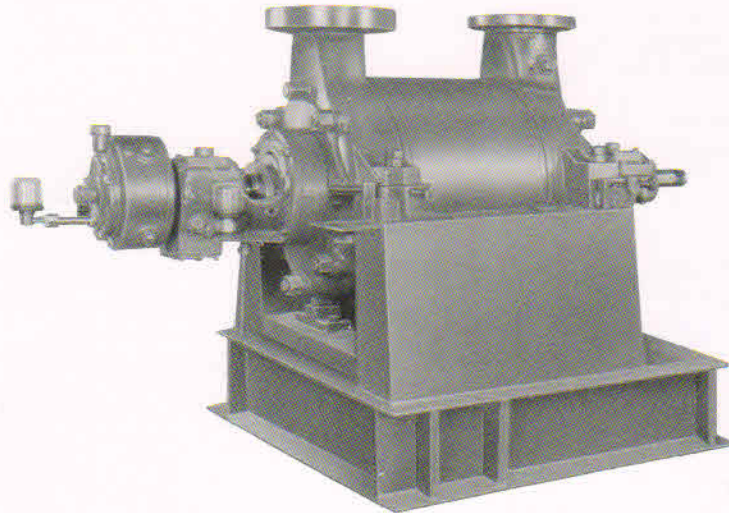


High Pressure Multistage Pump



Applications

HDA pumps are mainly used as Boiler Feed Pumps in industry. They are also employed for high pressure hydraulic circuits viz. Hydraulic presses, Decorticating, Coke cutting, Descaling and Municipal water supply systems. HDA pumps are used extensively in all core sector industries like power, fertiliser, chemical, refinery and steel plants.

Design

Horizontal multistage with vertical split casing and radial single entry impellers. The stage casings are sealed off from one another by metal to metal sealing faces, and are clamped together by external tie rods. The stage casing and tie rods are enclosed in a steel sheathing. The pump feet are cast integral with suction and discharge casing and are generally located at the shaft centre line.

