

Wide Range Heavy Duty PUMPS



Dynapumps Offices Australia & Chile

Dynapumps
MORE THAN JUST PUMPS

WIDE RANGE
HEAVY DUTY PUMPS

CATALOGUE

NM-FM

RIGIDLY COUPLED CENTRIFUGAL PUMPS



Handled Liquids

Clean or slightly contaminated low viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange _____ DN 32.....DN 150 mm

Capacity _____ up to 600 m³/h (*)

Head _____ up to 100 m (*)

Operating Temperature _____ -10 °C' to +140 °C (**)

Casing Pressure (Pmax) _____ 10 bar (16 bar) (**)

(Pmax: Suction Pressure + Shut off Head)

(*) Contact company for higher capacity and head values.
(**) The Material of pump differs according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- Horizontal / Vertical rigidly-coupled, volute casing, single stage, end suction centrifugal pump with closed impeller.
- Volute casing dimensions comply with EN 733.
- Suction and discharge flanges conform to EN 1092-2 / PN 16. The flanges are according to EN 1092-1 / PN 16 for steel or stainless steel casing. In case of request, ANSI/ASME flanges can be supplied.
- Pumps are rigidly coupled with electric motors of IEC frame sizes with high efficiency class.

- All impellers are balanced dynamically or statically according to ISO 1940 grade 6.3.
- Axial thrust is balanced by impeller balancing holes system.
- Direction of rotation is clockwise viewed from drive end.
- In case of request, wear ring and/or shaft sleeve can be supplied.
- The pump and motor have separate shafts connected by a rigid coupling or through slide fit shaft. Axial and radial forces are absorbed by electric motor bearings.
- Rigidly coupled pumps are lighter and smaller comparing to the norm centrifugal pumps of same hydraulic specifications.
- When the elbow is mounted on the suction of the pump, the name is changed to NM-FM V. In this case, the pump is always installed vertically.
- The electrical motor powers of NM-FM V pumps are limited because of its installation type.
- For NM-FM and NM-FM V drawings, please look at below address www.dynapumps.com.au

Shaft Sealing

- Depending on customer request or liquid type, mechanical seals are available.

Pump Designation

NM-FM V 100 - 250 - XXX

Pump Type _____

Vertical _____

Discharge Nozzle (DN-mm) _____

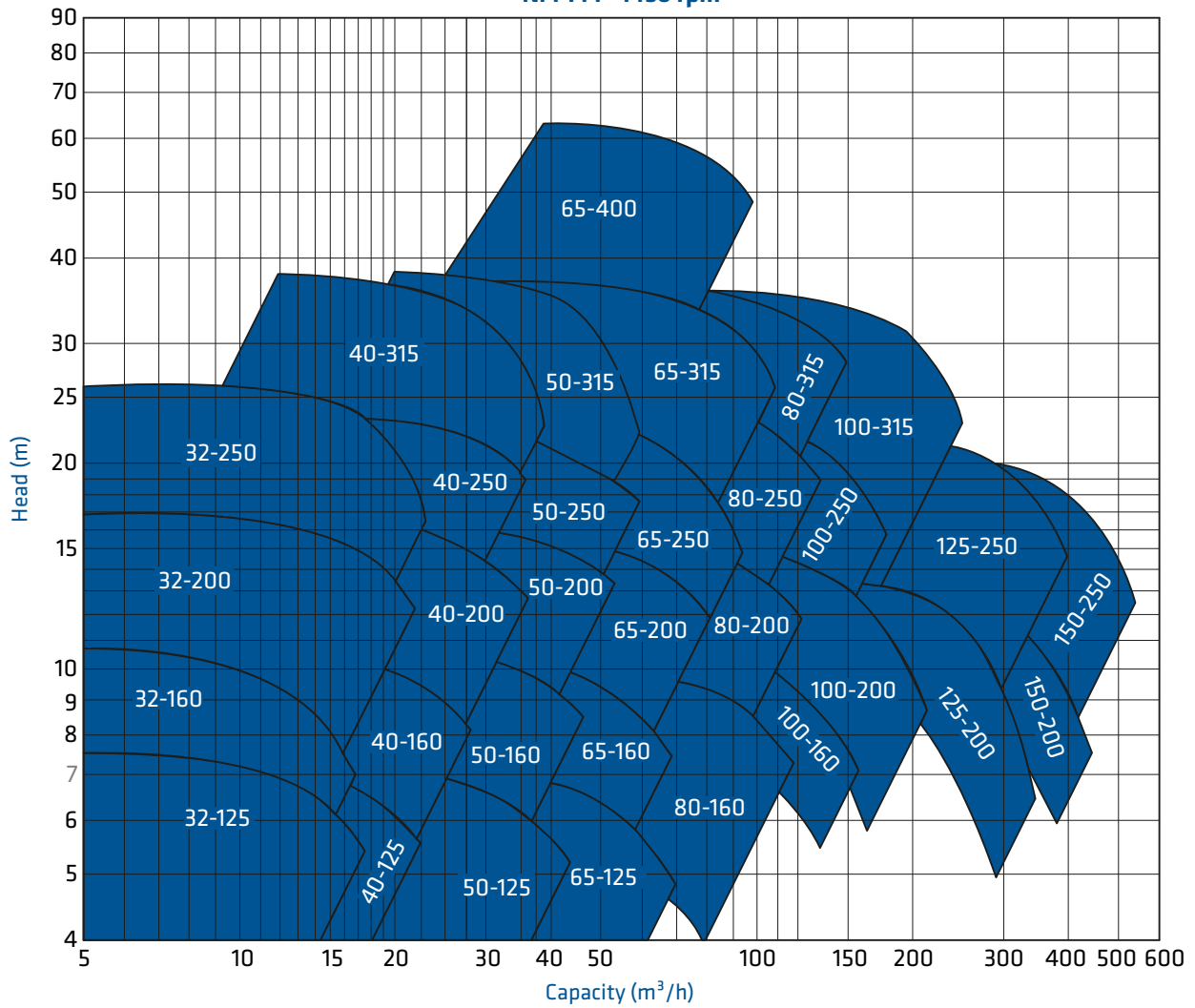
Nominal Impeller Diameter (mm) _____

Special Application _____

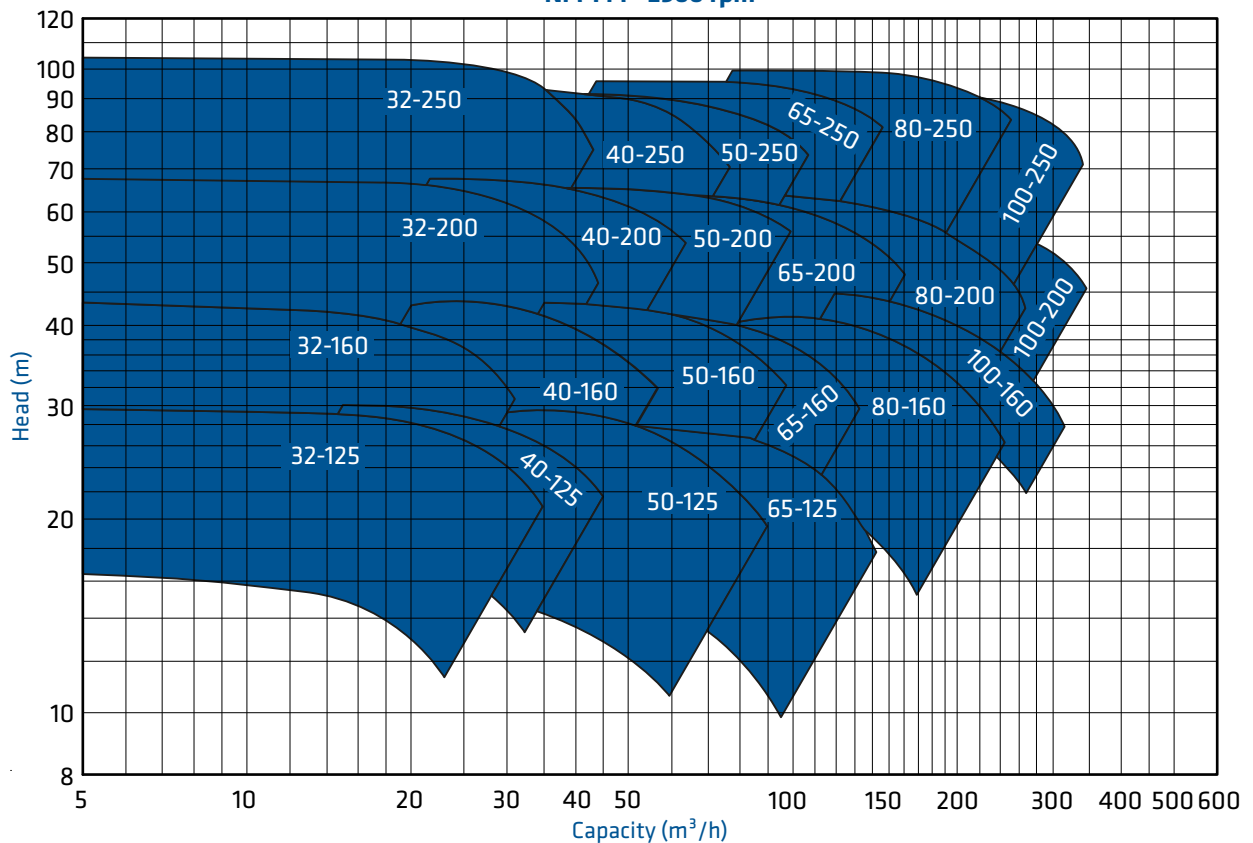


Field Charts

NM-FM - 1450 rpm



NM-FM - 2900 rpm



N-FM

EN 733 NORM PUMPS



Handled Liquids

Clean or slightly contaminated low viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange _____ DN 32.....DN 150 mm

Capacity _____ up to 600 m³/h (*)

Head _____ up to 100 m (*)

Operating Temperature _____ -10 °C' to +140 °C (**)

Casing Pressure (Pmax) _____ 10 bar (16 bar) (**)

(Pmax: Suction Pressure + Shut off Head)

(*) Contact company for higher capacity and head values.

(**) The Material of pump differs according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- Horizontal , radially split volute casing type , single stage, end suction centrifugal pump with closed impeller.
- Dimensionally complies with EN 733.
- In addition to 24 basic sizes conforming with EN 733, there are 8 additional sizes. Dimensions of additional sizes may differ from other suppliers.
- N-FM 40-315, 50-315, 65-315, 80-315, 100-315, 125-250 pumps are given with 2900 rpm only for fire fighting application.

Pump Designation

Pump Type _____

Discharge Nozzle (DN-mm) _____

Nominal Impeller Diameter (mm) _____

Special Application _____

- Suction and discharge flanges conform to EN 1092-2/ PN 16. For steel or stainless steel casing is EN 1092-1/ PN 16. In case of request, ANSI/ASME flanges can be supplied.

- Due to the back-pull-out design, the complete bearing assembly including impeller and casing cover can be dismantled without removing the volute casing from the pipe system. With spacer coupling application, also possible to take out the rotor group without dismantling the electric motor.

- All impellers are balanced dynamically or statically according to ISO 1940 grade 6.3.

- Axial thrust is balanced by impeller balancing holes system.

- Direction of rotation is clockwise viewed from drive end.

- In case of request, wear ring and/or shaft sleeve can be supplied.

- Bearings of N-FM type pumps are normally “life time grease lubricated” ball bearings. If there is a demand, oil lubrication or re-greasable bearing can be supplied.

- For N-FM drawings, please look at below adress www.dynapumps.com.au

Shaft Sealing

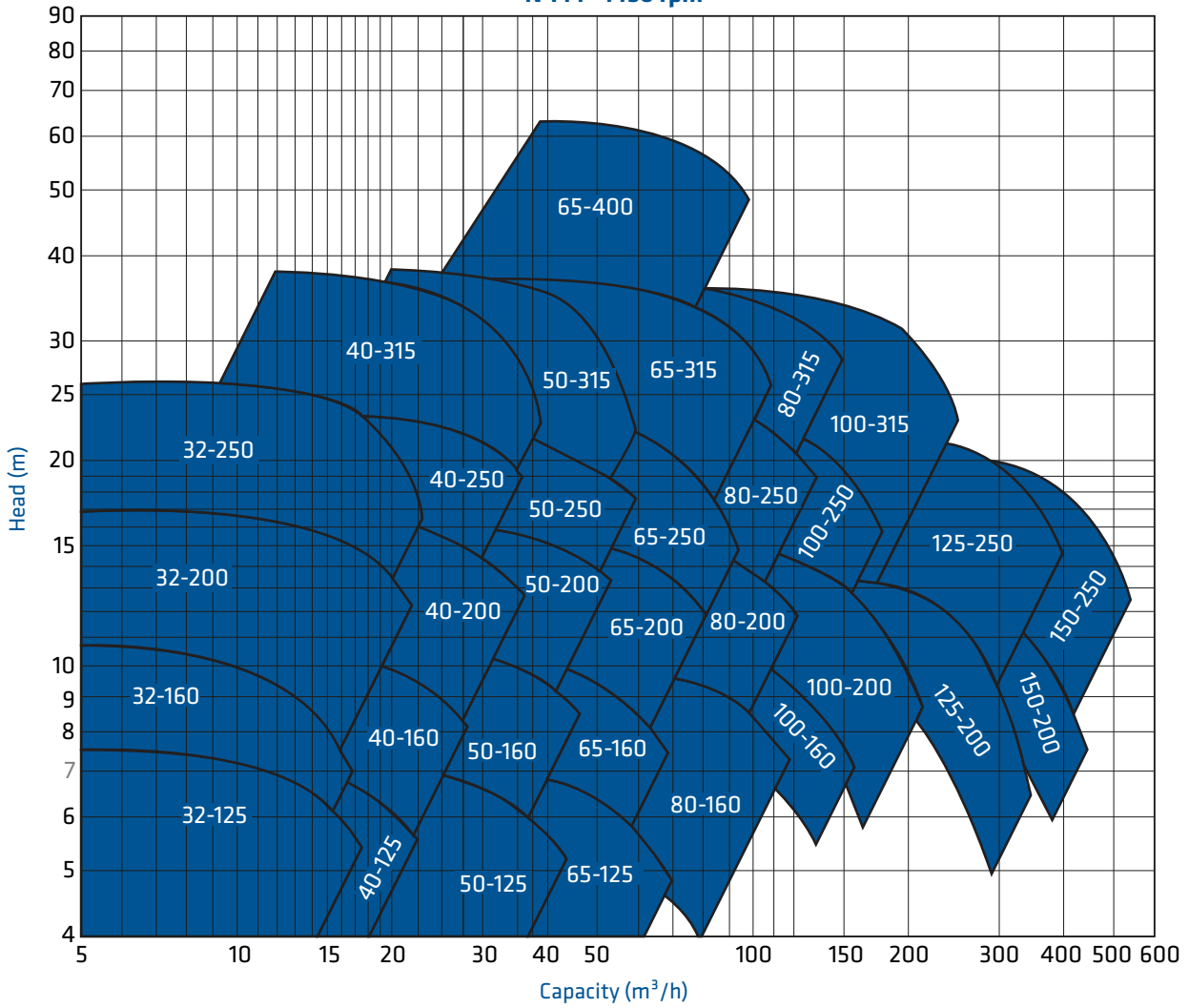
- In standard production, soft packed stuffing boxes are used.

- Depending on customer request, mechanical seals are available. In this case, pump shaft is always stainless steel.

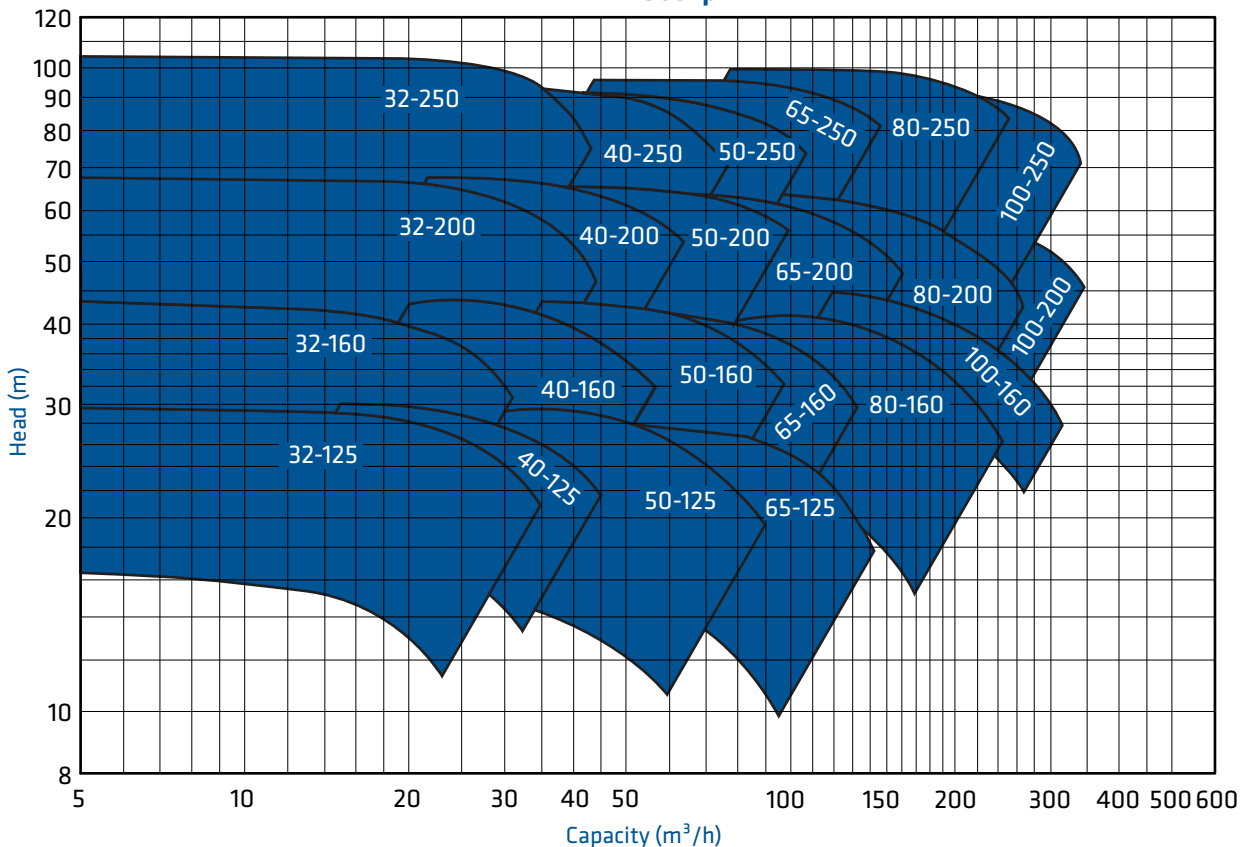
N-FM 100 - 250 - XXX

Field Charts

N-FM - 1450 rpm



N-FM - 2900 rpm



NG

ISO 2858

NORM PUMPS



Handled Liquids

Clean or normal contaminated low or medium viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange _____ DN 32.....DN 250 mm
 Capacity _____ up to 1500 m³/h
 Head _____ up to 160 m
 Speed _____ up to 2900 rpm
 Operating Temperature _____ -10 °C' to +175 °C (*)
 Casing Pressure (Pmax) _____ 16 bar (25 bar) (*)
 (Pmax: Suction Pressure + Shut off Head)

(*) The Material of pumps differ according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- Horizontal, radially split volute casing type, single stage, end suction centrifugal pumps with closed or semi-open impeller.
- In addition to 28 basic sizes conforming with ISO 2858, there are 10 additional sizes. Dimensions of additional sizes may differ from other suppliers.
- Heavy duty shaft not in contact with the medium handled (dry shaft)

Pump Designation

Pump Type _____
 Discharge Nozzle (DN-mm) _____
 Nominal Impeller Diameter(mm) _____
 Impeller Type (A: semi-open) _____

- For casing sealing, confined gaskets are used to prevent blow-out under pressure.
- Suction and discharge flanges conform to EN 1092-2 / PN 16. (EN 1092-1 / PN 16 for steel or stainless steel casing)
- Due to the back-pull-out design, the complete bearing assembly including impeller and casing cover can be dismantled without removing the volute casing from the pipe system. (With spacer coupling application, also possible to take out the rotor group without dismantling the electric motor.)
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- For closed impellers, axial thrust is balanced by impeller balancing holes system while for semi-open impellers, it is balanced by back ribs.
- Direction of rotation is clockwise viewed from drive end.
- Bearings of NG type pumps are always oil lubricated.

