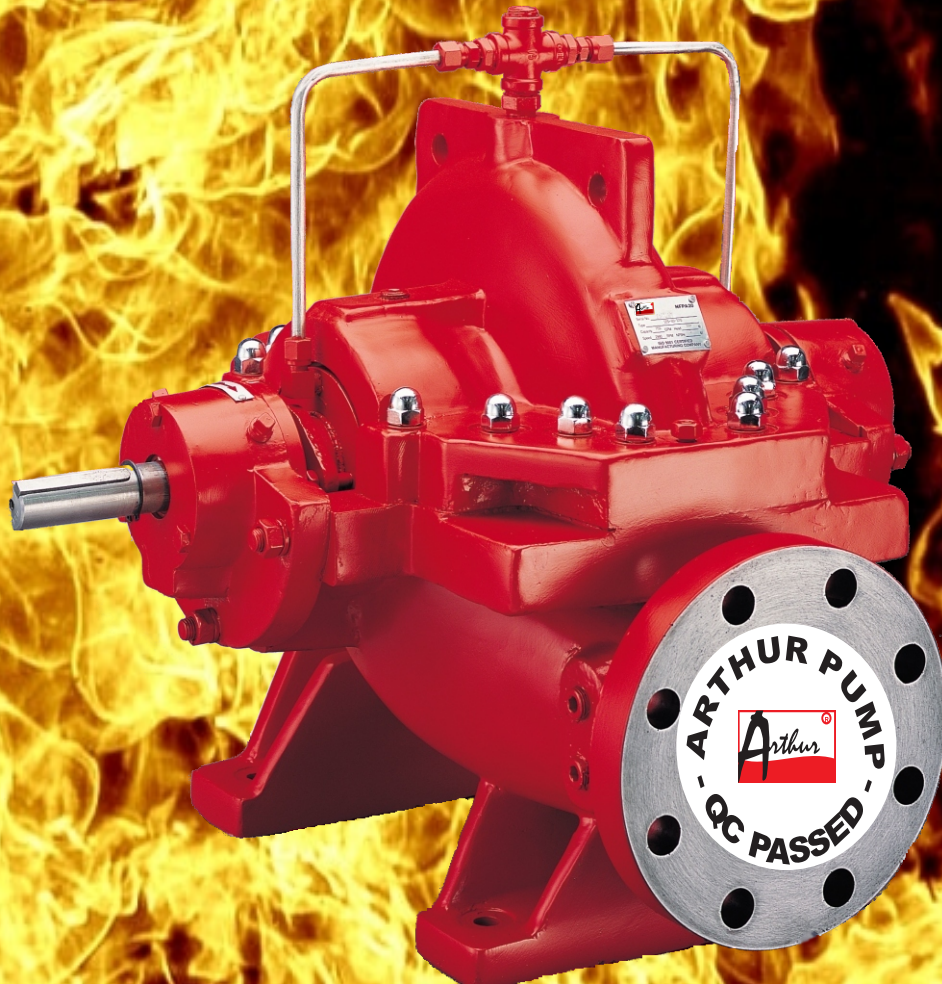




Name Quality
TKDN -16-2000488

Fire Pumps

**Effective and powerfull
fire protection**



2010



Built To Perform.

SPLIT CASE PUMPS



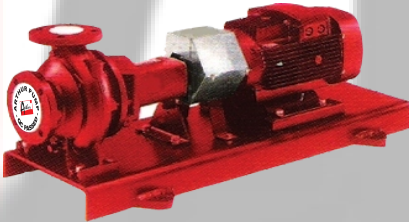
The Pro-Max Series

**Capacity up to 2500 GPM
(9.463 L/Min)**

**Pressures up to 25 Bar
(250 Meter)**

- Arthur Horizontal Split Case type pro max series of fire pumps offers higher efficiencies, more economical, a wider use of hydraulics and longer life in virtually every fire application.
- Available in clockwise or counter-clockwise rotating to simplify pump room layout.
- Available in electric motor or diesel engine driver configuration.