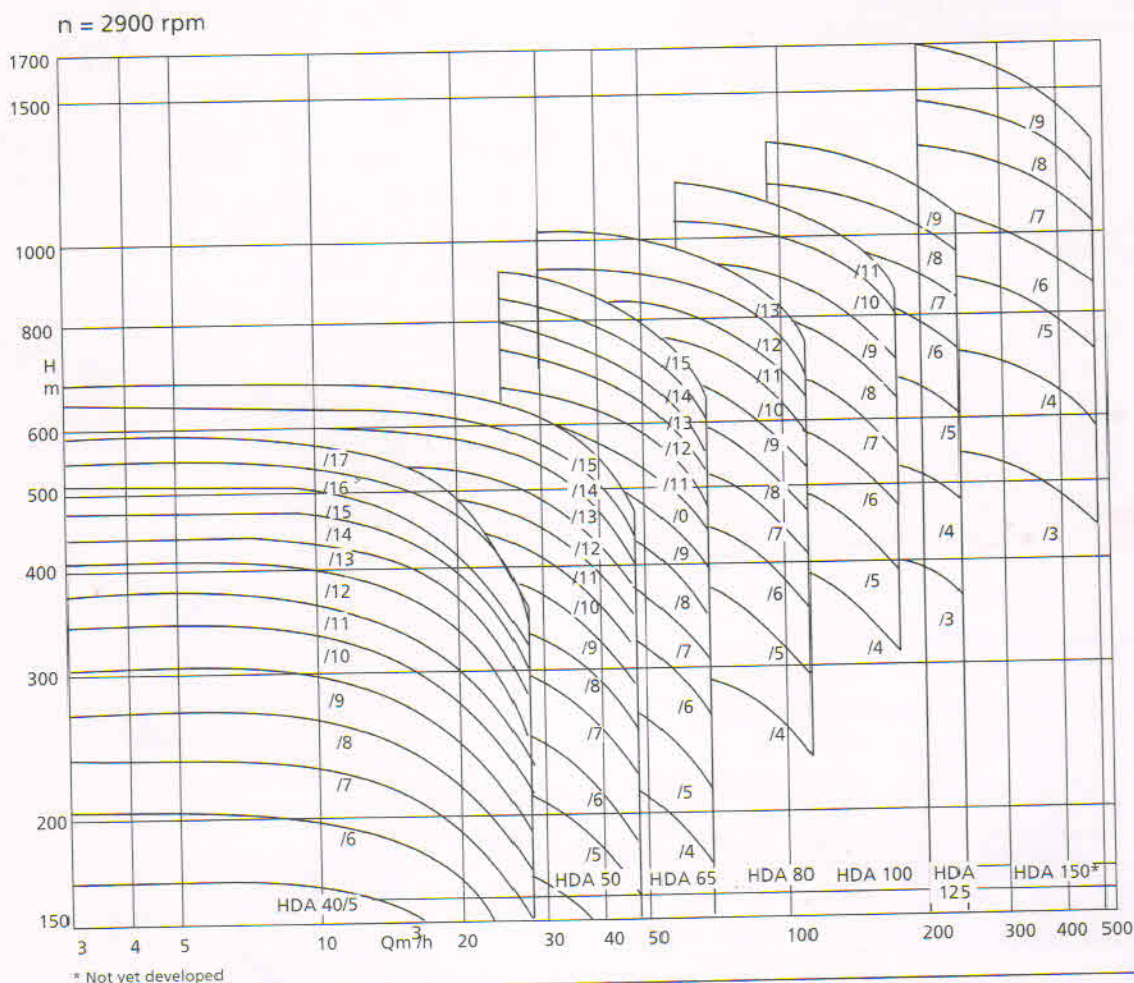
Operating Data

Pump sizes	DN	40 to 150 mm
Capacity	Q	Up to 576 m ³ /hr (160 l/s)
Total head	H	Up to 1450m
Temperature	t	-5 to 200°C
Pump Suction Head	ps	Up to 30 kg/cm ²
Pump Discharge Head	pd	(at Q = 0, ρ = 1.0 kg/dm ³) Up to 130 kg/cm ²
HDA 40 to 100		Up to 135 kg/cm ²
HDA 125 to 150		Up to 135 kg/cm ²
Speed	n	Up to 5500 rpm

Materials

Part No.	Description	Material Options						
		00	01	02	03	04	05	06
106	Suction casing	C.I.	ASTMA 216 Gr. WCB					1.4008
107	Discharge casing	ASTMA 216 Gr. WCB					1.4008	
108	Stage casing	C.I.	ASTMA 216 Gr. WCB					1.4008
171.1/2	Diffuser	C.I.		1.4008	1.4008	1.4008		
210	Shaft	45C8	AISI410	AISI410 (Chrome plated if impeller is of CA6NM)				
230	Impeller	C.I.	C.I.	1.4008				
451	St. box housing	C.I.	ASTMA216 Gr. WCB					1.4008
502.1/2	Wearing ring	C.I.	C.I.	C.I.	C.I.	Cr. Hard 400	C.I.	Cr. Hard 400
521	Stage sleeve	Ni Cl	Ni Cl	Ni Cl	Ni Cl	AISI410 (A)	Ni Cl	AISI 410 (A)
524.1/2	Shaft port. sleeve	AISI410						
525.1/2	Spacer sleeve	Ni Cl	Ni Cl	Ni Cl	Ni Cl	AISI410 (A)	Ni Cl	AISI410 (A)
601	Balancing disc	ASTMA 182 Gr. F6a						
602	Counter bal. disc	ASTMA 182 Gr. F6a						
905	Tie rod	EN 24 Condition V						

Selection Chart 50Hz



Manufactured in technical collaboration with KSB Aktiengesellschaft., Germany by :

KSB PUMPS LIMITED

Works

- Pimpri - Irrigation and Process Division, Mumbai-Pune Road, Pune - 411 018
- Chinchwad - Power Projects Division, D - II Block, MIDC, Pune - 411 019
- Coimbatore - Valves Division, 151, NSN Palayam Post, Mettupalayam Road - 641 031
- Vambori - Foundry Division, Ahmednagar- 413 704
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Regd. Office:

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- Chennai - Guindy House, 2nd Floor, 95, Anna Salai - 600 032
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- Raipur - (0771) 520758 • Secunderabad - (040) 7001724, 7003696

Service Stations :

- Odhav - Shed 22, G.V.M. Estate, Ahmedabad - 382 410 (079) 22870372
- NOIDA - "KSB House" A- 96, Sector IV, 201 301 (0120) 4591091-93, 4541501-03
- Howrah - 142, Foreshore Road, Ramkrishnapur (033) 26602909
- Chennai - No. 4 (old no. 18) Chakrapani Road, Guindy, 32 (044) 22550704

Telephone No.