Shaft Sealing

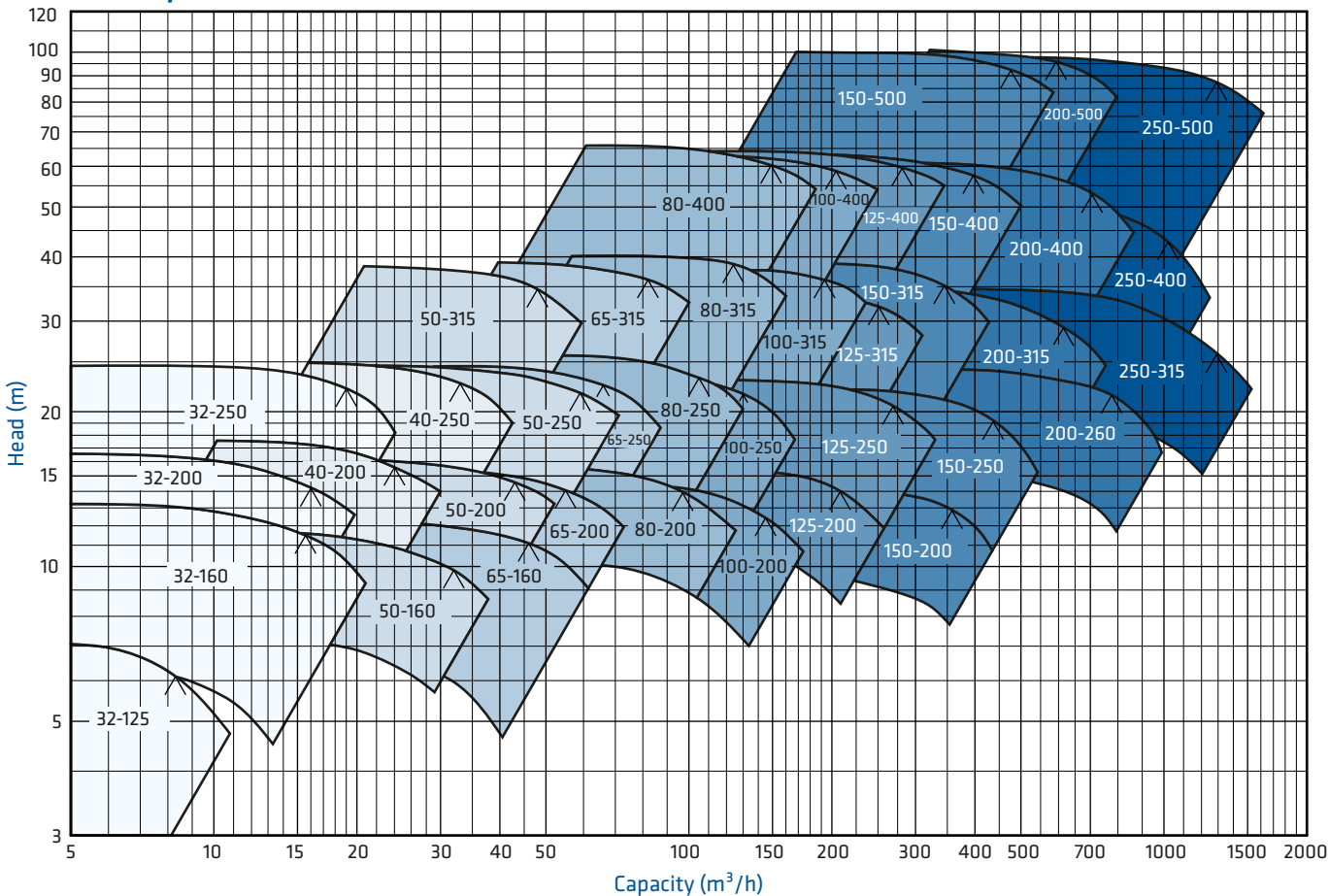
- Depending on request or requirement, pumps with soft packing or single, double and cartridge type mechanical seals can be supplied.
- External seal cooling system may be used if required.

NG 100-250-A

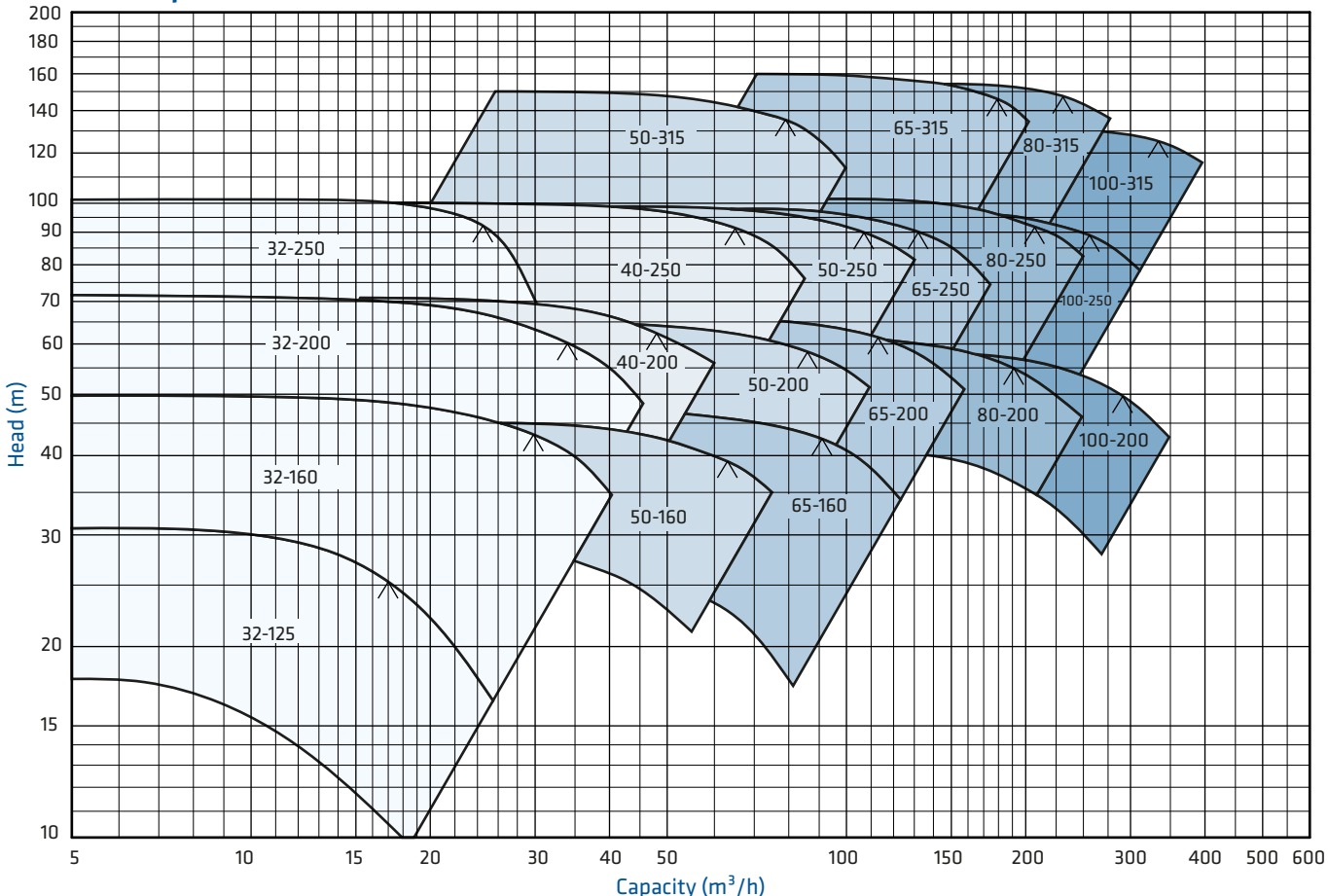


Field Charts

1450 rpm



2900 rpm



NG-HT

HOT WATER PUMPS



Handled Liquids

NG-HT pumps are specially designed for hot water and geothermal water application.

Technical Data

Discharge Flange _____ DN 32.....DN 250 mm

Capacity _____ up to 1500 m³/h

Head _____ up to 160 m

Speed _____ up to 2900 rpm

Operating Temperature _____ up to +230 °C (*)

Casing Pressure (Pmax) _____ 25 bar (40 bar) (*)

(Pmax: Suction Pressure + Shut off Head)

(*) The Material of pumps differ according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- Horizontal, radially split volute casing type, single stage, end suction centrifugal pumps with closed impeller.
- Heavy duty shaft not in contact with the medium handled (dry shaft)
- For casing sealing, confined gaskets are used to prevent blow-out under pressure.
- Coupling misalignment due to thermal expansions are mainly reduced with centerline mounting design.
- Suction and discharge flanges conform to EN 1092-2 / PN 25. (EN 1092-1 / PN 25 for steel or stainless steel casing)

Pump Designation

Pump Type _____

Discharge Nozzle (DN-mm) _____

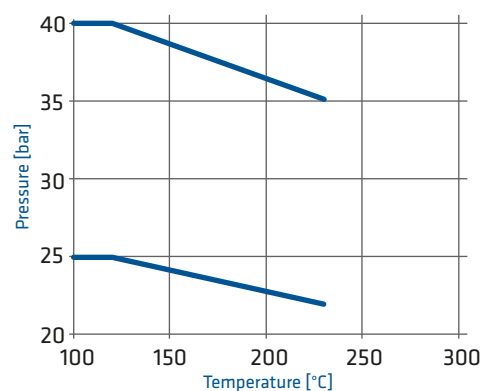
Nominal Impeller Diameter (mm) _____

- Due to the back-pull-out design, the complete bearing assembly including impeller and casing cover can be dismantled without removing the volute casing from the pipe system. (With spacer coupling application, also possible to take out the rotor group without dismantling the electric motor.)
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- Axial thrust is balanced by impeller balancing holes system.
- Direction of rotation is clockwise viewed from drive end.
- Bearings of NG-HT type pumps are always oil lubricated.

Shaft Sealing

- Depending on request or requirement, pumps with soft packing or single, double and cartridge type mechanical seals can be supplied.
- External seal cooling system may be used if required.

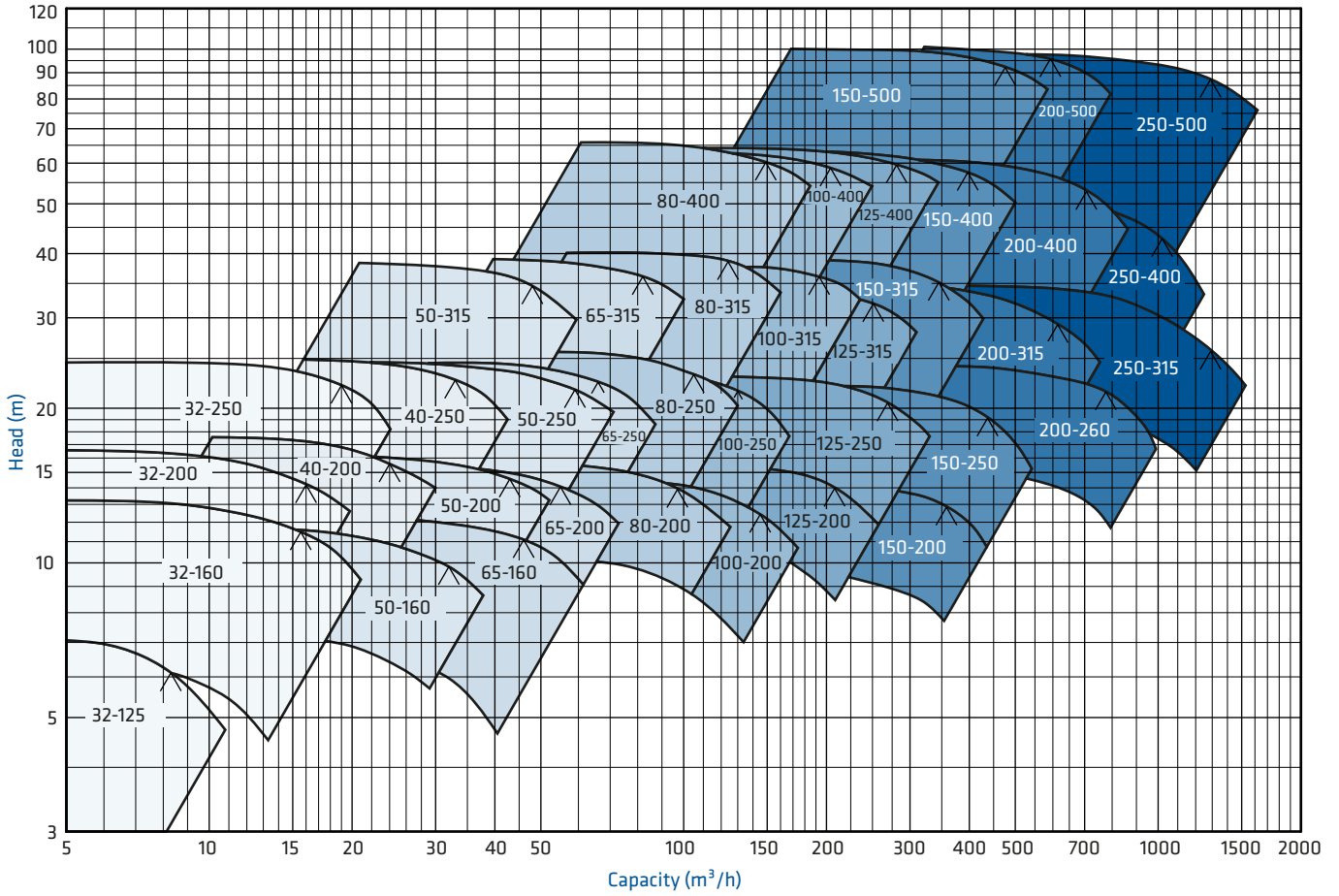
Pressure & Temperature Limits



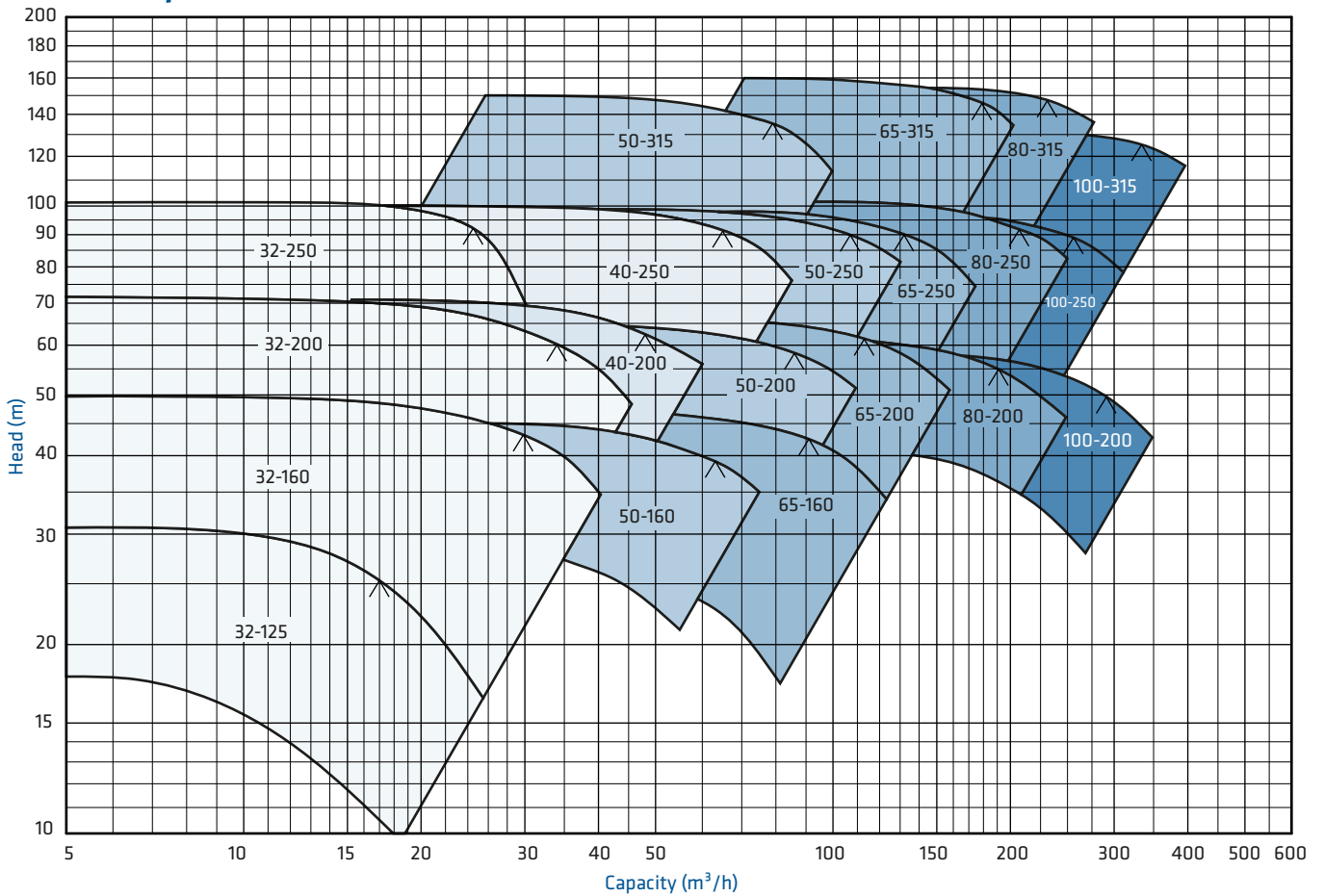
NG-HT 100 - 250

Field Chart

1450 rpm



2900 rpm



TOP

THERMAL OIL PUMPS



Handled Liquids

Heat transfer oil or low viscosity industrial oil without aggressive solid particles.