END SUCTION PUMPS



Arthur IS Series

**Capacity up to 900 GPM
(3.407 L/Min)**

**Pressures up to 15 Bar
(150 Meter)**

- Are Horizontal End Suction Centrifugal Pumps designed for clean water or similar liquids in fire fighting and sprinkler applications.
- Pull out design supplied as standard with flexible coupling, ease of maintenance, eliminates disturbing piping system when removing rotation element.
- Hydraulically balanced impeller extends bearing life and assures smoother operation.
- Available in electric motor or diesel engine driven configuration.

VERTICAL MULTI STAGE



Arthur CD, CDF Series

**Capacity up to 500 GPM
(1.893 L/Min)**

**Pressures to 22 Bar
(220 Meter)**

- Space saving design.
- Suction and discharge flanges are on a common centerline, 180° apart for inline mounting in piping.
- Dynamic balanced.

IN~LINE PUMPS

**Capacity up to 1500 GPM
(5,678 L/Min)
Pressures up to 16,6 Bar
(166 M)**

- Space saving design.
- No foundation or pads required.
- Suction and discharge flanges are on a common centerline, 180° apart for inline mounting in piping.
- Top pullout design allows for fast and easy servicing. the rotating element is easily removed without disturbing suction and discharge piping.
- Self-venting design eliminate the need for an automatic air release valve.
- Bronze impeller is dynamically balanced and keyed direct to the motor shaft.



VERTICAL TURBINE PUMPS

**Capacity up to 4000 GPM
(15.140 L/Min)
Pressures up to 20 Bar
(200 M)**

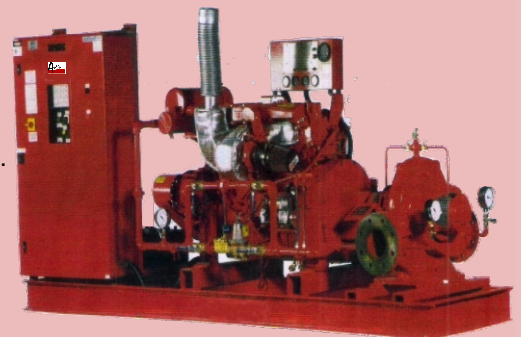
- Required by NFPA when operating under astatic suction lift condition.
- dynamically by balanced impeller secured to the shaft with steel locking collets to assure proper problem free operation.
- Open line shaft design provides for product lubrication of the bearing.
- Available in electric motor or diesel engine driven configuration.
- Provided with a bronze suction as standard.
- provided with an oversized air release valve as standard.
- Available in special material of construction for self water applications.

