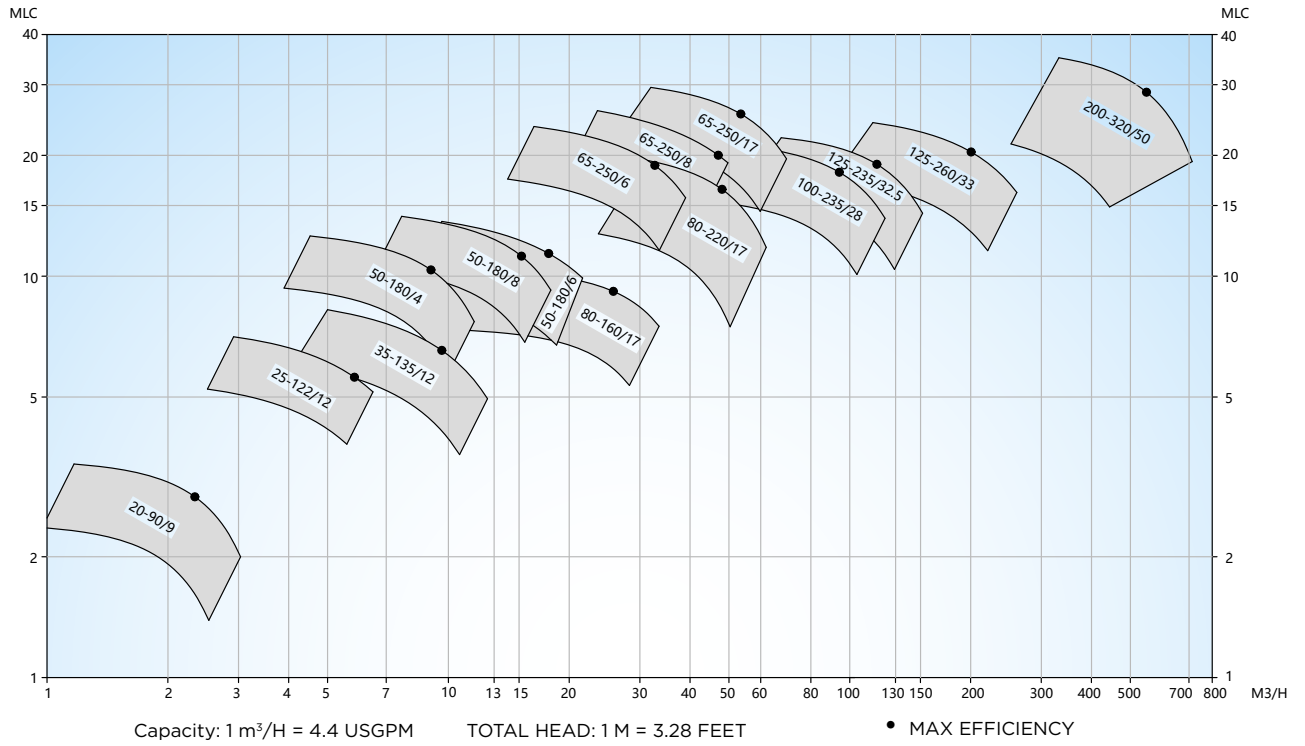




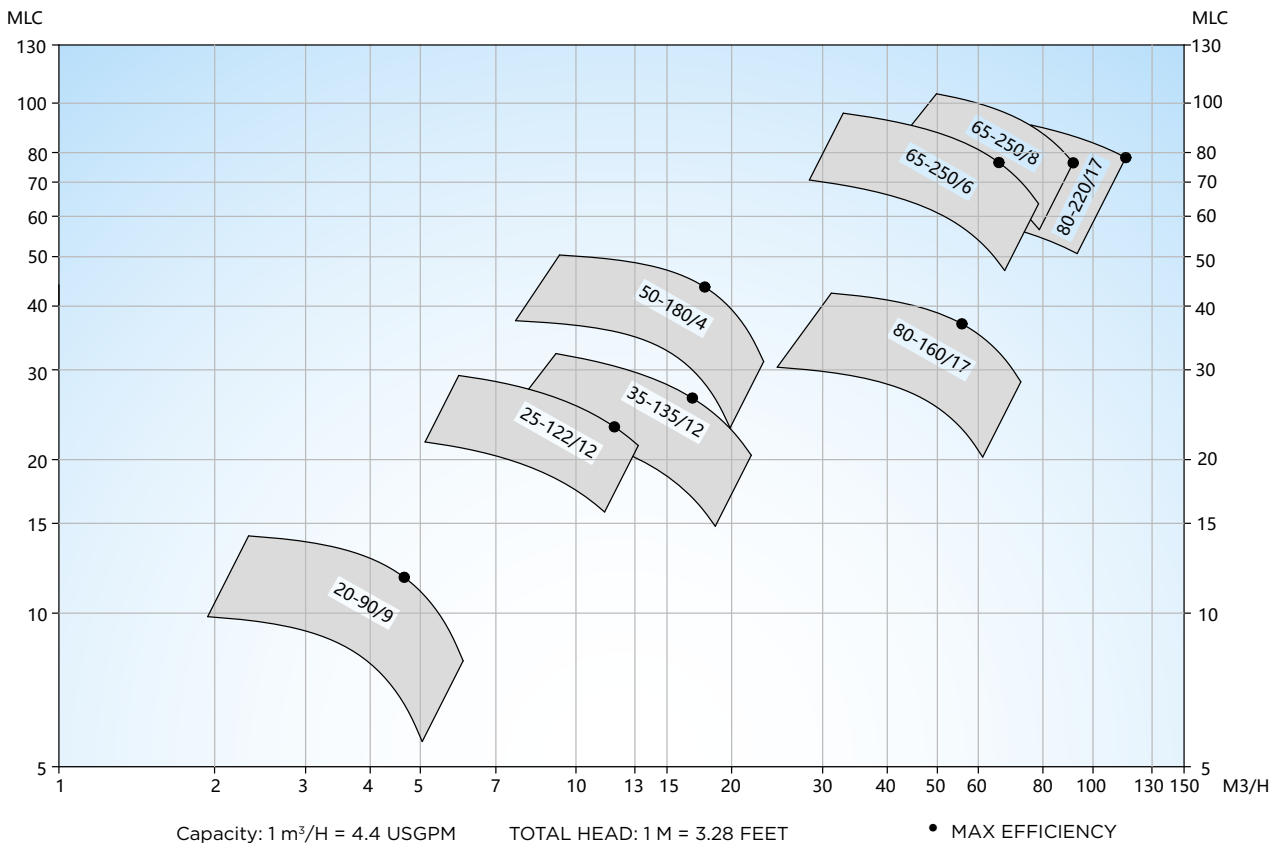
SA Centrifugal Pump, 1152 rpm, **60 Hz**