Technical Data

Discharge Flange _____ DN 32.....DN 125 mm

Capacity _____ up to 350 m³/h

Head _____ up to 105 m

Speed _____ up to 2900 rpm

Operating Temperature _____ up to 320 °C

Cooling Method _____ With Air

Casing Pressure (Pmax) _____ 10 bar (16 bar)

(Pmax: Suction Pressure + Shut off Head)

Design Features

- Horizontal, radially split volute casing type, single stage, end suction, air cooled centrifugal pumps with closed impeller.
- Suction and discharge flanges conform to EN 1092-2 / PN 16.
- Due to the back-pull-out design, the complete bearing assembly including impeller and casing cover can be dismantled without removing the volute casing from the pipe system. (With spacer coupling application, also possible to take out the rotor group without dismantling the electric motor.)

Pump Designation

Pump Type _____

Discharge Nozzle (DN-mm) _____

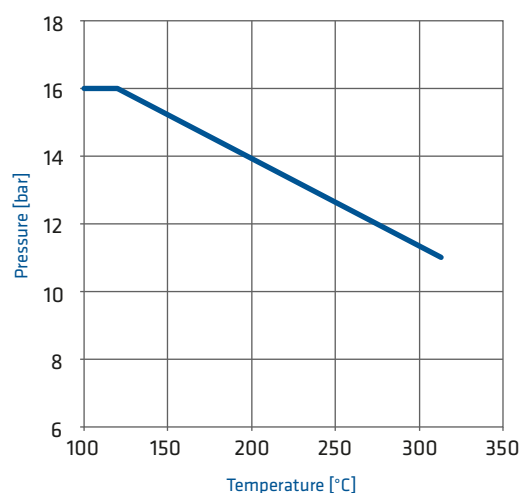
Nominal Impeller Diameter (mm) _____

- All impellers are balanced dynamically according to ISO 1940 class 6.3.
- Axial thrust is balanced by impeller back ribs.
- Direction of rotation is clockwise viewed from drive end.
- Bearings of TOP type pumps are “life time grease lubricated” ball bearings.

Shaft Sealing

- High temperature resistant mechanical seals are used.

Pressure & Temperature Limits

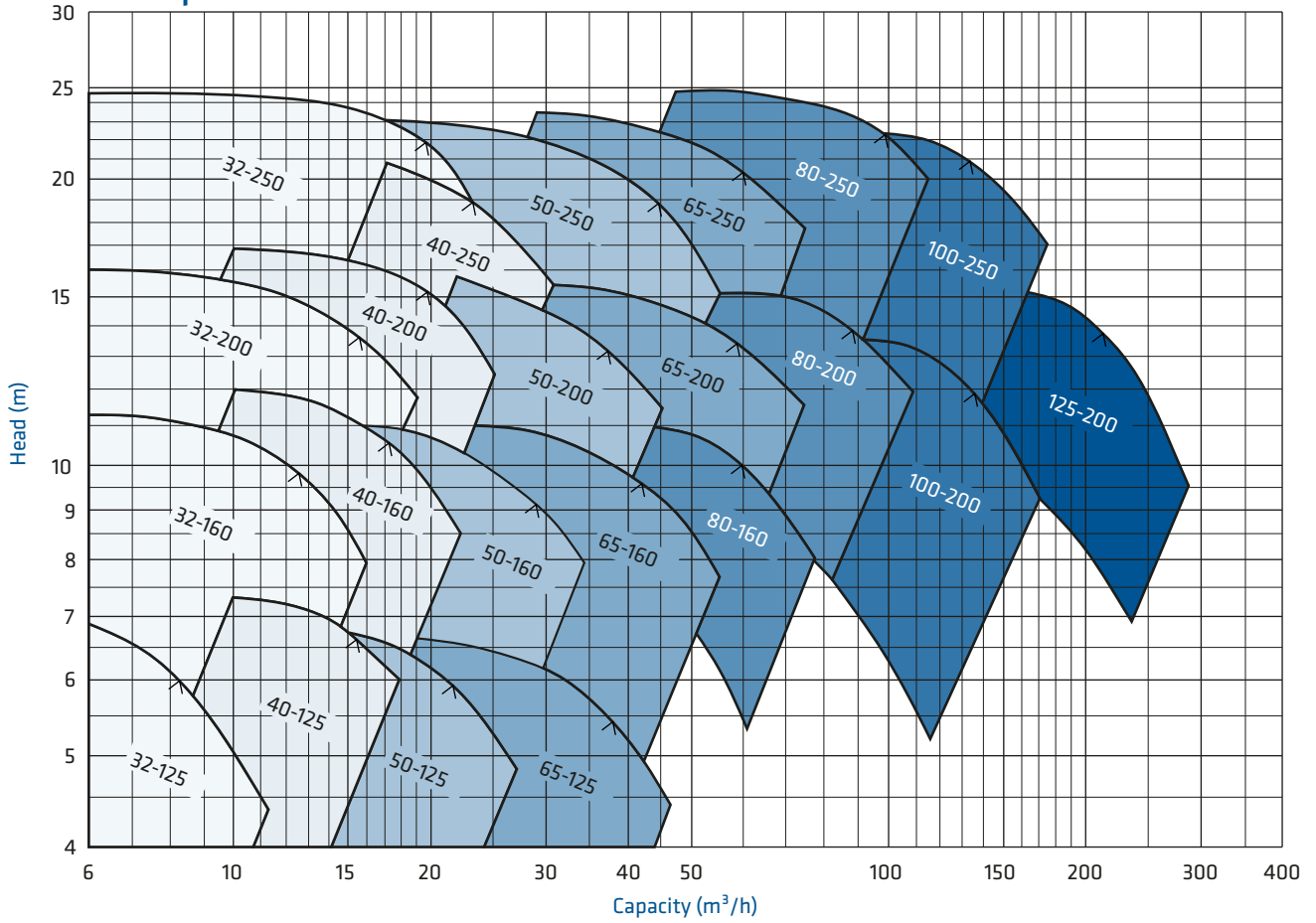


TOP 100 - 250

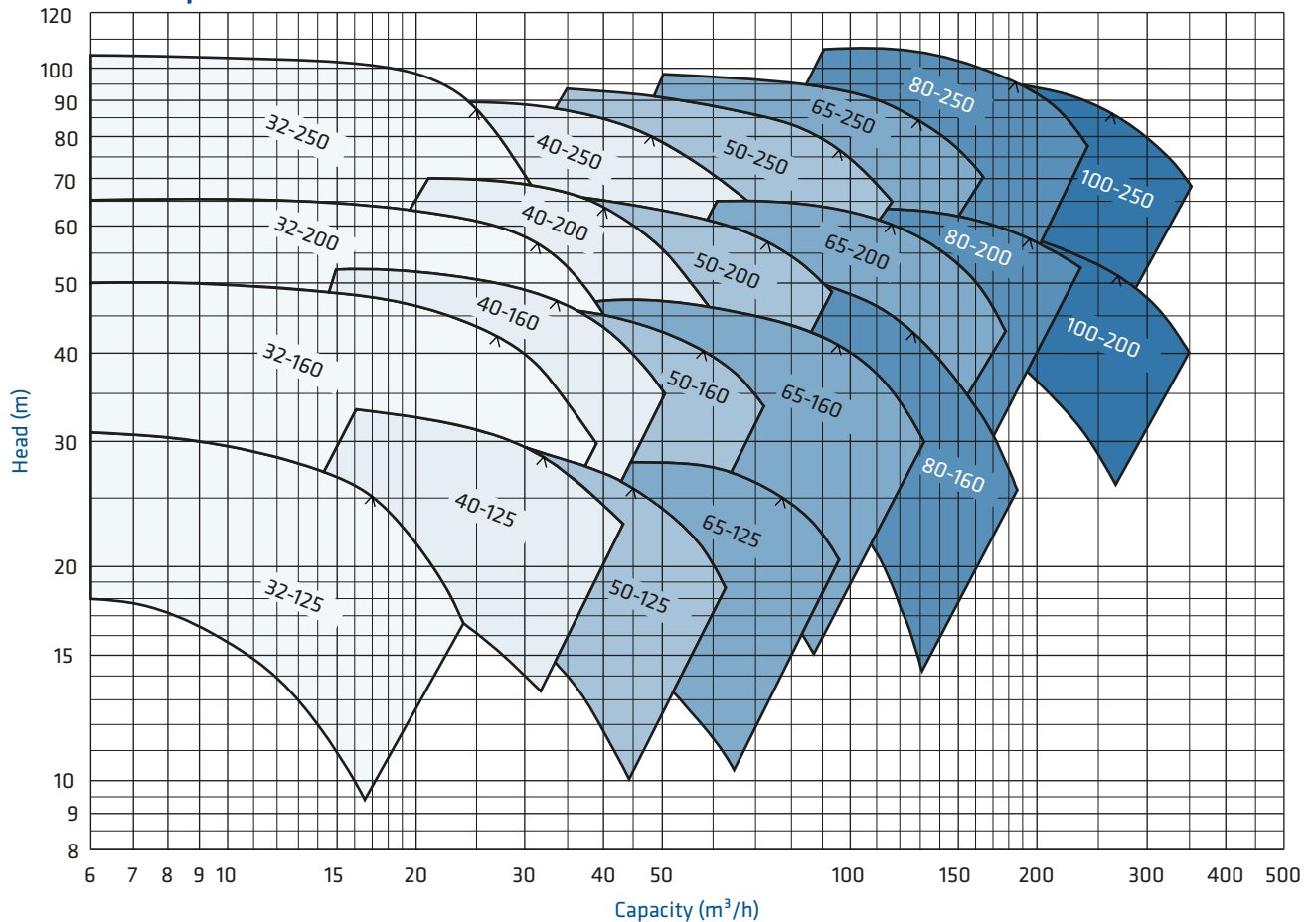


Field Chart

1450 rpm

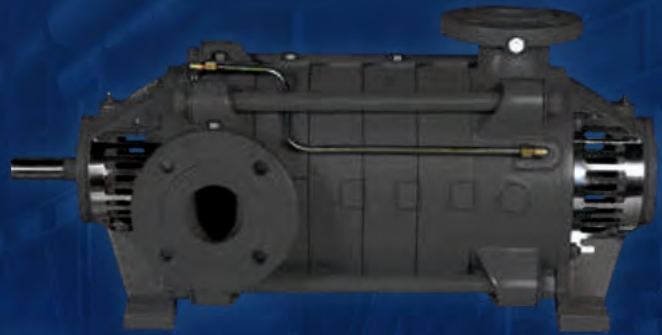


2900 rpm



HW

MULTISTAGE CENTRIFUGAL PUMPS



Handled Liquids

Clean or slightly contaminated low viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange _____ DN 32.....DN 250 mm

Capacity _____ up to 1000 m³/h

Head _____ up to 550 m

Speed _____ up to 2900 rpm

Operating Temperature _____ 10 °C up to +140 °C (*)

Casing Pressure (Pmax) _____ 30 bar (63 bar) (*)

(Pmax: Suction Pressure + Shut off Head)

(*) The Material of pumps differ according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- Horizontal ring section, multistage, centrifugal pumps with closed impeller and diffuser.
- 10 Models from DN 32 up to 250 discharge flange diameter.

Pump Designation

Pump Type _____

Heavy Duty Design _____

Discharge Nozzle (DN-mm) _____

Number of Stages _____

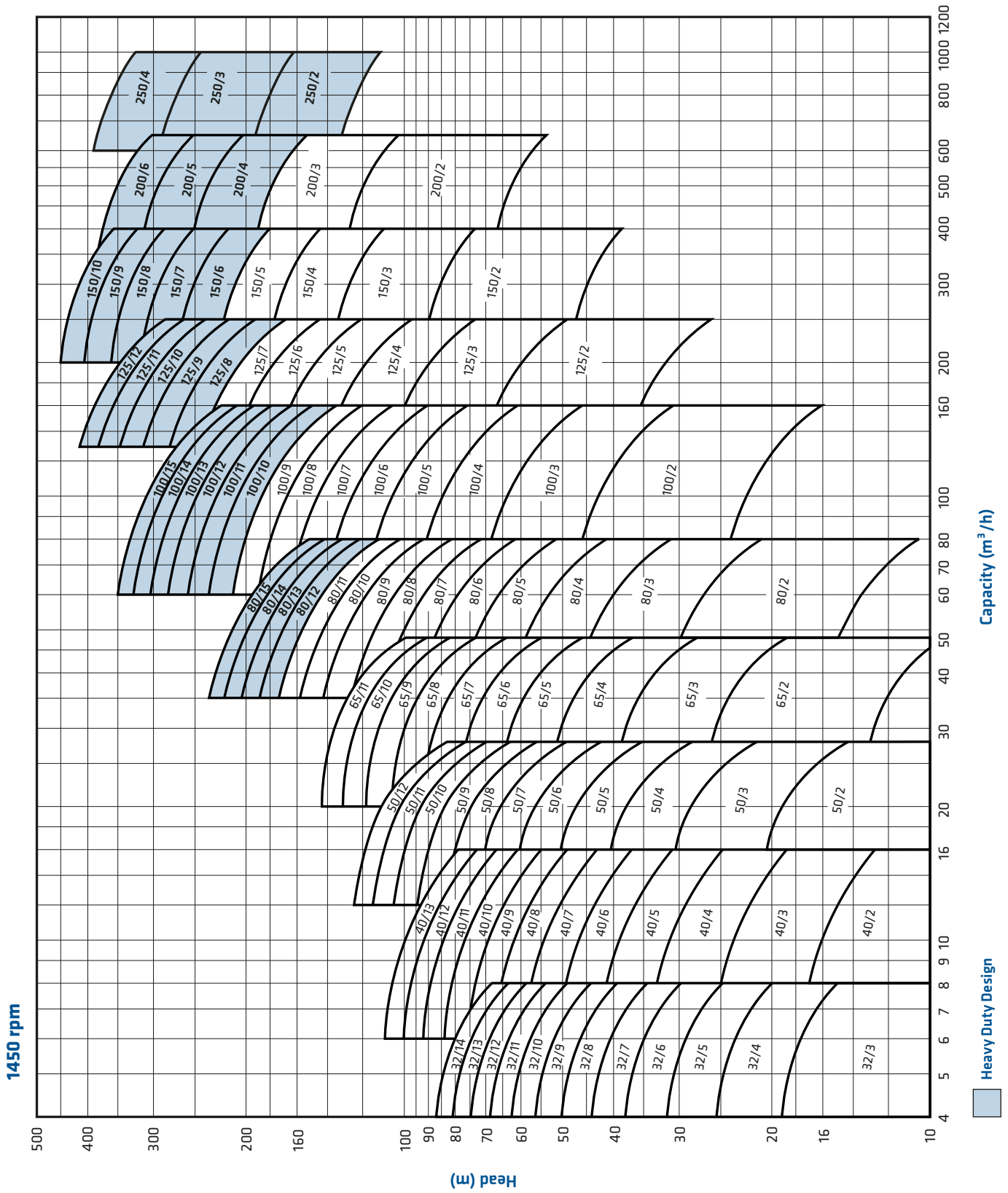
HW - K 100 / 6

- Suction nozzle flanges conform to EN 1092 - 2 / PN 16 and discharge nozzle flanges conform to EN 1092 - 2 / PN 40 (PN 63) (For steel or stainless steel casing pumps, flanges conform to related pressure class ratings defined in EN 1092 - 1)
- In standard production, suction flange is placed on the right side and close to the coupling while discharge flange is at the other end and radially upwards (R 3/0). If other flange position is required, it should be indicated in the order.
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- Axial thrust is balanced by impeller balancing holes system.
- Direction of rotation is clockwise viewed from drive end.
- Bearings of HW type pumps are always grease lubricated.