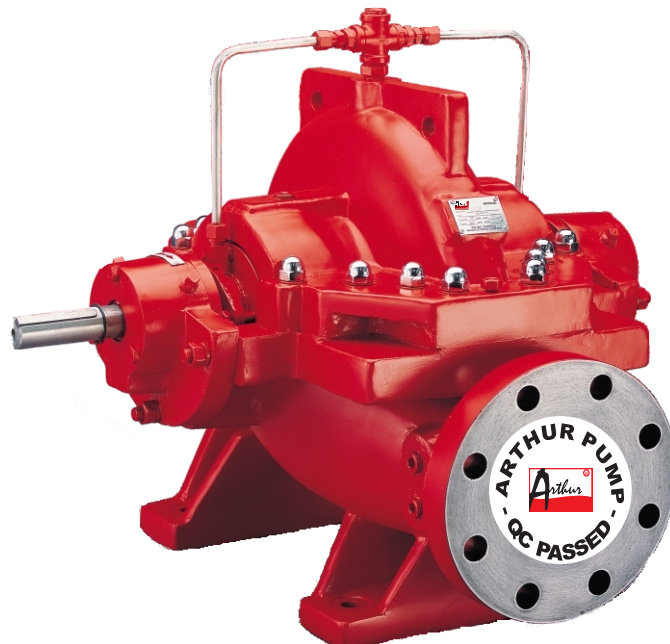


ENGINEERING SYSTEM

ENGINE FIRE PUMPS PACKAGE

- Designed for the customer's needs, Arthur fire pumps are the most versatile pump systems available. the highest quality material and workmanship along with excellence in engineering. design are employed in the creation of every pump system. Our experience and expertise allow us to customize the system to suit each owner's requirement while maintaining compliance to rules.
- Our expertise is further enhanced by a team of service engineers that provide commissioning for each installation to ensure optimal performance of the system.
- Rear pullout design supplied as standard with flexible coupling. ease of maintenance, eliminates disturbing driven or piping when removing rotating element.





Features

- **Standardized** design with generalized products series
- **Double volute** casing construction perfectly balances the radial forces, ensuring minimal shaft deflection lowered bearing loads.
- **Double suction** impeller design appropriately balances the axial forces with each impeller balanced statically and dynamically in accordance with ISO1940.
- **Flanges are** drilled to meet GB, ISO, DIN, BS or ANSI standards.
- **Deep groove** ball bearings are grease lubricated and sealed for life with optional oil lubrication available upon request.
- **Shaft sealing** with uncoiled soft packing or single-action unbalanced mechanical seal in accordance with DIN 24960, independent of rotation direction. Balanced mechanical seal shall be applied for operating pressures higher than 16 Bar.

Material of Construction

Volute Casing & Cover

Cast iron	HT250	GG-25
Ductile Cast Iron	QT400-18	GGG-40
Cast Steel	ZG230-450	GS-C25

Impeller

Cast iron	HT250	GG-25
Stainless Steel	ZG1Cr18Ni12Mo2Ti	1.4581

Shaft

Carbon Steel	45#	C45N
Cr Steel	2Cr13	1.4021
Stainless Steel	ZG1Cr18Ni12Mo2Ti	1.4581

Casing Wear Ring

Cast iron	HT250	GG-25
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Model Nomenclature