- (020) 7101000
- (0422) 700547-9
- (02426) 72528, 34, 72074
- (02551) 30252, 53, 30255, 30256

Fax

- (020) 7426000
- (0422) 700650
- (02426) 72043
- (02551) 30254

- (022) 2285 4237 - 42

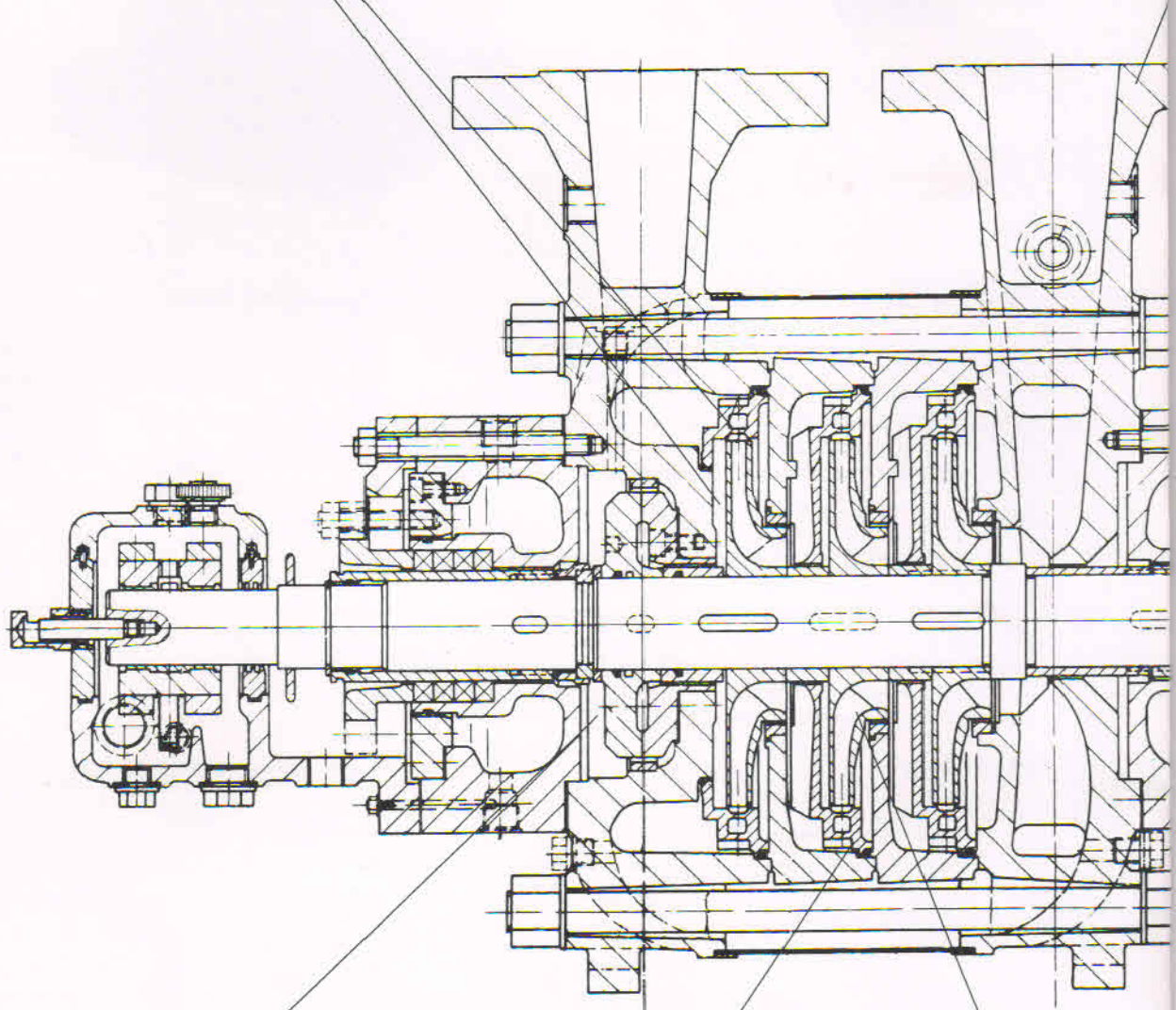
- (022) 2287 3299

- (033) 2247 0473, 2240 0117
- (044) 22352571 - 2, 2230 0629
- (022) 2285 4237 - 42
- (0120) 4541091 - 2, 4541502-3