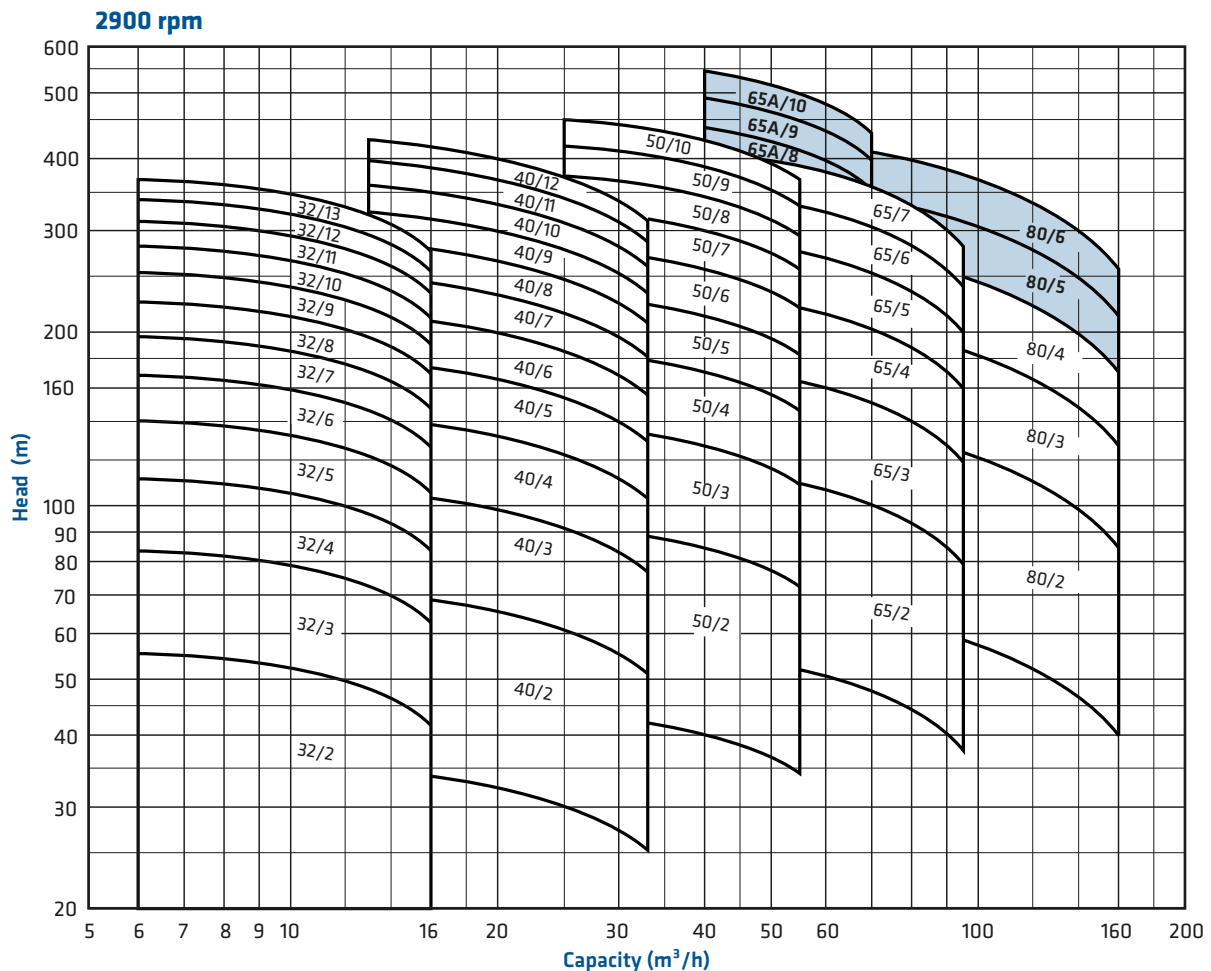
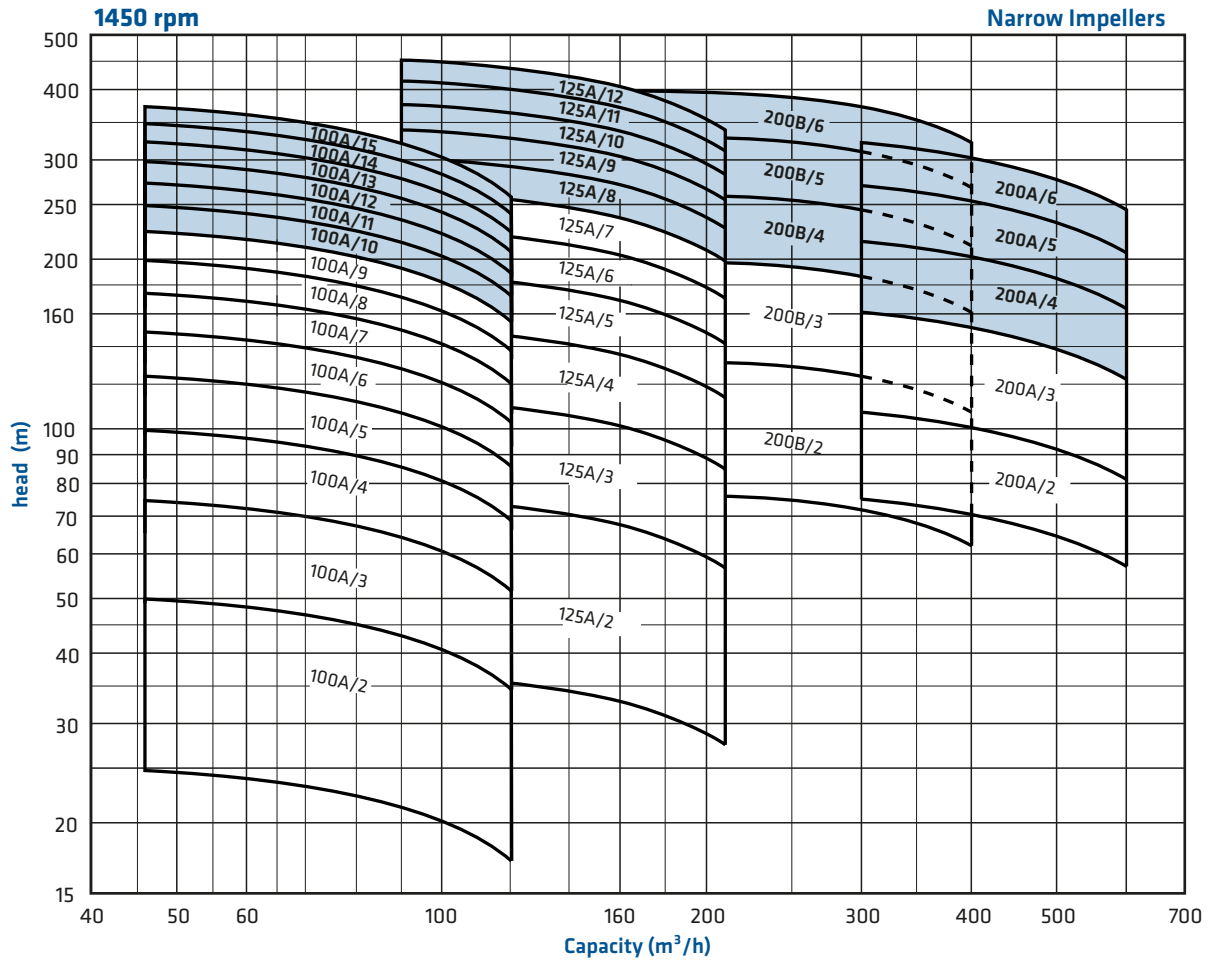
Shaft Sealing

- In standard production soft packing application is applied up to 110 °C. Between 110 °C and 140 °C soft packing may also applied together with the stuffing box cooling.
- Pumps with mechanical seal can also be manufactured upon request.

Field Chart



Field Chart



 Heavy Duty Design



HW-E

MULTISTAGE PUMPS (END SUCTION)



Handled Liquids

Clean or slightly contaminated low viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange _____ DN 40.....DN 150 mm

Capacity _____ up to 400 m³/h

Head _____ up to 450 m

Speed _____ up to 2900 rpm

Operating Temperature _____ -10 °C up to +140 °C (*)

Casing Pressure (Pmax) _____ 30 bar (63 bar) (*)

(Pmax: Suction Pressure + Shut off Head)

(*) The Material of pumps differ according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- Horizontal ring section, multistage, centrifugal pumps with closed impellers and diffusers in end suction design.
- 7 Models from DN 40 up to DN 150 discharge flange diameter.
- Suction nozzle flanges conform to EN 1092 - 2 / PN 16 and discharge nozzle flanges conform to EN 1092 - 2 / PN 40 (PN 63) (For steel or stainless steel casing pumps, flanges conform to related pressure class ratings defined in EN 1092 - 1)

Pump Designation

Pump Type _____

Discharge Nozzle (DN-mm) _____

Number of Stages _____

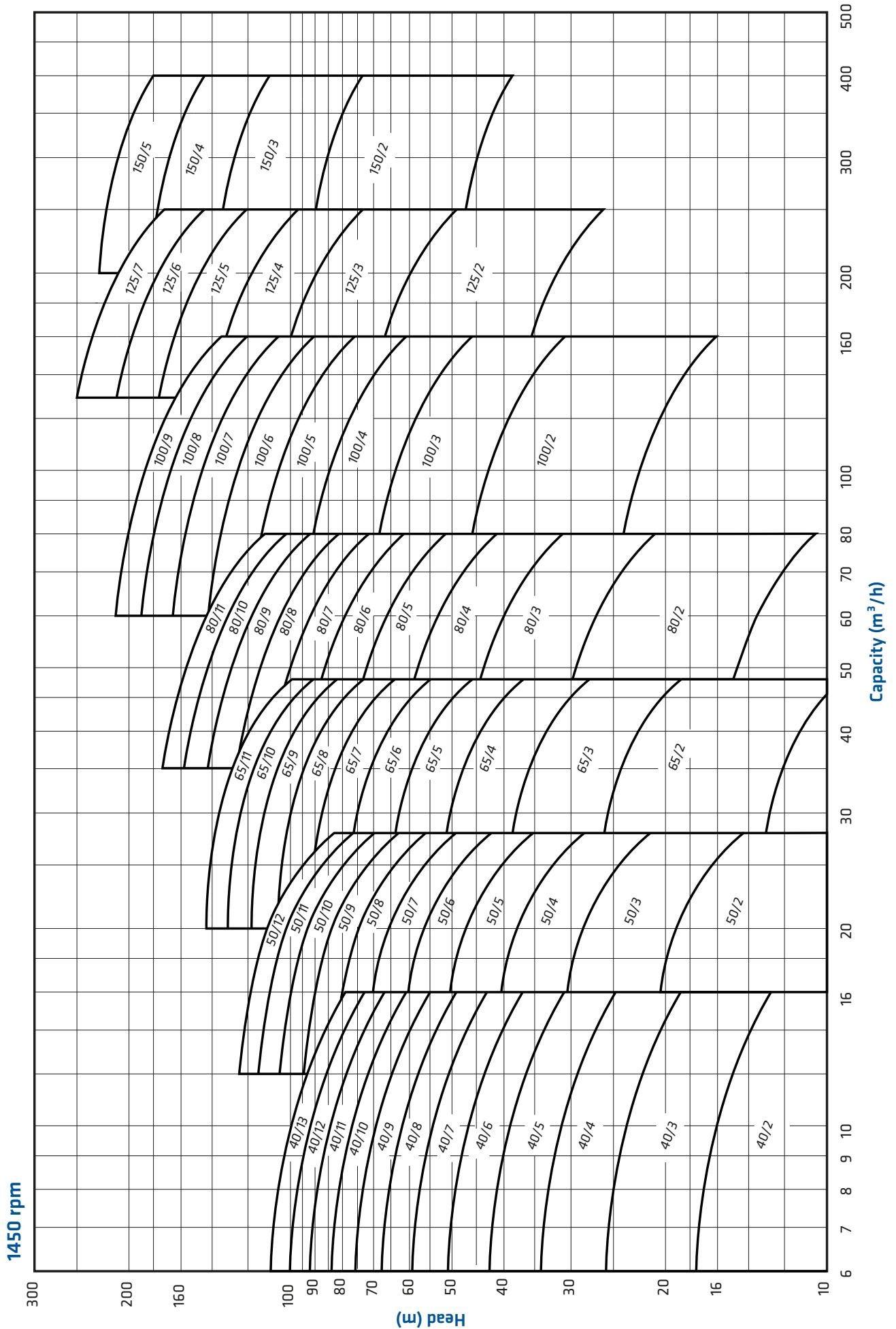
HW-E 100 / 6

- Discharge flange is on top for standard production, upon request different discharge flange positions can be applied.
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- Axial thrust is balanced by impeller balancing holes system.
- Direction of rotation is always counter clockwise viewed from drive end. That's why these pumps can not be accoupled directly with diesel engines.
- Bearings of HW-E type pumps are grease lubricated. Sleeve bearing used in the suction side is lubricated by the pumping liquid.

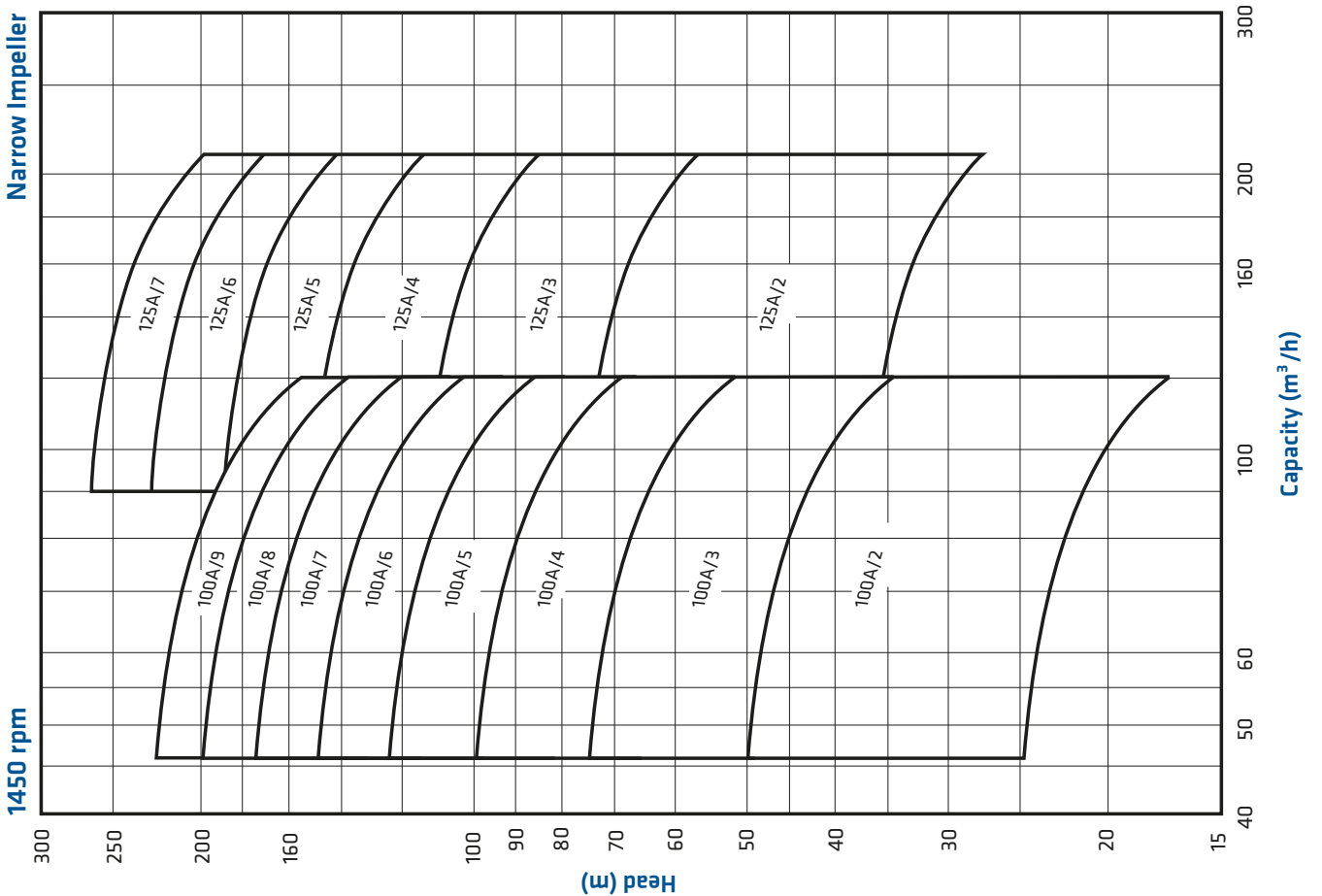
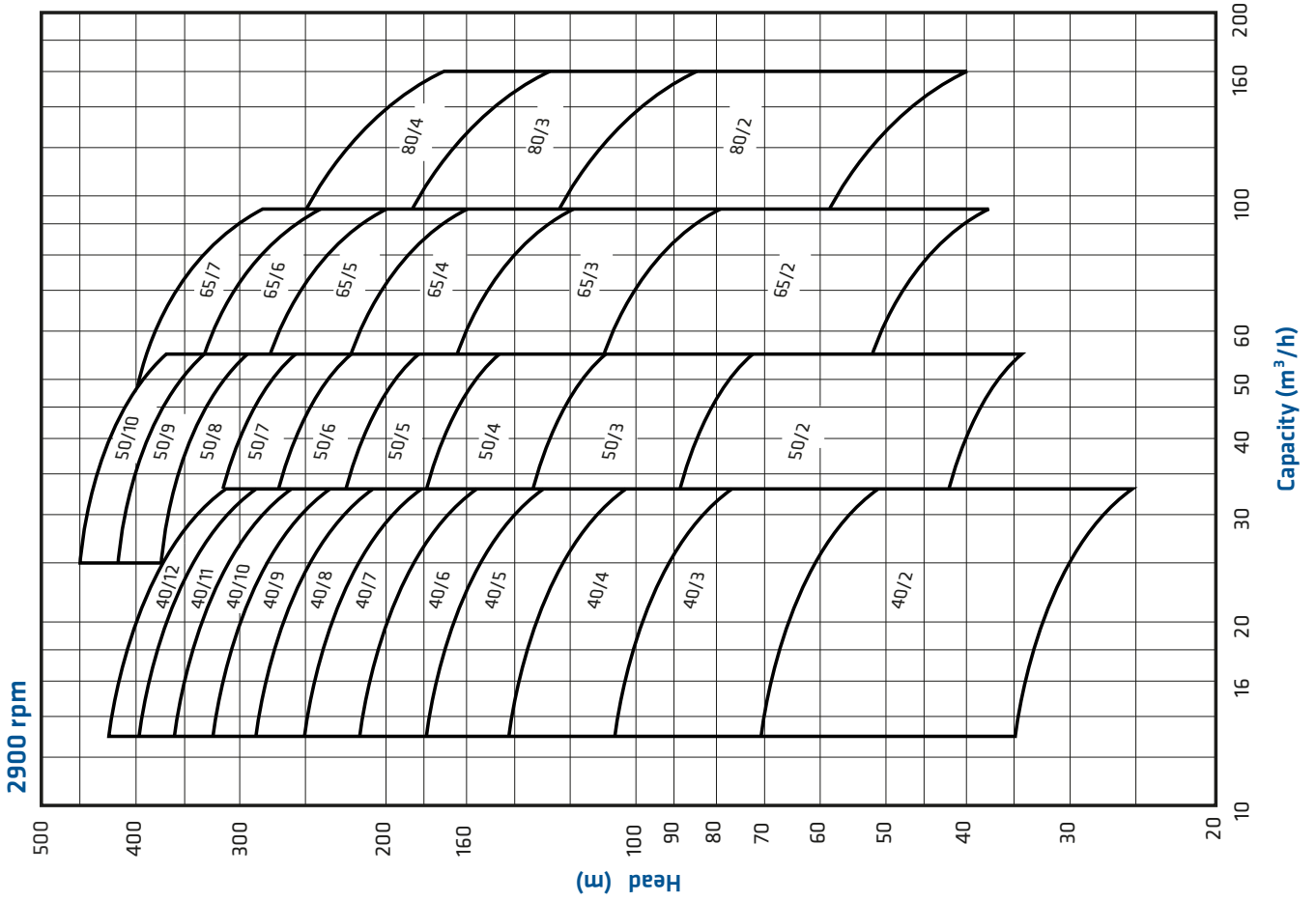
Shaft Sealing

- In standard production soft packing application is applied up to 110 °C. Between 110 °C and 140 °C soft packing may also applied together with the stuffing box cooling.
- Pumps with mechanical seal can also be manufactured upon request.