SA Centrifugal Pump, 1740 rpm, **60 Hz**



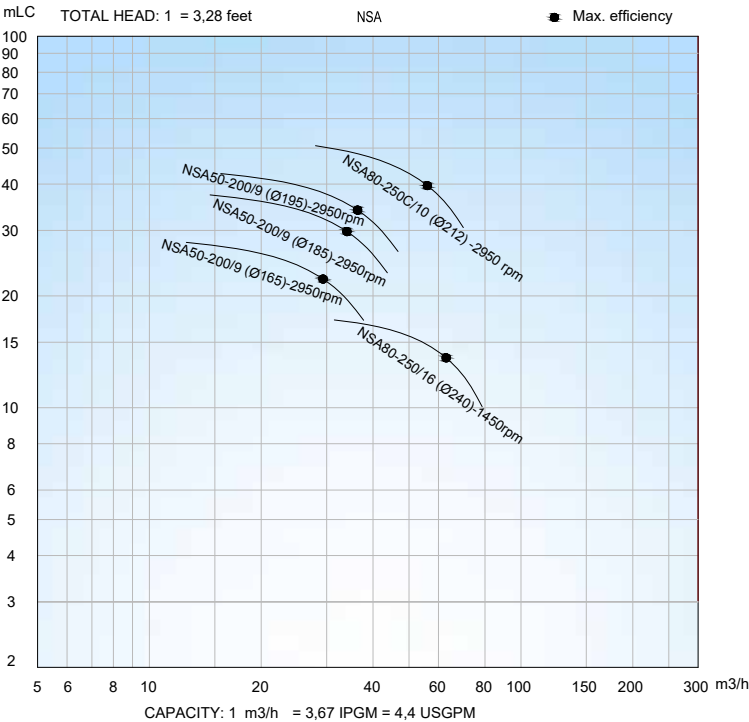
SA Centrifugal Pump, 3450 rpm, **60 Hz**



