

FROM PLATFORMS TO REFINERIES, AHEAD ALL THE WAY



The KSB engineered pumps division is specialized in designing and manufacturing high performance pumps for the oil and gas industry.

Application

RPH pumps find extensive applications in off-shore platforms, refineries and HPI, heavy duty oil and gas services.

Design

Horizontal, single stage, radially split, centre-line mounted end suction pump in back pull-out design.

It has a single entry closed radial impeller. The pump is designed as per API 610 or ISO 13709 requirements, overhung execution (category OH2 of API 610).

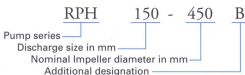
Special features

Finned bearing housing and air cooling with fan allow operation of the pump without water cooling up to 315° C.

The seal chamber is designed in full compliance with API 682.

All necessary connections for temperature & vibration measurement can be provided on the pump.

Designation



Additional designation can be:

B - for special hydraulics

I - with inducer

Operating Data

Pump size:	DN 25 to 250 mm
Capacity:	up to 1500 m ³ /h
Head:	up to 350 m
Operating pressure:	up to 51 BAR Higher pressure ratings on request
Temperature:	up to 450°C
Flanges:	ANSI B 16.5 class 300/600

Materials

Standardized materials according table H-1 (API 610)

Part name	API class S5	API class S6	API class C6	API class A8	API class D1
Volute casing	A216 Gr. WCB	A216 Gr. WCB	A487 Gr. CA6NM	A351 Gr. CF8M	A351 CD4 MCu
Impeller		A743 Gr. CA6NM	A743 Gr. CA6NM	A743 Gr. CF8M	A890 CD4 MCu
Casing Cover	A216 Gr. WCB / A516 Gr. 65		A487 Gr. CA6NM	A351 Gr. CF8M	A351 CD4 MCu
Shaft	A434/4140 CL.BB		A276 type 420	A276 type 316	DIN 1.4462
Bearing bracket	A216 Gr. WCB				
Casing wear ring	AISI 420 Hardened			AISI 316 Hard Faced	Duplex
Impeller wear ring	AISI 420 Hardened			AISI 316 Hard Faced	Duplex
Gasket	Spiral wound SS 316 - graphite				
Studs / Nuts	A193 Gr. B7 / A194 Gr. 2H				

KSB RPH. All synergies in the field

Mastering all the technologies involved in the oil and gas pump industry, KSB engineers ensure reliability and efficiency on RPH pumps.

KSB has more than 30 year's experience in Quality Management. Its Quality Assurance System was originally designed for nuclear applications.

So not surprisingly, it's approved by all the international standards authorities, including the API and ASME.

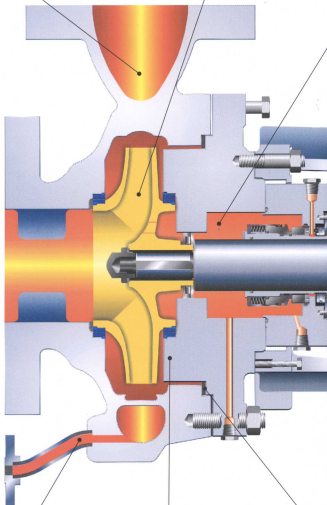
*KSB can tailor its
quality control plans to
match customer needs and
specifications.*

VOLUTE CASING

- Double volute for sizes DN 80 & above.
- Minimizes radial load & shaft deflection.
- Flanges available in ASME B16.5CL300 as a standard.

IMPELLER

- Designed to give low
- Low NPSHr designs a
- Inducer option on req
- Positive locking for im



CASING DRAIN

- Complete drainability.
- Integral flange design.

COOLED OR HEATED CASING COVER

- as option arrangement.

of centrifugal pumps technologies.

SS.
ilable.
st.
eller nut.

SEAL CHAMBER

Designed as per
API682 table 1

HEAT DISSIPATER

Conducts heat from the shaft
before it reaches the bearings.
Also circulates air between casing
cover & the bearing bracket.

RADIAL BEARING

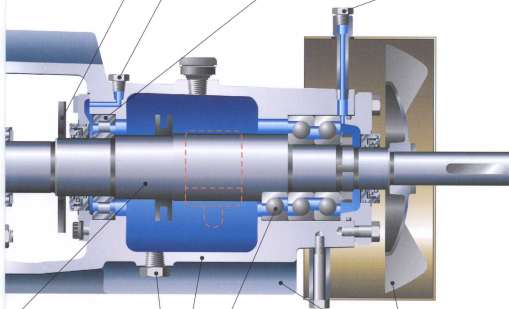
Permits easy assembly &
compensates the thermal
expansions.

OIL MIST INLET

(Optional)

OIL MIST INLET

(Optional)



RIGID & HEAVY SHAFT

- Ensures minimum shaft deflection and shaft stiffness L/D' as per API 610 limits.
- Maximum seal and bearing life.

TRIPLE BEARING ASSEMBLY

for high suction pressure

FINS & FAN

- As cast fins & a high capacity fan enable to run the pump without water cooling up to 315° C.
- Water cooling option available for extremely high temperatures.

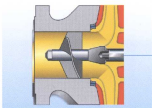
METAL TO METAL FIT

Confined controlled compression
spiral wound SS 316 gasket
between casing & casing cover

BEARING BRACKET

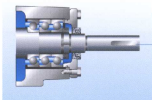
- Rugged design ensures low vibrations.
- Magnetic drain plug protects bearings by collecting metallic inclusions.
- Bearing isolators to enhance bearing life.

Special design features



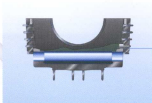
INDUCER

For very low NPSHr requirements



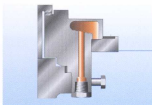
TANDEM BEARING ARRANGEMENT

For high suction pressure



WATER COOLED BEARING BRACKET

For extremely high temperatures



COOLED CASING COVER

For a cooled mechanical seal

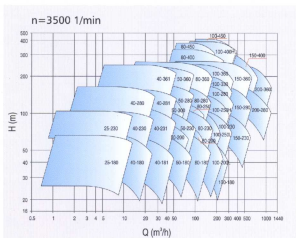
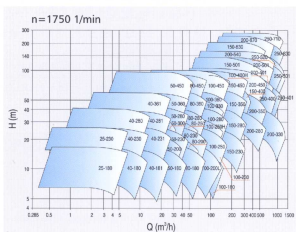


HEAT DISSIPATER

For dissipating shaft conducted heat

Hydraulic coverage

Selection Chart 60Hz



**KSB Brazil
manufacturing
facilities.**



KSB Bombas Hidráulicas S.A.
Rua José Rabelo Portela, 400
13225-100 Várzea Paulista SP / Brazil
Tel (11) 4596-8700 Fax (11) 4596-8747
divisaoenergia@ksb.com.br