Field Chart



Field Chart



SC-SCV

DOUBLE SUCTION PUMPS



Handled Liquids

Clean or slightly contaminated low viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange _____ DN 65.....DN 600 mm
 Capacity _____ up to 6000 m³/h
 Head _____ up to 180 m
 Speed _____ up to 2900 rpm
 Operating Temperature _____ -10 °C' to +110 °C (*)
 Casing Pressure (Pmax) _____ 16 bar - 25 bar (*)
 (Pmax: Suction Pressure + Shut off Head)

(*) The Material of pumps differ according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- Horizontal or vertical manufacturing option. Axial split case, single stage, double suction centrifugal pumps.
- Suction and discharge flanges are on the same axis on the bottom casing. Split case design permits easy disassembly of the rotor group for maintenance or repair without distorting pump alignment and suction / discharge piping.

Pump Designation

Pump Type _____
 Vertical Installation _____
 Discharge Nozzle (DN-mm) _____
 Nominal Impeller Diameter (mm) _____

SC - V 200 - 500

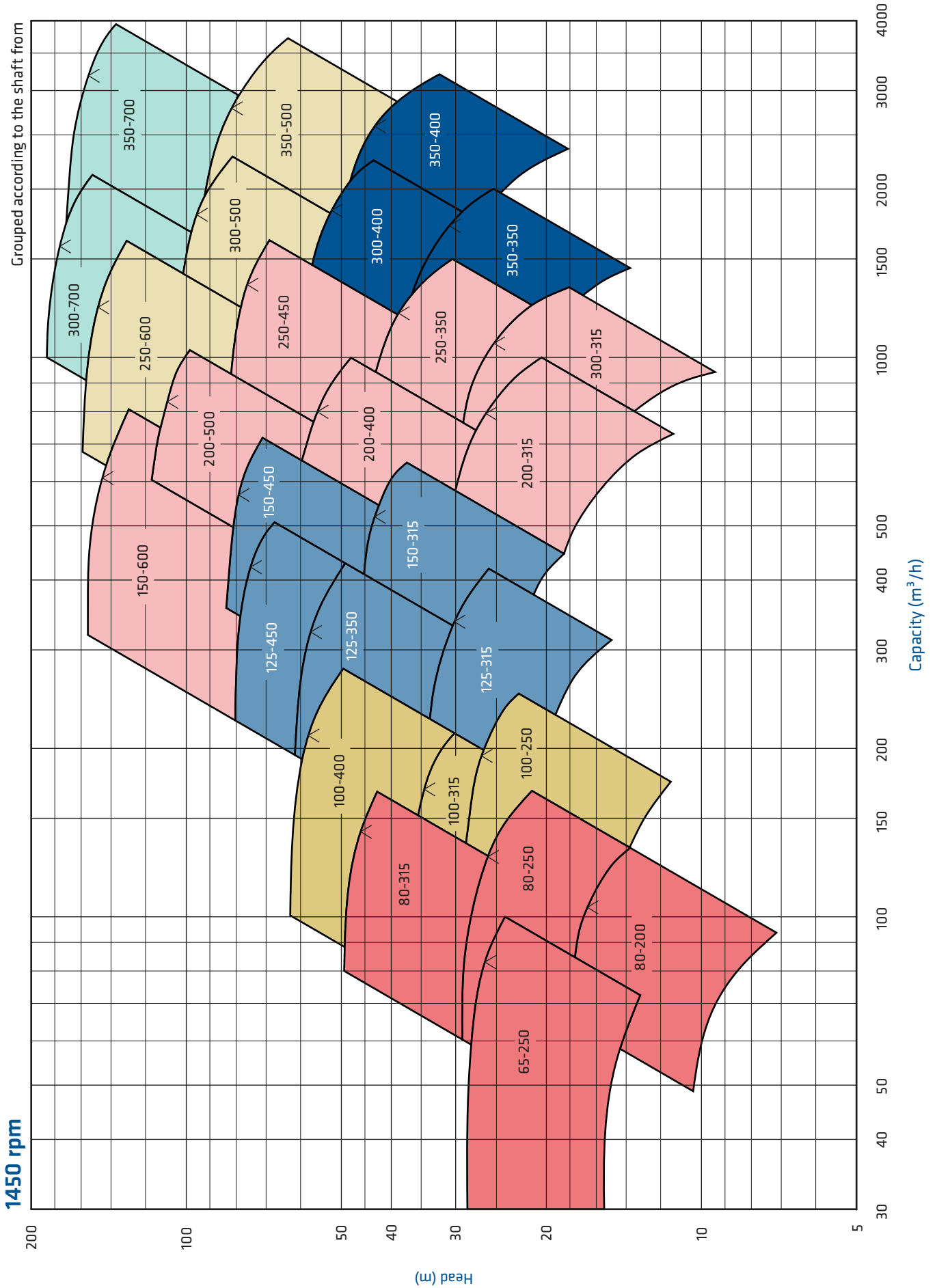
- Suction and Discharge Flanges are conform to EN 1092-2/PN 16 or PN25. (EN 1092-1 / PN 16 or PN 25 for steel or stainless steel casing)
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- Impeller is of double suction design. This feature increases pump suction performance in addition with providing the balance of hydraulic axial forces resulting higher bearing lifes and higher reliability.
- In standard construction, the direction of rotation is clockwise when it is looked from drive end. In this case, suction flange is on right and discharge flange is on left. Upon request the direction of rotation can be reversed. This time the position of the suction and discharge flanges are also reversed.
- Grease lubricated ball bearings are used in horizontal installation. In case of vertical installation, pumping liquid lubricated journal bearings on top and grease lubricated ball bearings on bottom are used.

Shaft Sealing

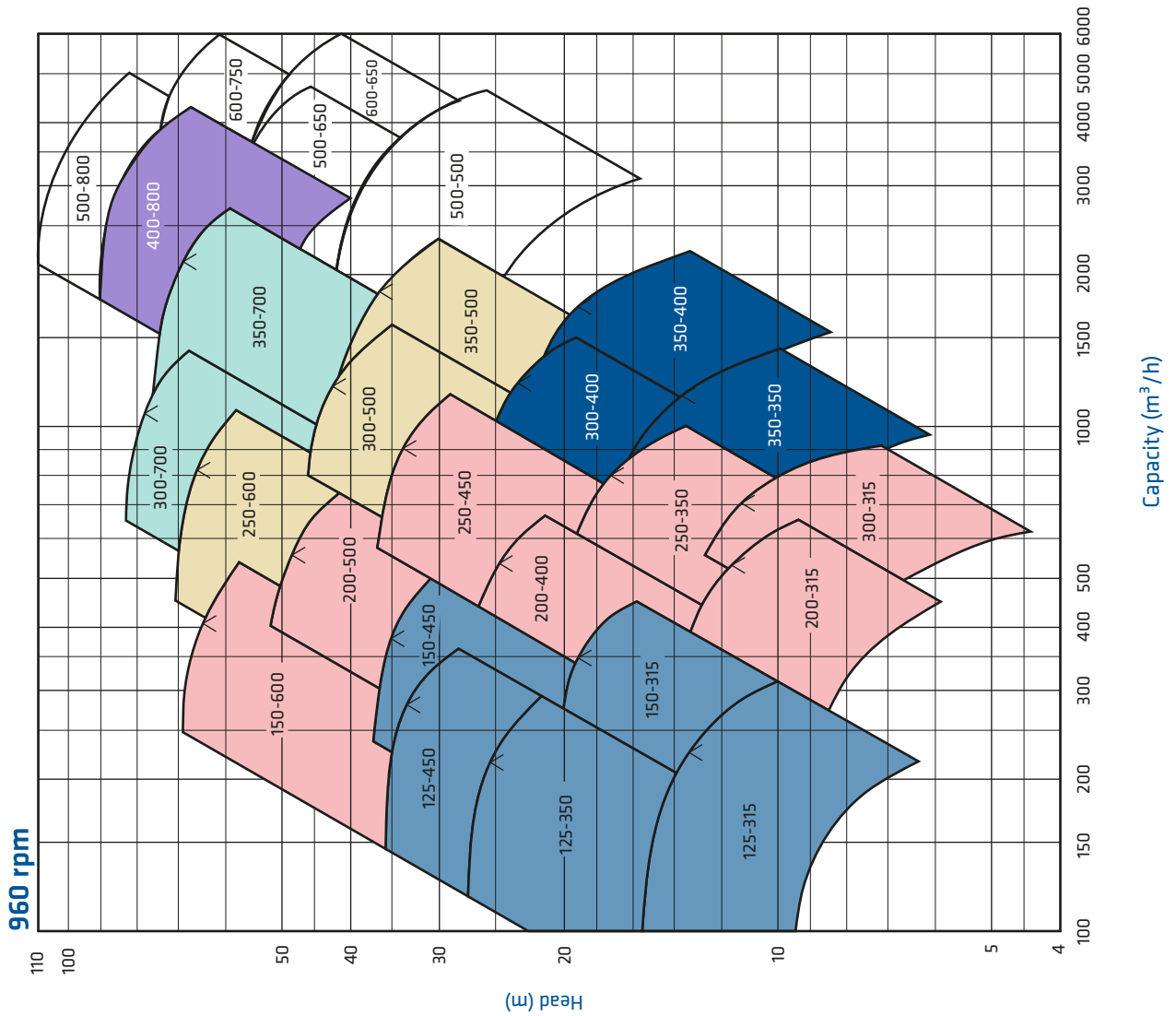
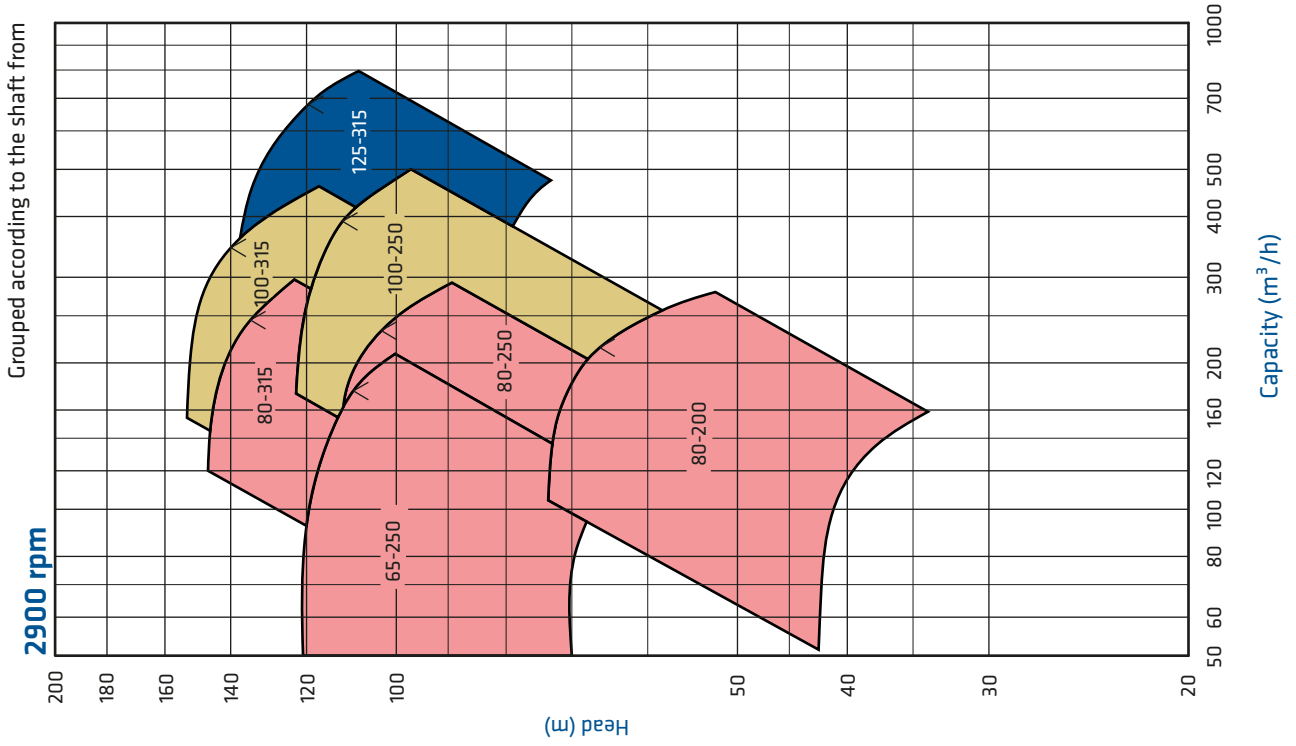
- Depending on request or requirement, pumps with soft packing or single, double and cartridge type mechanical seals can be supplied.



Field Charts



Field Charts



VTP

VERTICAL TURBINE PUMPS MIXED FLOW & AXIAL FLOW



Handled Liquids

Water, Butane, Corrosives, etc.

Design Features

- **PATTERNSHOP:** Different composite materials can be selected and CAD/CAM programs are used in order to reply new product requests.
- **CASTING:** Alternative material selections are offered to customers.
 - Cast iron (GG25, GGG40, GGG70, etc)
 - Stainless Steel (AISI304, Duplex, SuperDuplex, etc)
 - Bronze (CuAlNi, CuSn10, etc.)
- **WELDING:** M.I.G, T.I.G and submerged arc welding process are applied successfully by high quality welding team and ultrasonic tests are used to control the results.
- **MACHINING:** Machining processes are done up to Ø2500mm dia. and up to 15 ton weight.
- **COATING:** All painting and coating processes including availability for drinking water applications are applied.
- **ASSEMBLY:** We match our customers specs and assembling with precision to have the result of efficiently working pumps which have long life cycles.

Technical Data

- Capacity: _____ up to 40.000 m³/h
- Head: _____ up to 600 meters
- Bowl Sizes: _____ up to 100"
- Horse Power: _____ up to 7500 KW
- Impellers: _____ Enclosed, Semi-Open and Axial
- Materials: _____ Cast Iron (GG25, GG40, GG70, etc), Stainless Steel (AISI 304, Duplex, Super Duplex, etc.), Bronze (CuANiNi, CuSn10, etc.)

Applications

- Municipal Water, Seawater, Irrigation, Mining, Industrial, Power Generation, Oil & Gas Production, Storm Water, Sump Service, Booster Systems.