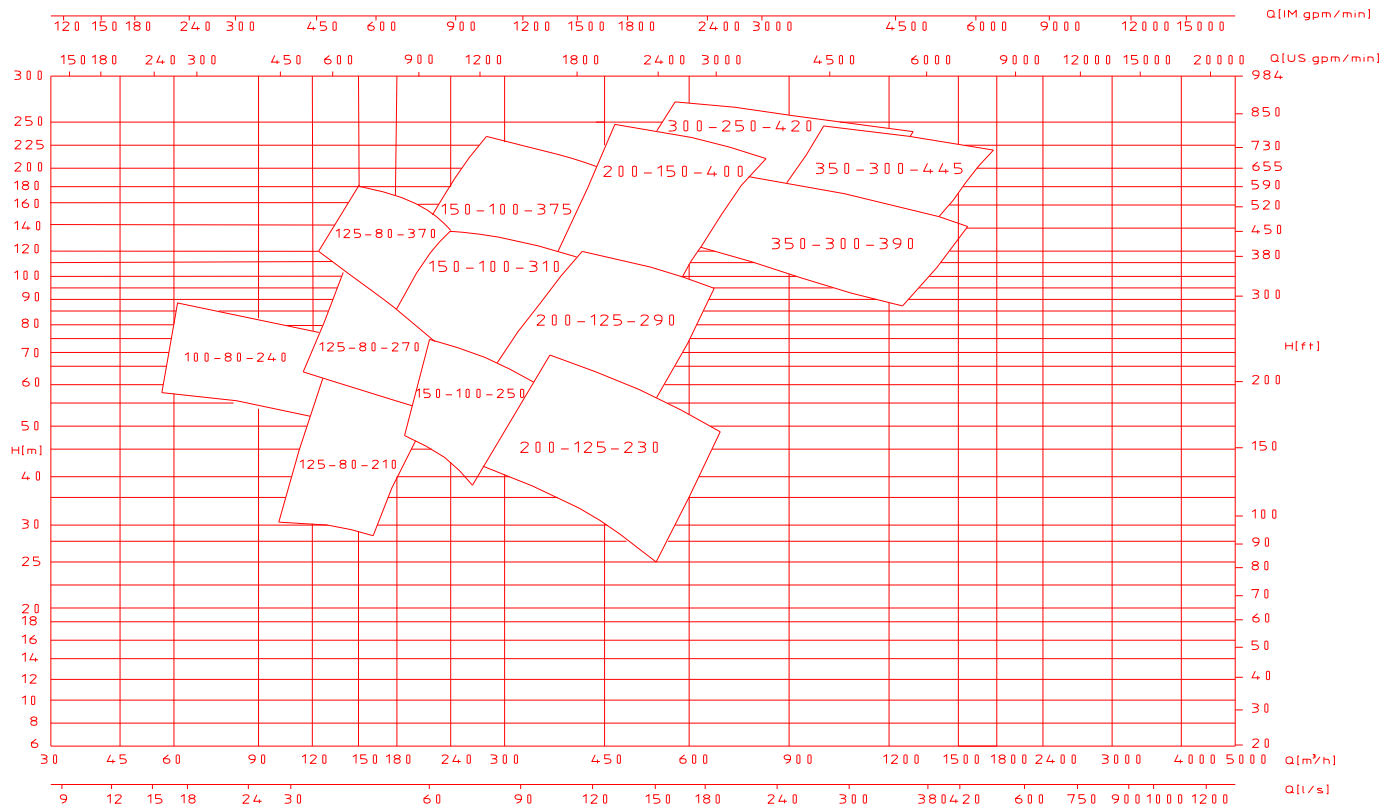
E.G. CPS300-125-290

TSY — Split Case Centrifugal Pump
 300 — Suction Dia. (mm)
 125 — Discharge Dia. (mm)
 290 — Impeller DN (mm)

Performance Data

Pump Size : DN 80 ~ 800
 Flow Range : Q up to 2800l/s
 Head Range : H up to 220m
 Operating Pressure : P up to 25 Bar
 Liquid Temperature : T up to 105°C

n=2900 rpm



Your technical advantages

Innovative casing

- In-line design
- Short distance between bearing and correspondingly short shaft
- Leak-tight due to compact joint flange with long, prestressed bolts
- Counter - rotation possible with similar parts
- Double volute version for appropriate total heads
- Easy mounting-self-aligning upper casing

High - performance impeller

- Minimal axial thrust due to double-entry impeller
- Optional impeller wear rings
- New vane passage with excellent hydraulic characteristics

Your service advantage

Service - friendly shaft

- Completely sealed and dry for zero corrosion
- Short and rigid with negligible vibrations
- Replaceable shaft protecting sleeves
- No threads exposed to pumped medium, long operation life and no corrosion
- Adjustment - free assembly
- Quick and easy assembly / dismantling of the rotor components due to elastically prestressed mountings

Excellent efficiencies

Outstanding NPSH

- Computer - optimized double entry impellers
- Smooth surface inside the casing and on the impeller
- Smooth, quiet running also guaranteed by a large impeller eye area
- No drop in efficiency due to cost effective replaceable casing wear rings and impeller wear rings
- Smooth, low loss running due to a swirl - free inlet

Long - life bearings

- Covered, sealed for life grease lubricated antifriction bearings for a long service life
- Open gland, I.E enough space for service activities
- Optional: oil lubrication with constant level oiler

Application - oriented seals

- Asbestos - free, potable water quality soft - packed stuffing boxes
- Optional - mechanical seals





Features

- **Designed** in accordance with ISO2858 International Standard.
- **Back slide** cover construction facilitated service and repairing work. Rotor may be easily pull out without having to disturb suction and discharge pipes.
- **Soft packing** for shaft sealing.
- **Flexible** spacer coupling.