# DESMI Centrifugal Pumps - NSA



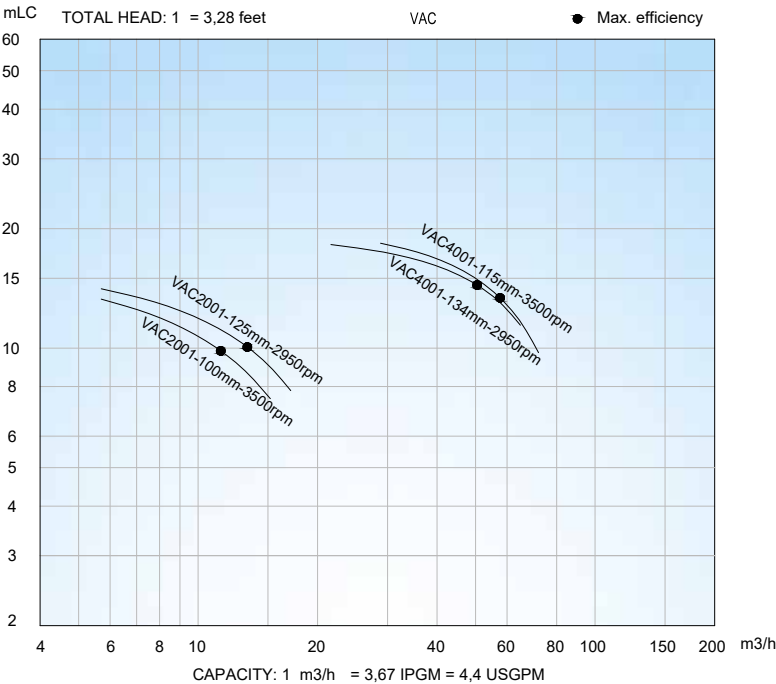
NSA Centrifugal Pump, **50 Hz**



# DESMI Centrifugal Pumps - VAC



VAC Centrifugal Pump, **50 & 60 Hz**







# ROTAN® - Internal Gear Pumps for Marine

All the ROTAN® models have a differential pressure up to 16 bar/232 psi and a suction lift up to 0.8 bar/11.6 psi vacuum while pumping.

## ROTAN® GP

ROTAN® GP - General Purpose	
Capacity range	Up to 50 m³/h / 220 gpm
Speed	Up to 1750 rpm
Differential pressure	Up to 16 bar / 232 psi
Suction lift	Up to 0.5 / 7.25 psi bar vacuum while priming Up to 0.8 bar / 11.6 psi vacuum while pumping
Viscosity range	Up to 7,500 cSt
Temperature	Up to 150°C / 302°F
Pump medium	For clean, non abrasive liquids and clean oil. Fuel, diesel, gas, and lube oil.

### ROTAN® GP

General purpose pumps in cast iron. The simple and compact construction makes it a competitive pump suitable for most applications.

#### GP pump benefits:

- Easy installation
- Low maintenance costs
- Small footprint
- Low noise and vibration



ROTAN® GP

## ROTAN® HD

ROTAN® GP - Heavy Duty	
Capacity range	Up to 250 m³/h / 1100 gpm
Speed	Up to 1750 rpm
Differential Pressure	Up to 16 bar / 232 psi
Suction lift	Up to 0.5 bar / 7.25 psi vacuum while priming Up to 0.8 bar / 11.6 psi vacuum while pumping
Viscosity range	Up to 250,000 cSt
Temperature	Up to 250°C / 482°F
Pump medium	For viscous, non-corrosive liquids. Fuel, diesel, gas and lube oil.

### ROTAN® HD

Heavy duty pumps in cast iron for a wide range of viscous, non-corrosive liquids. Designed for difficult applications and those involving high-viscosity oils.