Pump Designation

VTP 14 3 2

Pump Type (Vertical Turbine Pumps) _____

Pump Size In Inches _____

Approximate Specific Speed Of The Pump _____

Impeller Type _____

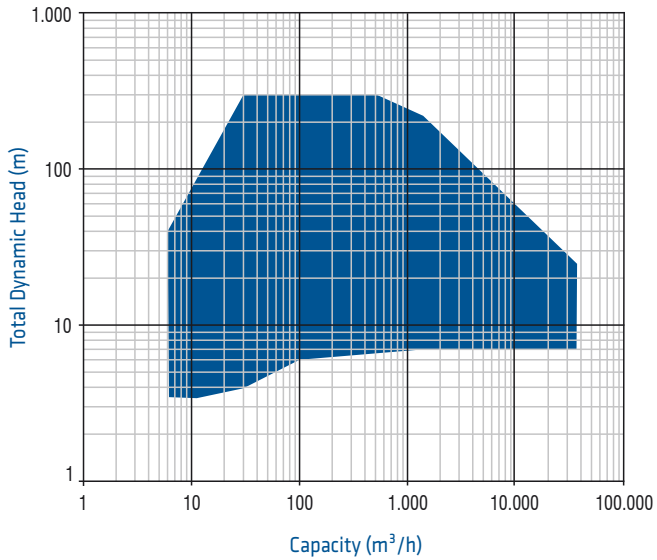


Field Charts

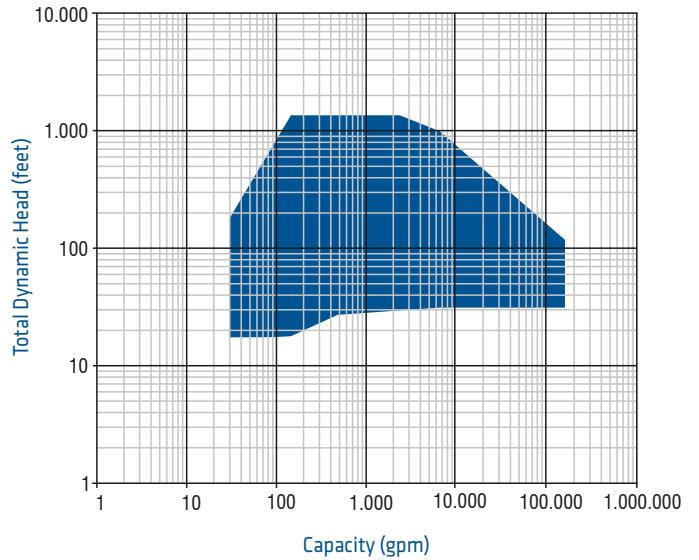
Mixed Flow Vertical Turbine Pumps Performance Range



50 Hz



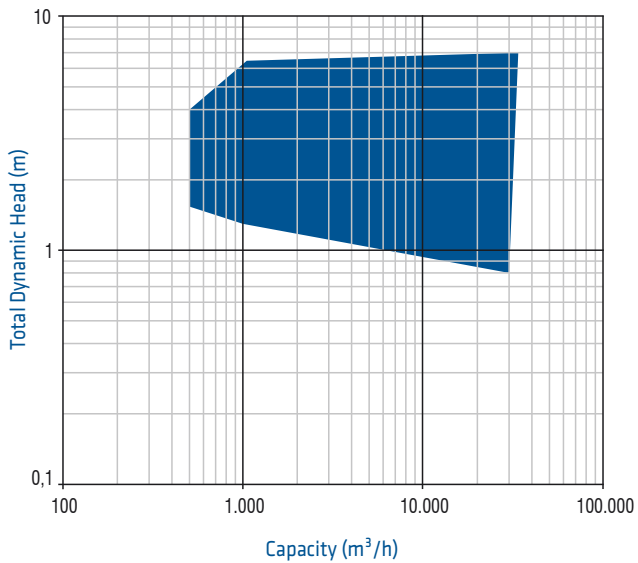
60 Hz



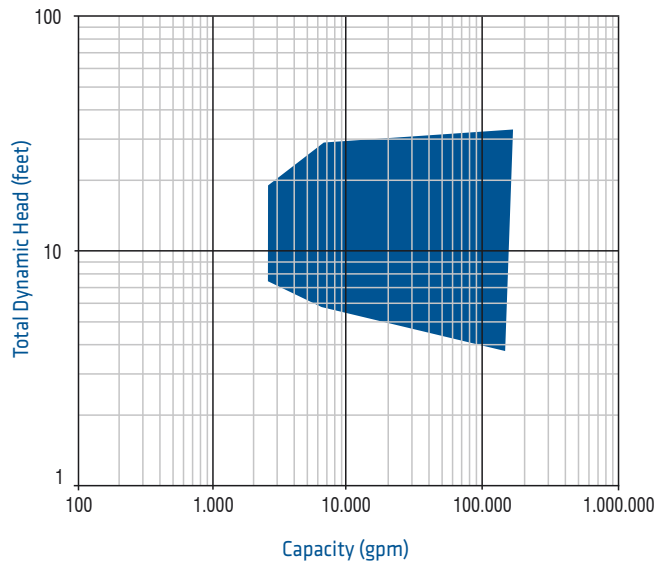
Axial Flow Vertical Turbine Pumps Performance Range



50 Hz



60 Hz



FKM

PROCESS PUMPS (SUMP DESIGN)



Handled Liquids

Clean or normal contaminated low or medium viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange _____ DN 32.....DN 150 mm
 Capacity _____ up to 400 m³/h
 Head _____ up to 220 m
 Speed _____ up to 1450 rpm
 Operating Temperature _____ up to +95 °C
 Casing Pressure (Pmax) _____ 30 bar

Design Features

- Vertical ring section, multistage, centrifugal pumps with closed impellers and diffusers.
- Up to 4 m. column length.
- Suction nozzle flanges conform to EN 1092 - 2 / PN 16 and discharge nozzle flanges conform to EN 1092 - 2 / PN 40 (PN 63) (For steel or stainless steel casing pumps, flanges conform to related pressure class ratings defined in EN 1092 - 1)
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.

- Axial thrust is balanced by impeller balancing holes system.
- Direction of rotation is counter clockwise viewed from driver.
- Bearings of FKM type pumps are grease lubricated. Bottom and internal sleeve bearings are lubricated by the pumping liquid. (different lubrication systems can be applied for the sleeve bearings in case of request or requirement. Contact for detailed information)

Shaft Sealing

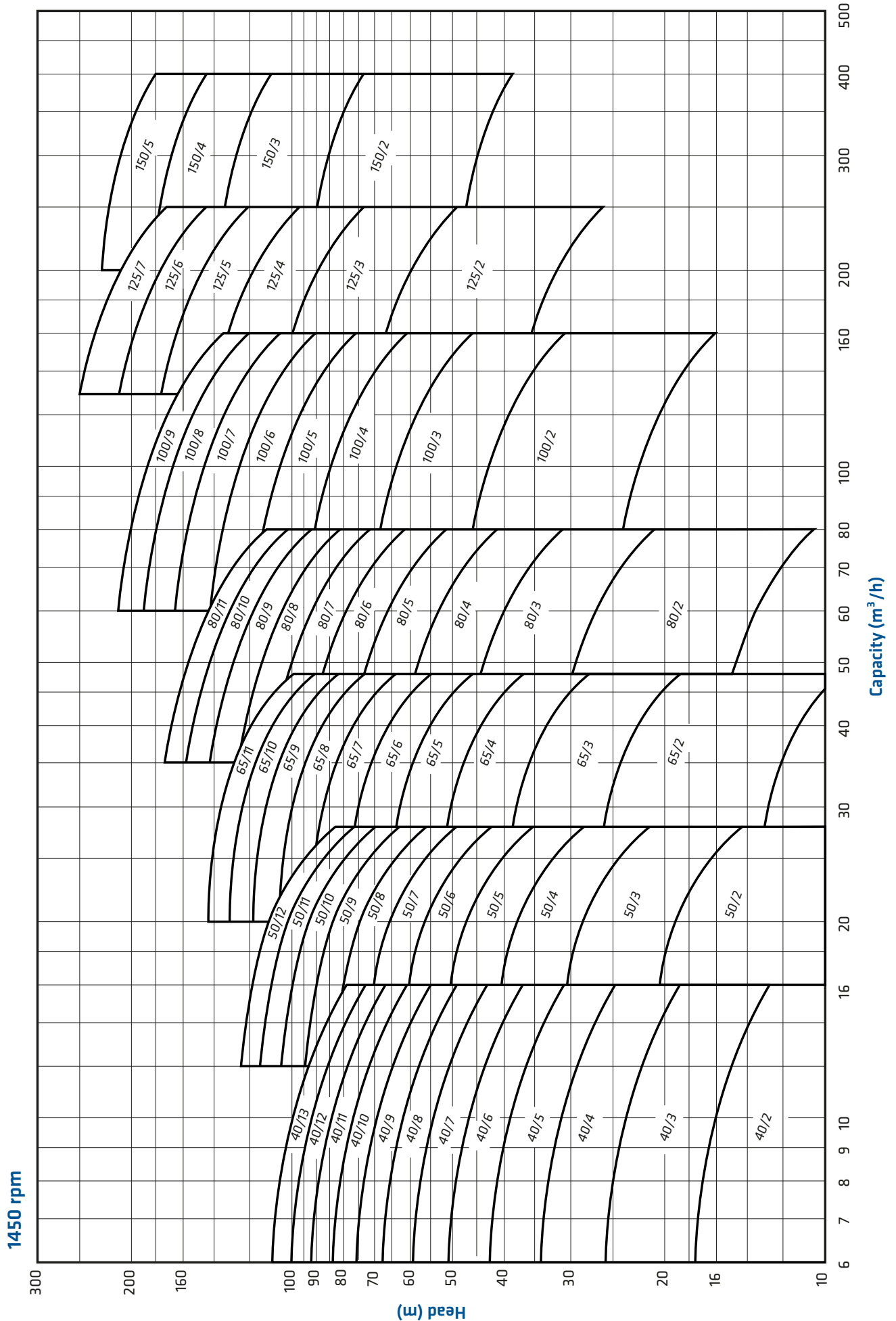
- In standard production soft packed stuffing boxes are used.
- Depending on customer request, mechanical seals are available. In this case, pump shaft is always stainless steel.

Pump Designation

Pump Type _____
 Discharge Nozzle (DN-mm) _____
 Nominal Impeller Diameter (mm) _____

FKM 40 / 3

Field Charts



FNV-B

PROCESS PUMPS (SUMP DESIGN)

Handled Liquids

Clean or normal contaminated low or medium viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange _____ DN 32.....DN 200 mm
Capacity _____ up to 800 m³/h
Head _____ up to 35 m
Speed _____ up to 1450 rpm
Operating Temperature _____ up to +95 °C
Casing Pressure (Pmax) _____ 10 bar

Design Features

- Vertical, volute casing, single stage, end suction centrifugal sump pumps with enclosed type impeller.
- Up to 4 m. column length.
- Discharge pipe is extended up to base plate for easy installation.
- Suction and discharge flanges conform to EN 1092-2 / PN 16. (EN 1092-1 / PN 16 for steel or stainless steel casing)
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- Axial thrust is balanced by impeller balancing holes system.

Pump Designation

Pump Type _____
Discharge Nozzle (DN-mm) _____
Nominal Impeller Diameter (mm) _____



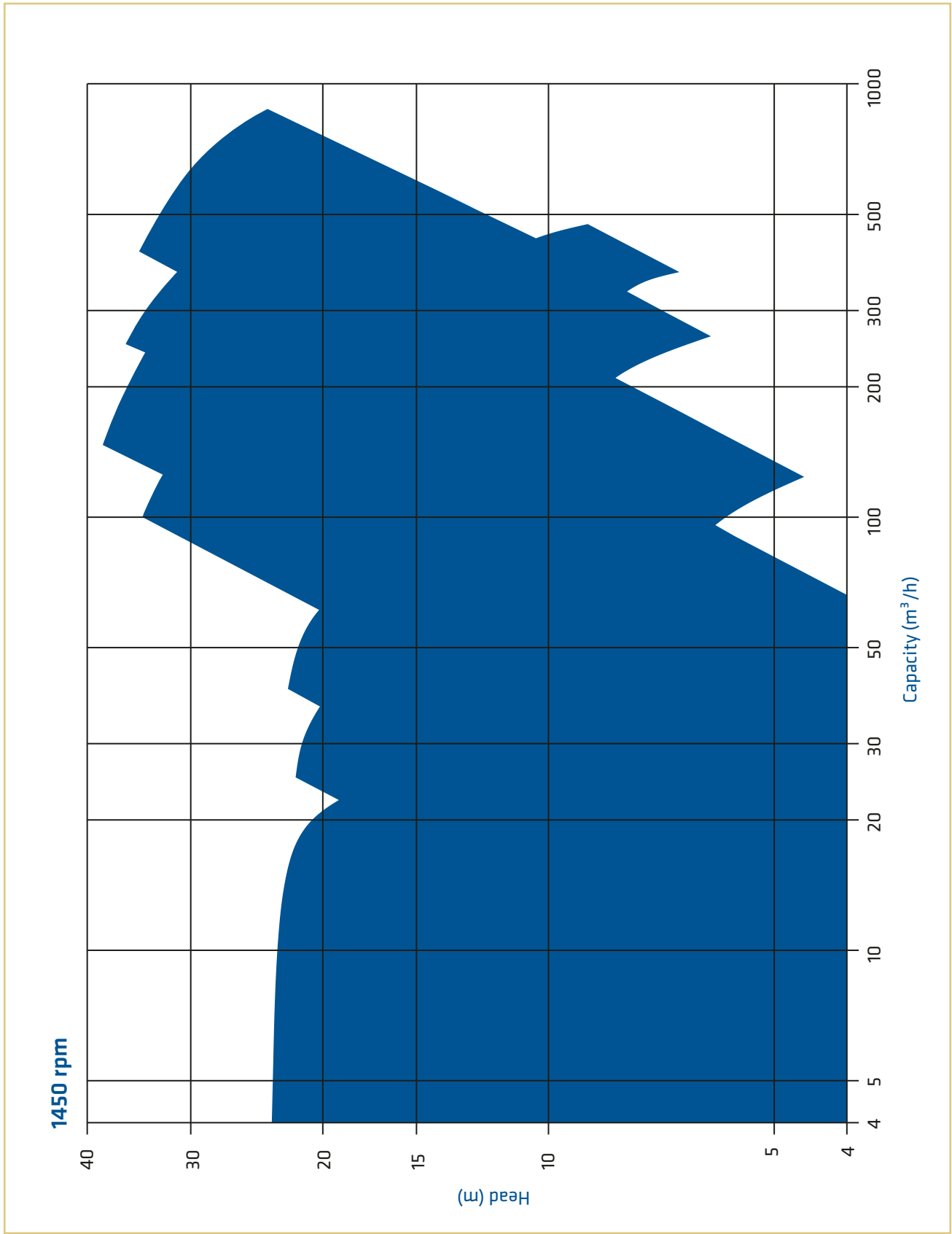
- Direction of rotation is clockwise viewed from driver.
- Bearings of FNV-B type pumps are grease lubricated. Bottom and internal sleeve bearings are lubricated by the pumping liquid. (different lubrication systems can be applied for the sleeve bearings in case of request or requirement. Contact for detailed information).

Shaft Sealing

- No sealing is required.

FNV-B 100 - 250

Field Chart



PW-PWV

WASTE WATER AND PROCESS PUMPS



Handled Liquids

Domestic and industrial waste water, raw sewage, viscous and corrosive liquids, liquids with fibrous and solid substances.

Technical Data

Discharge Flange _____ DN 40.....DN 300 mm
 Capacity _____ up to 1600 m³/h
 Head _____ up to 95 m
 Speed _____ up to 2900 rpm
 Operating Temperature _____ -10 °C up to +110 °C
 Casing Pressure (Pmax) _____ 10 bar (16 bar) (*)

(Pmax: Suction Pressure + Shut off Head)

(*) The Material of pumps differ according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- Horizontal / Vertical, wide volute casing, single stage, end suction, centrifugal pumps with enclosed, semi-open or vortex type impeller.
- 18 basic sizes covering wide range of operational area.

Pump Designation

Pump Type _____
 Vertical Installation _____
 Discharge Nozzle (DN-mm) _____
 Nominal Impeller Diameter (mm) _____
 Impeller Type _____

PW - V 250-315 AB

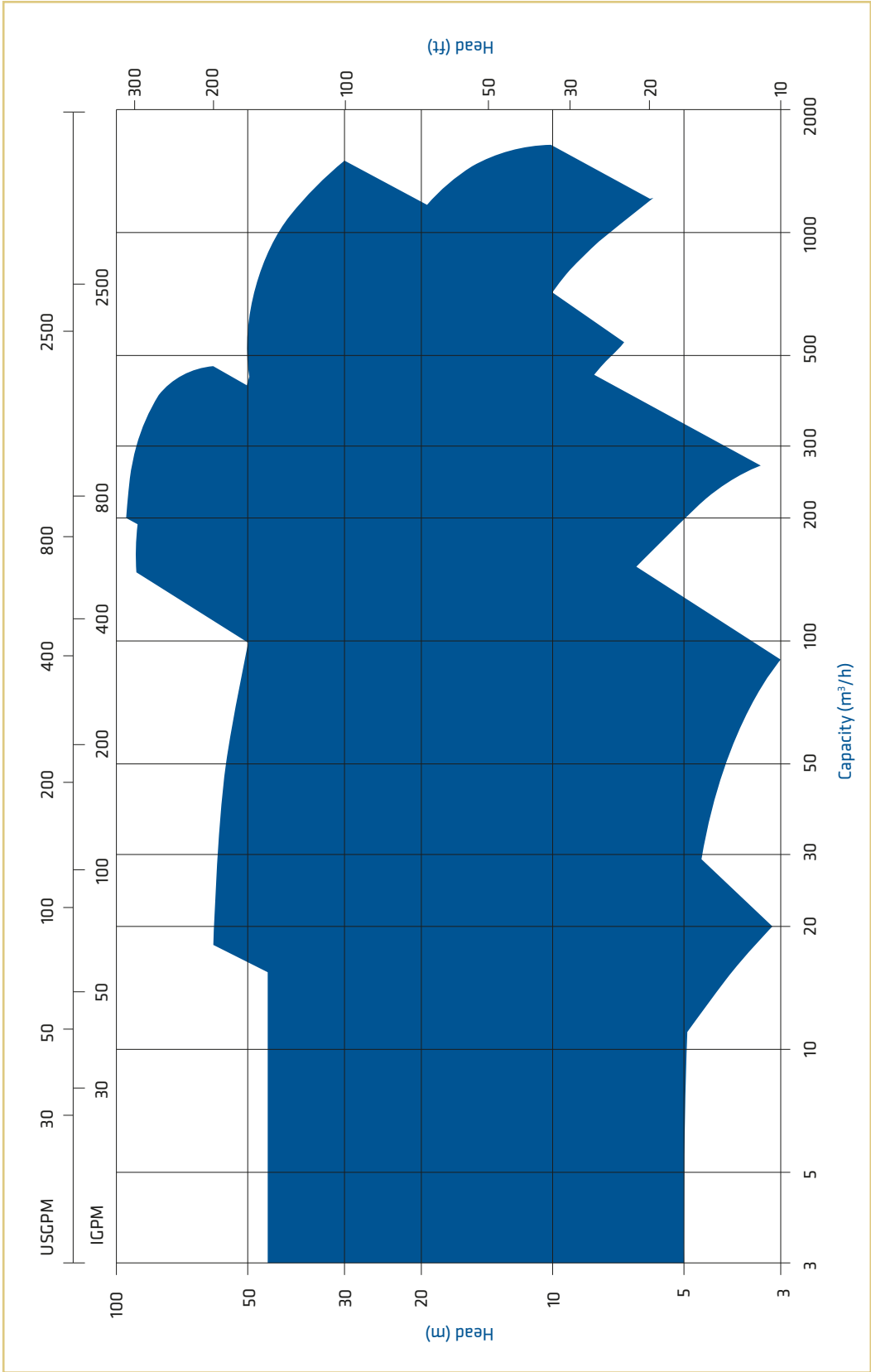
- Due to the back-pull-out design, the complete bearing assembly including impeller and casing cover can be dismantled without removing the volute casing from the pipe system. (With spacer coupling application, also possible to take out the rotor group without dismantling the electric motor.)
- Discharge flanges conform to EN 1092-2 / PN 10. (EN 1092-1 / PN 10 for steel or stainless steel casing)
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- Axial thrust is balanced by impeller back ribs.
- Direction of rotation is clockwise viewed from drive end.
- Bearings of PW type pumps are "life time grease lubricated" ball bearing up to 150-315 size. For bigger sizes oil lubricated bearings are used. In vertical design (PWV) always grease lubricated bearings are used.