Performance Data

Performance Data : 6.3 ~ 400m
Head Range : 5 ~ 125m
Suction Dia : 50 ~ 200
Pump Speed : 1450/2900 rpm
Fluid Temp : up to 80

Model Nomenclature

Pe.g. IS80-65-160A
IS — Single Stage End Suction
Centrifugal Pump
80 — Suction Dia. (mm)
65 — Discharge Dia. (mm)
160 — Impeller Dia. DN (mm)

Variations:

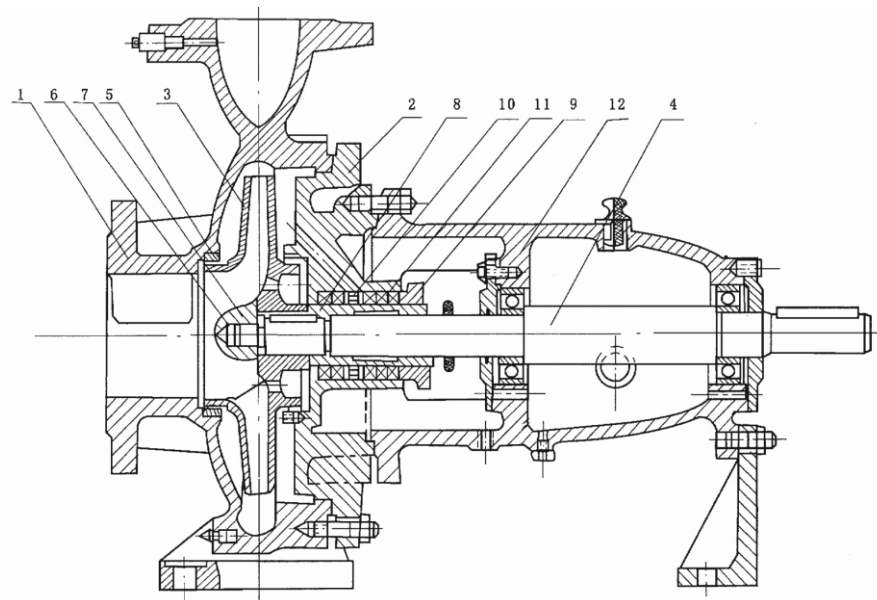
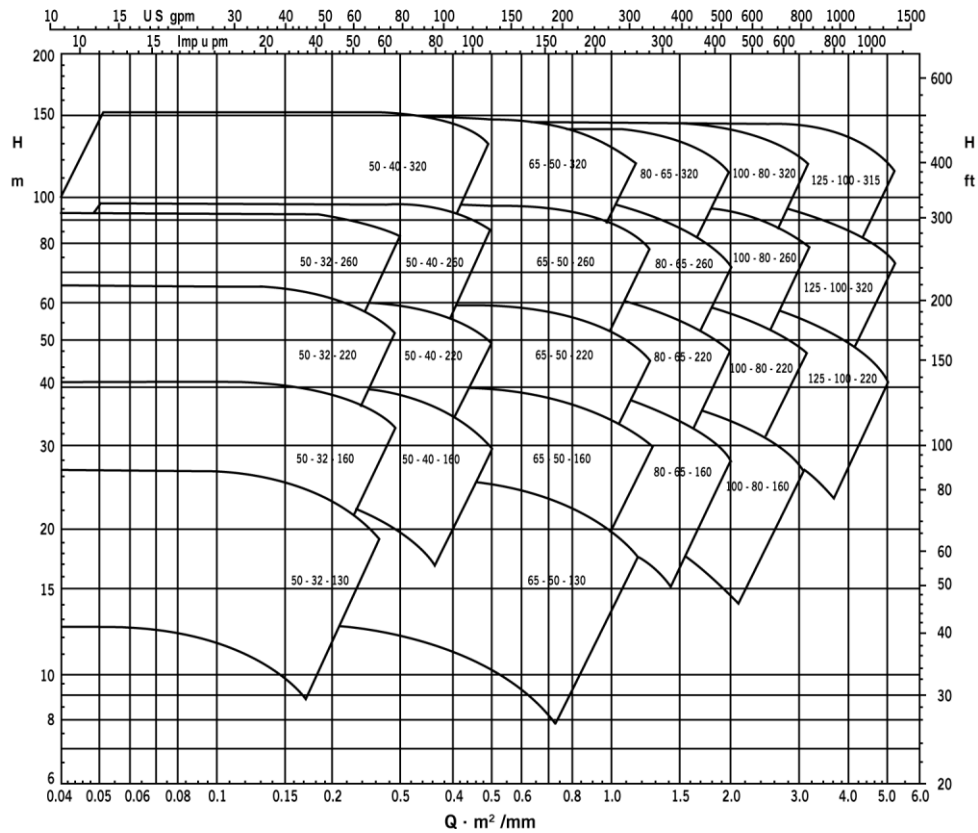
A — Impeller