#### HD pump benefits:

- Heavy duty
- High reliability
- Low maintenance costs
- Low noise and vibration



ROTAN® HD

## ROTAN® ED

ROTAN® ED - Environmental Duty	
Capacity range	Up to 90 m³/h / 396 gpm
Speed	Up to 1750 rpm
Differential pressure	Up to 16 bar / 232 psi
Suction lift	Up to 0.5 bar / 7.25 psi vacuum while priming Up to 0.8 bar / 11.6 psi vacuum while pumping
Viscosity range	Up to 10,000 cSt
Temperature	Up to 250°C / 482°F
Pump medium	Where no leakage, liquid or gaseous, is allowed. Fuel, diesel, gas, and lube oil.

### ROTAN® ED

Environmental duty - Magnetically coupled pumps in cast iron, carbon or stainless steel for ultimate protection against leakage.

#### ED pump benefits:

- Magnetically coupled pumps for ultimate protection against leakage.
- Easy reversible direction of flow.



ROTAN® ED



The art of transporting water is finding the right solution, with maximum efficiency, for each situation. The DPV series of vertical, multistage, centrifugal pumps is the result of 55 years of experience and the pumps can be used for numerous applications.

The new DPV pump series is revolutionary in terms of energy-savings and efficiency. Corrosion-free materials, advanced production methods and an optimised hydraulic assembly all contribute towards providing a unique example of craftsmanship.

The modular construction of the product enables you to modify the pump according to your specifications.



Modular construction  
Quality materials

50 Hz					
Model	DPV 2	DPV 4	DPV 6	DPV 10 2P	DPV 10 4P
Capacity					
Capacity range (m³/h)/(gpm)	0.2-3.3/0.9-15	0.4-6.5/1.8-29	0.6-9/2.6-40	1.0-13.2/4-58	0.5-6.6/2-29
Nominal capacity at Qopt. (m³/h)/(gpm)	1.9/8.4	4/18	6.3/28	10/44	5/22
Pressure					
Norm pressure	PN16-25-40				
Maximum pump pressure (m)/(ft)	229/751	234/768	256/840	239/784	58/190
Maximum pressure at Qopt. (m)/(ft)	187/614	193/633	200/654	179/587	43/141
NPSH at Qopt. (m)/(ft)	2.2/7.2	1.2/4	1.2/4	1.2/4	0.9/3
Hydraulic assembly					
Temperature range medium	-20 - +140° C / -4 - 284° F				

## DP pump application

- ME pre-heating pump
- Hot water circulation pump
- Refrigeration water circulation pump
- HVAC water circulation pump
- Technical water pump
- Hydrophore pump
- Boiler water transfer pump
- Chemical clean pump

50 Hz					
Model	DPV 15 2P	DPV 15 4P	DPV 25 2P	DPV 25 4P	DPV 85
Capacity					
Capacity range (m³/h)/(gpm)	1.8-22.5/8-99	0.98-11.3/4.3-50	2.8-35/12-154	1.4 - 17.5	8.5 - 112.8
Nominal capacity at Qopt. (m³/h)/(gpm)	18/79	9.8/43	28/123	14	85.7
Pressure					
Norm pressure	PN16-25-40				
Maximum pump pressure (m)/(ft)	248/814	59/194	246/807		176/577
Maximum pressure at Qopt. (m)/(ft)	193/633	44/144	185/607	45/148	132/433
NPSH at Qopt. (m)/(ft)	1.2/4	0.6/2	3.0/10	0.8/3	2.2/7
Hydraulic assembly					
Temperature range medium	-20 up to + 140° C / -4 - 284° F				

## Low NPSH

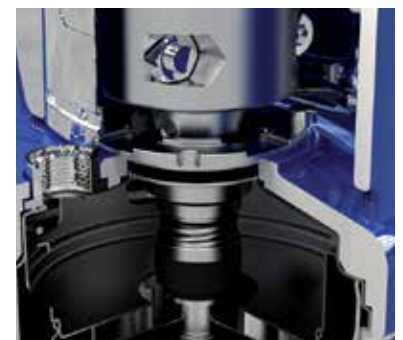
- Extended life span as a result of favourable suction conditions
- NPSH-level 0.6 up to 3.8 (Qopt)