Shaft Sealing

- In standard production soft packed stuffing boxes are used.
- Depending on customer request, mechanical seals are available. In this case, pump shaft is always stainless steel.
- Only mechanical seal is applied for vertical type installation.



Field Chart



PW-VS

WASTE WATER AND PROCESS PUMPS (SUMP DESIGN)

Handled Liquids

Domestic and industrial waste water, raw sewage, viscous and corrosive liquids, liquids with fibrous and solid substances.

Technical Data

Discharge Flange	DN 40.....DN 300 mm
Capacity	up to 1600 m ³ /h
Head	up to 95 m
Speed	up to 1450 rpm
Operating Temperature	up to +95 °C
Casing Pressure (Pmax)	10 bar

Design Features

- Vertical, wide volute casing, single stage, end suction, centrifugal pumps with enclosed, semi-open or vortex type impeller.
- Up to 4 m. column length.
- Discharge pipe is extended up to base plate for easy installation.
- Closed, semi-open or free vortex type impeller design.
- Discharge flanges conform to EN 1092-2 / PN 10. (EN 1092-1 / PN 10 for steel or stainless steel casing)

Pump Designation

Pump Type	_____
Discharge Nozzle (DN-mm)	_____
Nominal Impeller Diameter (mm)	_____
Impeller Type	_____



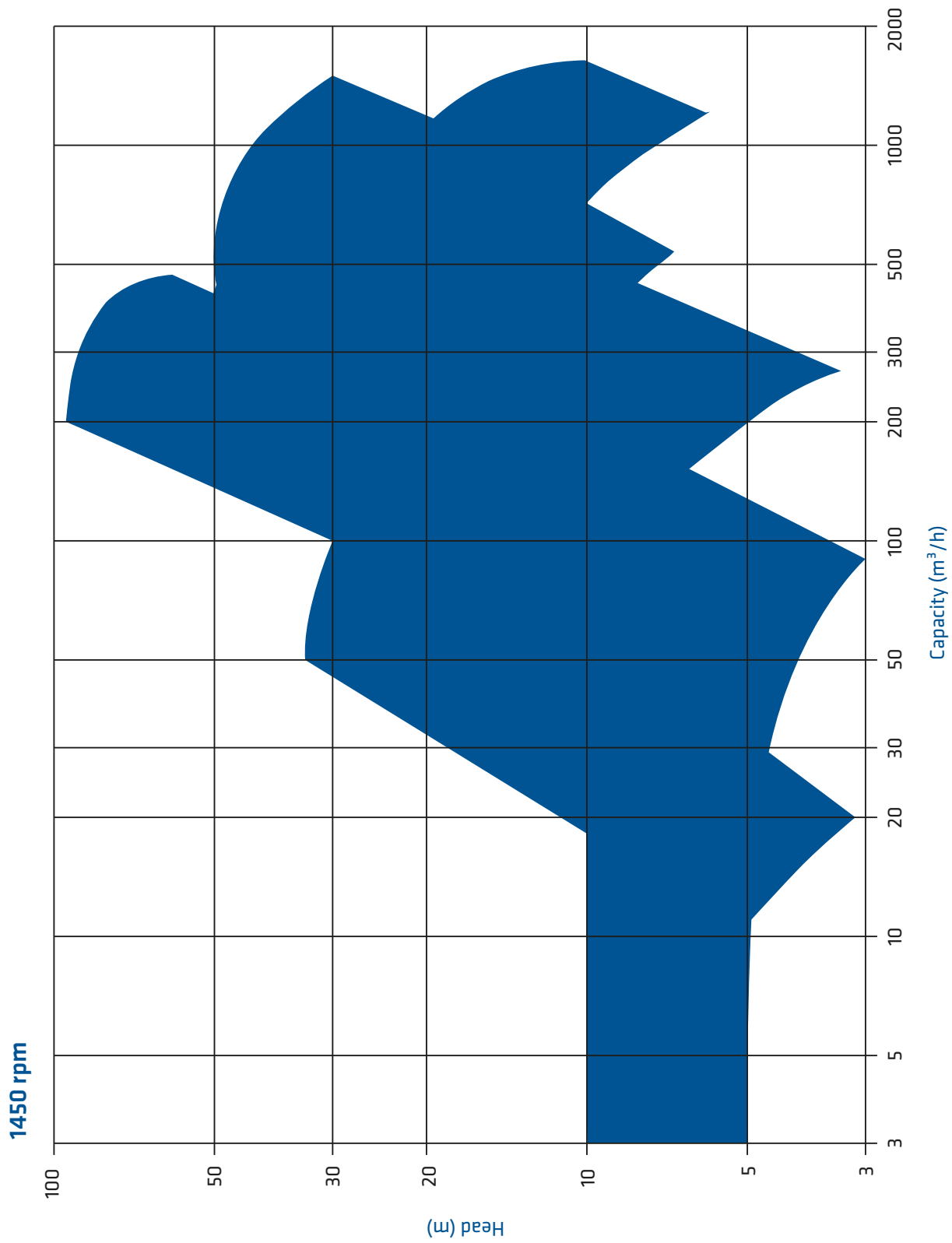
- All impellers are dynamically or statically balanced according to ISO 1940 Class 6.3.
- Axial thrust is balanced by impeller back ribs.
- Direction of rotation is clockwise viewed from drive end.
- Bearings of PW-VS type pumps are grease lubricated. Bottom and internal sleeve bearings are lubricated by the pumping liquid. (different lubrication systems can be applied for the sleeve bearings in case of request or requirement. Contact for detailed information)

Shaft Sealing

- No sealing is required.

PW-VS 250 - 315 AB

Field Chart



IL-FM

IN-LINE PUMPS



Handled Liquids

Clean or slightly contaminated low viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange _____ DN 40.....DN 150 mm

Capacity _____ up to 200 m³/h(*)

Head _____ up to 100 m(*)

Operating Temperature _____ -10 °C' to +140 °C(**)

Casing Pressure (Pmax) _____ 10 bar (16 bar)(**)
(Pmax: Suction Pressure + Shut off Head)

(*) Contact company for higher capacity and head values.
(**) The Material of pump differs according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- In-line, rigidly-coupled, volute casing, single stage centrifugal pump with closed impeller.
- All impellers are balanced dynamically or statically according to ISO 1940 grade 6.3.
- Suction and discharge flanges conform to EN 1092-2 / PN 16. The flanges are according to EN 1092-1 / PN 16 for steel or stainless steel casing. In case of request, ANSI/ASME flanges can be supplied.
- Pumps are rigidly coupled with electric motors of IEC frame sizes with high efficiency class.

Pump Designation

Pump Type _____

Suction and Discharge Nozzle (DN-mm) _____

Nominal Impeller Diameter (mm) _____

Special Application _____

- All impellers are balanced dynamically or statically according to ISO 1940 grade 6.3.
- Axial thrust is balanced by impeller balancing holes system.
- Direction of rotation is clockwise viewed from drive end.
- In case of request, wear ring and/or shaft sleeve can be supplied.
- The pump and motor have separate shafts connected by a rigid coupling or through slide fit shaft. Axial and radial forces are absorbed by electric motor bearings.
- For IL-FM drawings, please look at below address www.dynapumps.com.au

Shaft Sealing

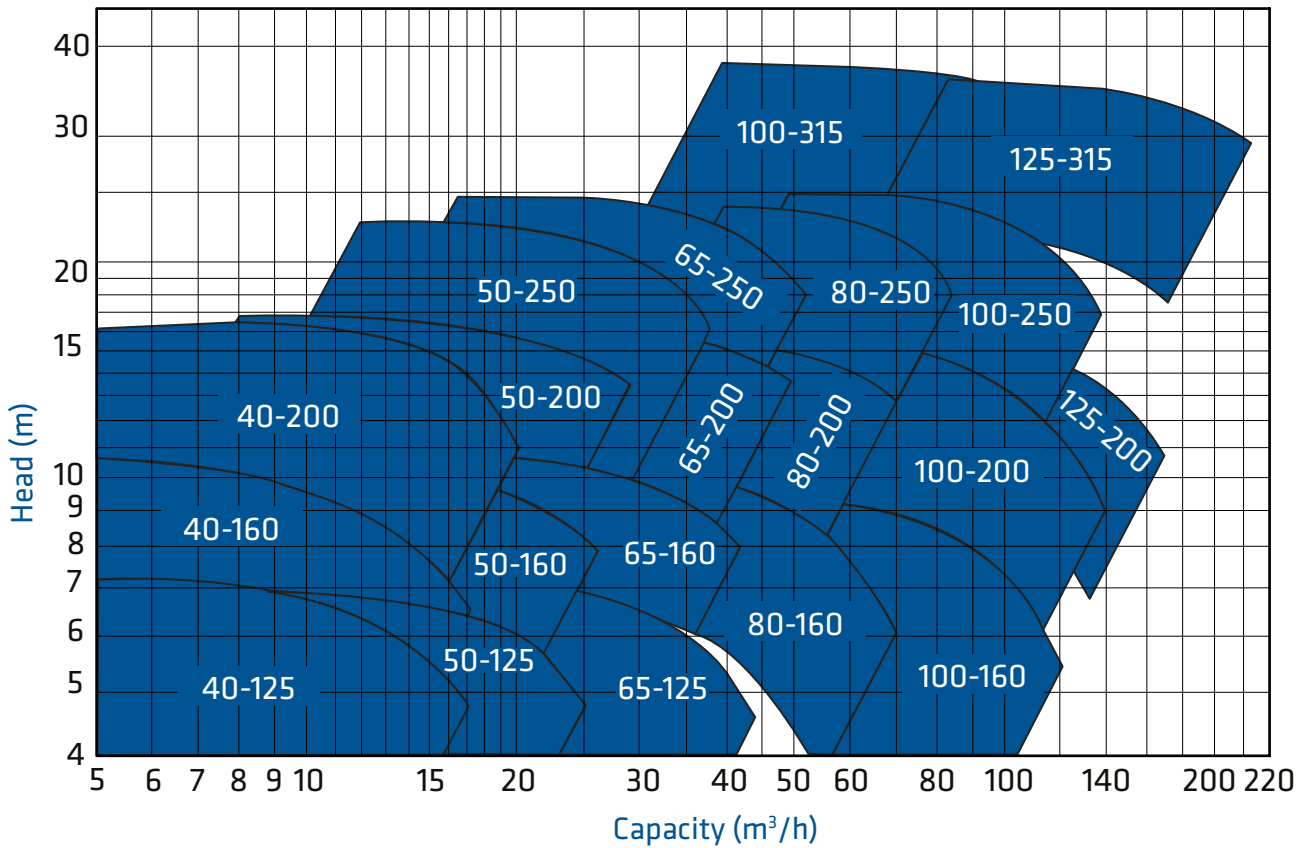
- Depending on customer request or liquid type, mechanical seals are available.

IL-FM 100 - 250 - XXX

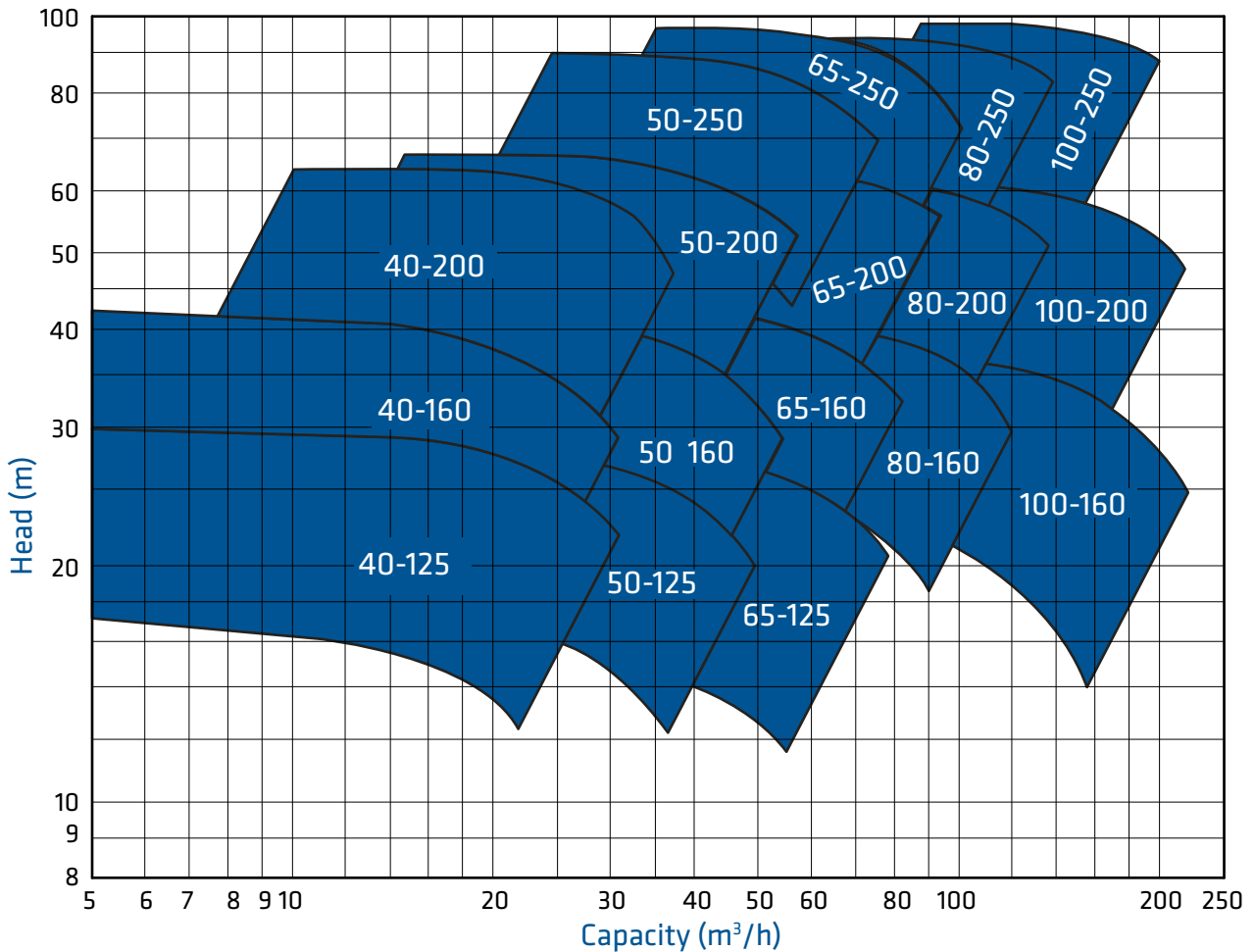


Field Charts

IL-FM - 1450 rpm



IL-FM - 2900 rpm



ILV-FM

IN-LINE PUMPS



Handled Liquids

Clean or slightly contaminated low viscosity liquids without solid & fibrous particles.

Technical Data

Discharge Flange _____ DN 40.....DN 250 mm

Capacity _____ up to 800 m³/h

Head _____ up to 95 m

Speed _____ up to 2900 rpm

Operating Temperature _____ -10 °C' to +140 °C (*)

Casing Pressure (Pmax) _____ 10 bar (16 bar) (*)

(Pmax: Suction Pressure + Shut off Head)

(*) The Material of pumps differ according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- Volute casing, single stage, vertical in-line centrifugal pump with closed impeller and with separate own bearing bracket.
- Suction and discharge flanges conform to EN 1092-2 / PN 16. (EN 1092-1 / PN 16 for steel or stainless steel casing)
- ILV-FM pumps are short coupled with electric motors of IEC frame sizes with high efficiency class.

Pump Designation

Pump Type _____

Suction and Discharge Nozzle (DN-mm) _____

Nominal Impeller Diameter (mm) _____

- Due to the back-pull-out design, the complete bearing assembly including impeller and casing cover can be dismantled without removing the volute casing from the pipe system. (With spacer coupling application, also possible to take out the rotor group without dismantling the electric motor.)
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- Axial thrust is balanced by impeller balancing holes system.
- Direction of rotation is clockwise viewed from drive end.
- Bearings of ILV-FM type pumps are "life time grease lubricated" ball bearings.

Shaft Sealing

- Single mechanical seal, flushed by pumped liquid, uncooled and unbalanced.