Materials of Construction

Casing & Cover	: Cast/ductile iron
Shaft	: Carbon steel, Stainless steel
Impeller	: Ductile cast iron, Cast steel and St. steel
Sealing	: Packing or mechanical seal
Packing or mechanical seal	: Cast iron
Seal Ring	: Cast iron

$n=2900$ rpm

Family curve 50 Hz



1. Pump casing
2. Pump Cover
3. Impeller
4. Shaft
5. Wear ring

6. Impeller Cap
7. Braking Pad
8. Shaft Sleeve
9. Gland Packing / Mechanical Seal

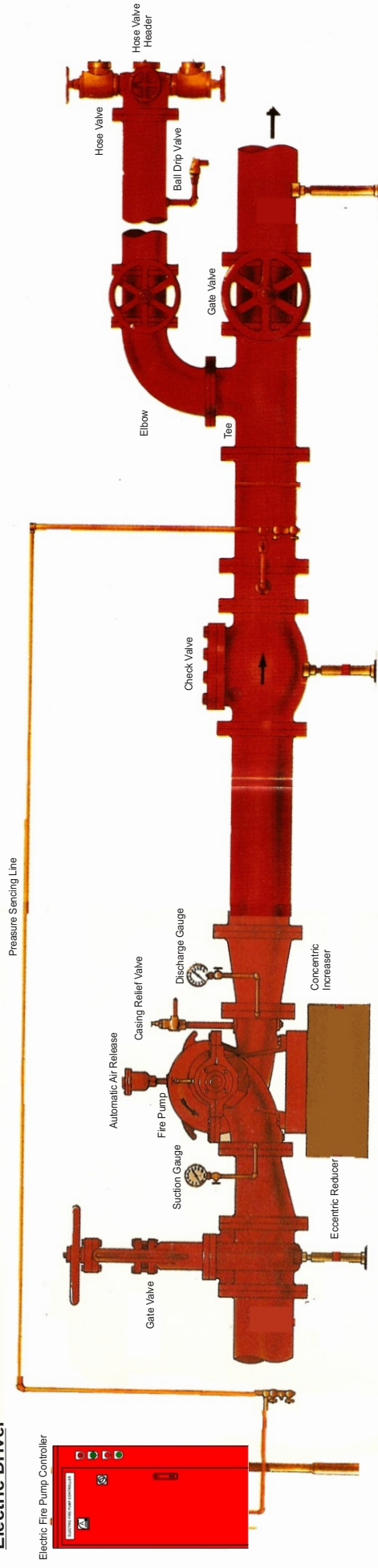
10. Seal Cage
11. Packing Assembly
12. Cantilever Bearing Assembly



Fire Pumps

Typical Installation Diagram Horizontal Split Case

Electric Driver



Engine Driver