## Modular construction

- Wide range of options
- All specials are standard
- Short delivery times

60 Hz					
Model	DPV 2	DPV 4	DPV 6	DPV 10 2P	DPV 10 4P
Capacity					
Capacity range (m³/h)/(gpm)	0.24-4/1-18	0.48 - 7.8	0.72 - 10.8	1.3 -15.8	0.6 - 7.9
Nominal capacity at Qopt. (m³/h)/(gpm)	2.3/10	4.8	7.6	13.3	6.3
Pressure					
Norm pressure	PN16-25-40				
Maximum pump pressure (m)/(gpm)	246/807	238/781	255/837	246/807	61/200
Maximum pressure at Qopt. (m)/(gpm)	201/659	195/640	199/653	173/568	44/144
NPSH at Qopt. (m)/(ft)	3/10	1.8/6	2/7	2/7	1.3/4
Hydraulic assembly					
Temperature range medium	-20 - +140° C / -4 - 284° F				

60 Hz					
Model	DPV 15 2P	DPV 15 4P	DPV 25 2P	DPV 25 4P	DPV 85
Capacity					
Capacity range (m³/h)/(gpm)	2.2-27/10-119	1.1-13.8/5-41	3.4-42/15-185	1.3 -15.8	10-132/44-551
Nominal capacity at Qopt. (m³/h)/(gpm)	21.7/96	10.9/48	34/150	34/150	100/440
Pressure					
Norm pressure	PN16-25-40				
Maximum pump pressure (m)/(ft)	233/764	57/187	210/689	87/285	151/495
Maximum pressure at Qopt. (m)/(ft)	177/551	43/141	157/515	65/213	108/354
NPSH at Qopt. (m)/(ft)	1.5/6	1.3/4	4.6/15	1.1/3.6	3.8/12
Hydraulic assembly					
Temperature range medium	-20 up to + 140° C / -4 - 284° F				



Wide range of shaft seals.  
Replace without dismantling the pump.

# DESMI DESERVE

## After Sales & Service

We always strive to provide our customers with the very best service! That's why we have established DESMI DeServe - your guarantee for an excellent service 24/7/365.

Our Spare Parts Kits cover more pumps and have all the necessary parts when overhauling your pumps, but we also have individual spare parts that match your immediate need for maintenance.

Our DESMI 48 is for you, who needs a replacement pump immediately. The DESMI 48 makes sure you can have your pumps replaced and ready for shipping within 48 hours.

Our service on all pumps and solutions includes:

- Installation
- Commissioning
- On-site Service
- Repair / Maintenance

Don't hesitate to contact us right away if you need our assistance.

Our dedicated global DESMI Service Team delivering local service





### DESMI Genuine Spare Parts Kits for Simple Overhaul and Service

DESMI provides spare parts kits for easy and simple maintenance and overhaul of your pumps. We offer a variety of spare parts kits for a number of DESMI pump series.

To determine which spare parts kit you need and to provide you with the best service, we need to have the following information:

- Pump type (e.g. NSL 150-265)
- Serial number (e.g. 323249 or 30192-1)

#### Spare Parts Kits include:

- Mechanical shaft seal
- Special tool
- Bearings
- O-rings
- Gaskets
- Washers & nuts
- Item list
- Etc.



The DESMI Service Team operates globally and around the clock. We can offer simple advice over the phone or full, on-site maintenance and service programmes.

The team is factory-trained and fully capable of meeting both your technical and practical demands. We have customized programmes to meet specific client requirements and be your partner of choice.

DESMI Service Team supports a working culture based on an appropriate respect for health, safety and environmental issues.

In case of emergency breakdowns, we are always able to access our global parts database, sending spare parts or complete pumps 24/7/365.





Need more information or specifications? Contact us at [desmi@desmi.com](mailto:desmi@desmi.com) or read more about DESMI and DESMI's other products and solutions at [www.desmi.com](http://www.desmi.com)

MARINE & OFFSHORE

INDUSTRY

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DEFENCE & FUEL

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**DESMI**