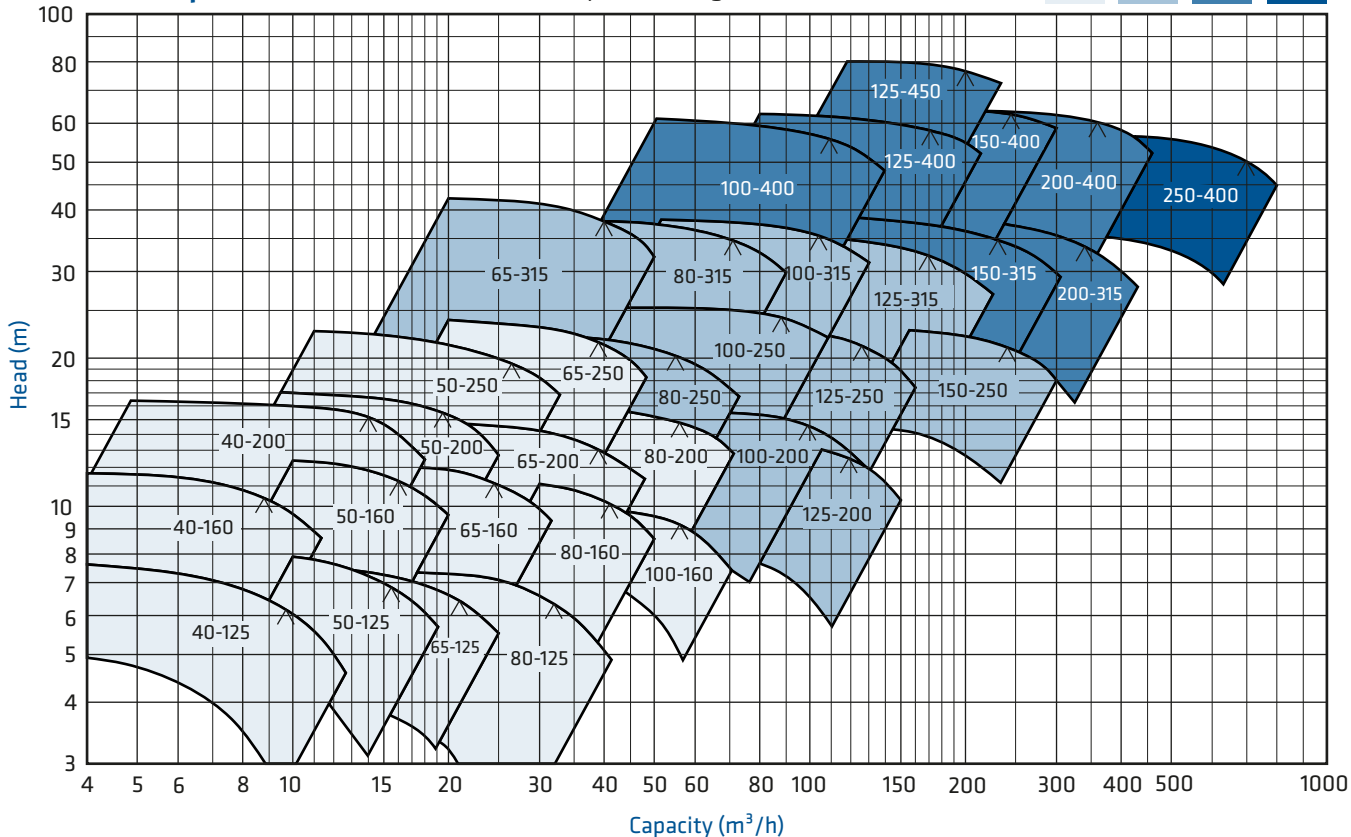
ILV-FM 100 - 250

Field Chart

1450 rpm

Grouped according to mechanical seal dimension

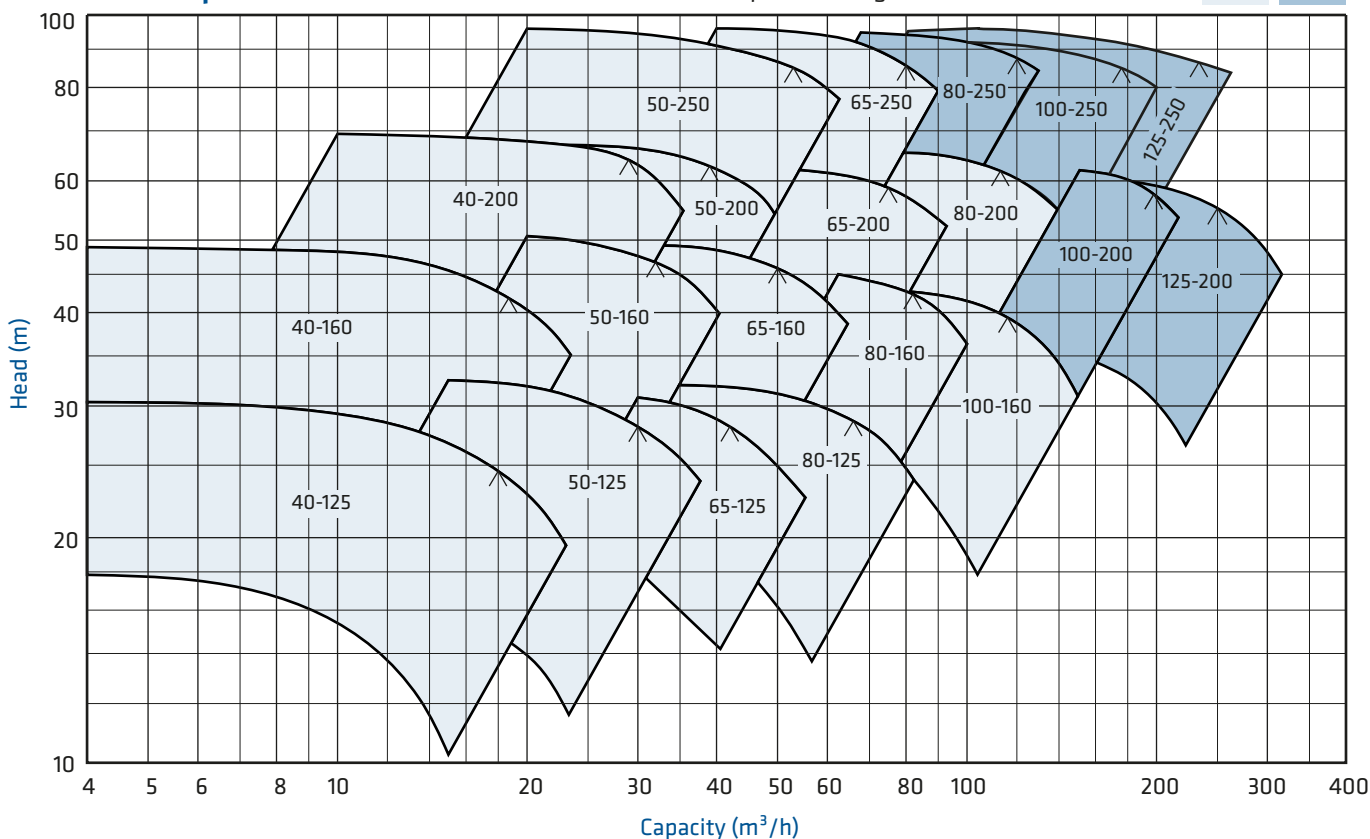
- A
- B
- C
- D



2900 rpm

Grouped according to mechanical seal dimension

- A
- B



PPA

API 610 11th Edition ISO 13709 Process Pumps



Application Areas and Pumped Liquids

Petroleum industry, power plants and chemical industry. Fuel oil, motorin, gasoline, LPG, lubricants, kerosene, etc.

Technical Data

Discharge Flange	_____	NPS 1" - NPS 10"
Capacity	_____	up to 1000 m ³ /h
Head	_____	up to 350 m
Speed	_____	up to 3600 rpm
Operating Temperature	_____	up to +350 °C (*)
Operating Pressure	_____	51 bar (*)
Design Type	_____	OH2

(*) The Material of pump differs according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- According to API 610 11th edition (ISO 13709).
- Center line volute casing design for high pressure and temperature.
- Tangential outlet design for high efficiency at the volute casing.
- For special application double volute casing can be applied.

Pump Designation

Pump Type	_____	PPA	6	-	4	-	17
Discharge Nozzle (inch)	_____						
Suction Nozzle (inch)	_____						
Nominal Impeller Diameter (inch)	_____						

- Due to the back-pull-out design, the complete bearing assembly including impeller and casing cover can be dismantled without removing the volute casing from the pipe system. With spacer coupling application, also possible to take out the rotor group without dismantling the electric motor.
- The suction and discharge flanges are capable for handling the forces and moments which are mentioned in API 610.
- The material of casing gasket is spiral wound gasket for handling high pressure.
- In case of pumping hot liquid there is cooling devices on bearing housing and special construction for mechanical seal.
- Heavy duty type shaft and bearings.
- All impellers are balanced dynamically or statically according to ISO 1940 grade 2.5.
- In case of preventive maintenance, temperature and vibration sensors can be applied.
- For high bearing life time, the constant level oilers are supplied in order to keep oil level in proper level.
- Oil ring are used in standart production and these rings prevent oil foaming.
- The base plate construction is highly rigid as defined in to API 610 standard.

Shaft Sealing

- Mechanical seal cover is designed according to API 610. This mechanical seal cover is suitable to assemble every kind of mechanical seal according to API 682.



S

SUBMERSIBLE SEWAGE PUMPS



Handled Liquids

Domestic and industrial waste water, raw sewage, liquids with fibrous and solid substances.

Technical Data

Discharge Flange _____ DN 50.....DN 300 mm
 Capacity _____ up to 1600 m³/h
 Head _____ up to 95 m
 Speed _____ up to 2900 rpm
 Operating Temperature _____ up to +40 °C
 Casing Pressure (Pmax) _____ 10 bar

Design Features

- Vertical, wide volute casing, single stage, end suction submersible type centrifugal pump with enclosed, semi-open or vortex types impeller.
- 20 basic sizes covering wide range of operational area.
- Electric motor isolation class is IP 68.

- Discharge flanges conform to EN 1092-2 / PN 10. (EN 1092-1 / PN 10 for steel or stainless steel casing)
- All impellers are balanced dynamically or statically according to ISO 1940 class 6.3.
- Axial thrust is balanced by impeller back ribs.
- In case of request motor cooling jacket is also applicable (for pumps bigger than 12 HP)
- Bearings of S type pumps are “life time grease lubricated” ball bearings.

Shaft Sealing

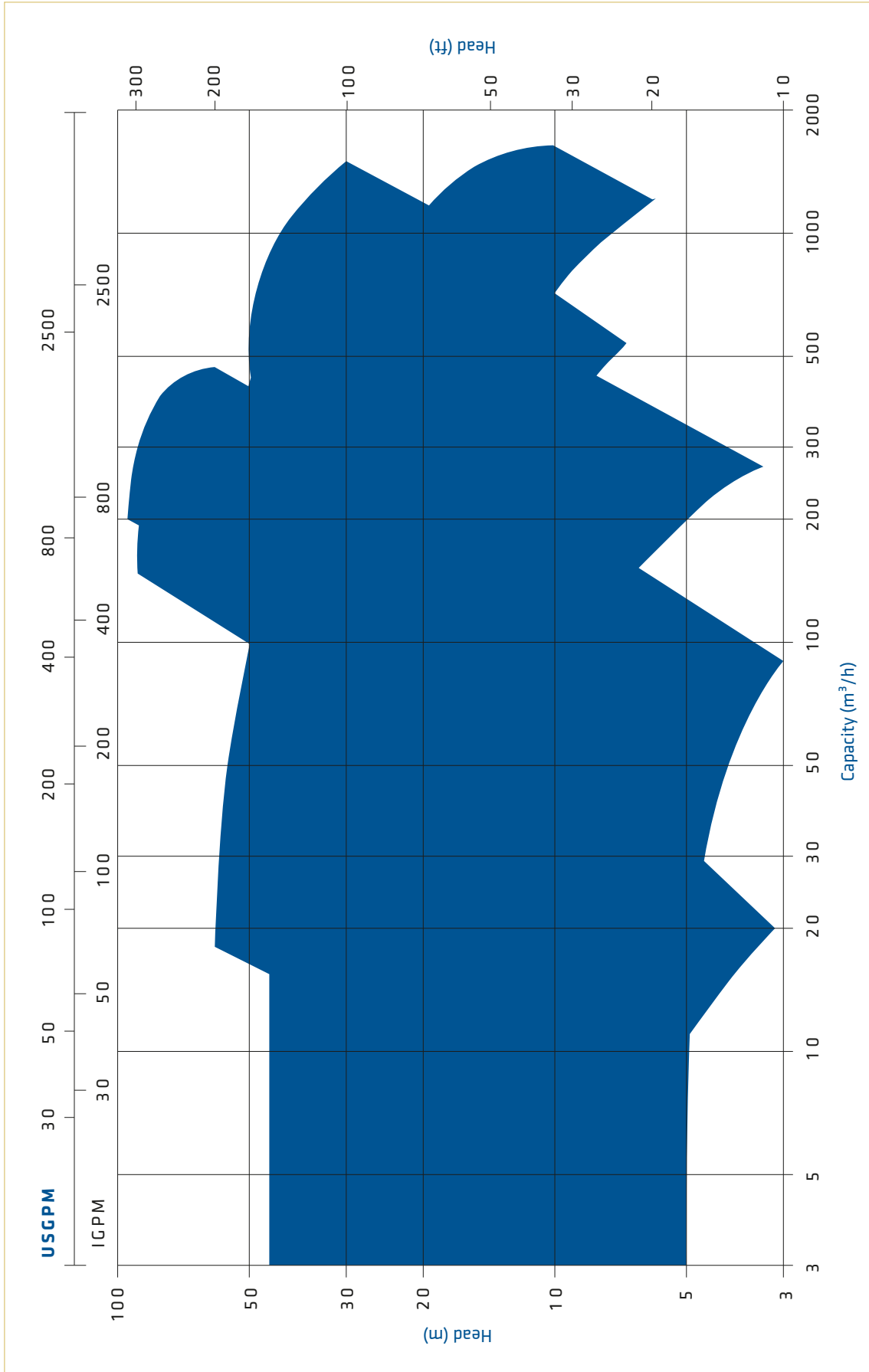
- For pumps bigger than 12 HP, always double mechanical seal is applied while for pumps up to 12 HP, single mechanical seal is applied as standard.
- In case of request, double mechanical seal can also be applied for pumps up to 12HP.

Pump Designation

S 100 - 240 B

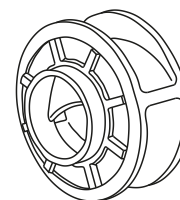
Pump Type _____
 Discharge Nozzle (DN-mm) _____
 Impeller Nominal Diameter (mm) _____
 Impeller Type _____

Field Charts

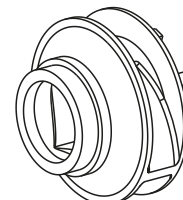


Impeller Type

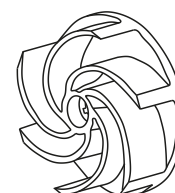
B Type Impeller: Enclosed type impellers with wide channels capable of pumping large size solid particles without clogging, for big capacity and low pressure. It is mainly used for 4 pole motors.



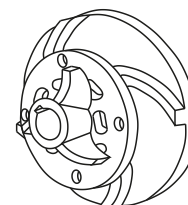
D Type Impeller: It is also enclosed type like B type but suitable for high speed motors (2 pole). It is convenient for high pressure, small capacity and smaller size solid particles.



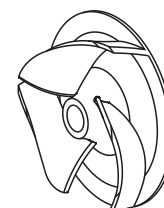
VX Type Impeller: Semi-open free vortex type impeller is placed on top of the volute. It creates a forced vortex motion in the casing. It is mostly suitable for fibrous materials. They are suitable for low head applications but pump efficiency is lower compare to other impeller types. The increased clearances limit the head that can be generated and reduce the attainable efficiency. Recessed type impellers are also possible for some models. With this type of design solid particles up to pump flanges size can pass through the pump. Please ask for more information.



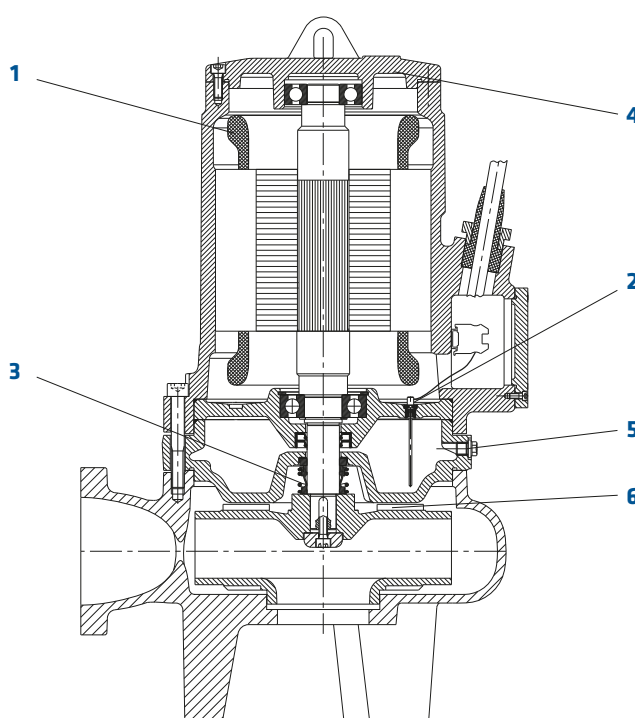
F Type Impeller: Semi-open type impeller with cutter. The cutting system is placed in front of the impeller and it breaks up the solid particles into smaller sizes that makes passing possible through the smaller pipes without sticking. F type impeller is suitable for small capacity, high pressure, but the pump efficiency is also low.



AB Type Impeller: Semi-open type impellers with wide channels capable of pumping large size solid particles without clogging, for big capacity and low pressure. It is more suitable for 4 pole motors. Designed for aggressive applications. Impeller works against a wear plate. Clearance between the wear plate and impeller blades is between 0.25 - 0.40 mm.



1. Temperature SENSOR (130°C) in F class winding head protection for overheating.
2. Signaling ELECTRODE in case of leakage into the motor or into the oil chamber.
3. Mechanical seal running in pumping liquid.
4. Demountable TOP COVER for easy motor winding.
5. Oil filling and inspection PLUG.
6. BACK VANES for reducing axial load and sealing pressure.



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