- (033) 2247 0588
- (044) 2235 2749
- (022) 2287 3299
- (0120) 4525627



Minimum radial forces because of secured hydraulic impeller/ diffuser design. Simultaneously use of high grade oil lubricated plain bearing / radial roller bearings guarantees the bearing life up to 40,000 operating hours



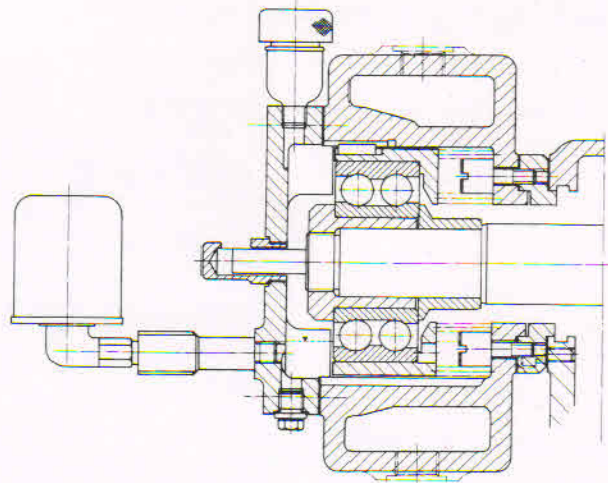
Guarantees axial thrust balancing by balancing disc
 No residual thrust
 Negligible abrasion
 Higher pump efficiency
 Small amount of balancing leak off

Perfect and safe casing sealing by metallic sealing faces together with 'O' rings.

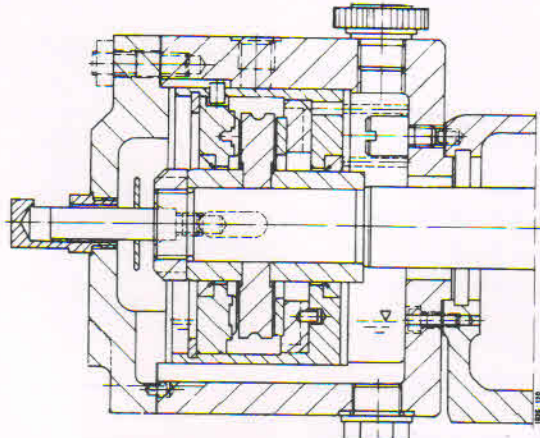
Easily replaceable impeller wearing rings and stag reliable materials with properties, available on

Flanges as per DIN / ANSI / BS connection
as per customers choice is possible.
Higher values of permissible forces and moments

Alternative arrangement of shaft sealing with
mechanical seal of reputed make is possible



Lift off device - ball bearing



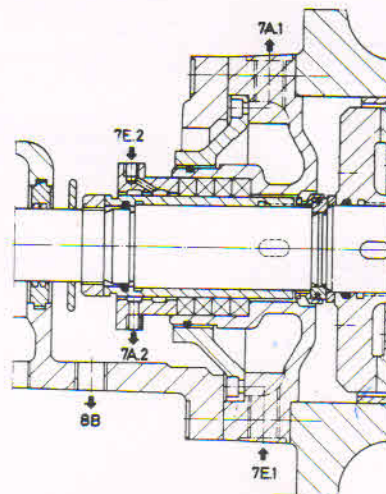
Lift off device - segmental thrust bearing

Spring loaded Lift off device with ball bearing/
segmental thrust bearing execution, separates
positively the balancing disc off the counter balancing
disc during

- transient operating condition
- lower speeds
- higher number of starts-stops
- Drive through electric motor without its own thrust bearing

Long life robust ring / pressure oil
lubricated plain bearings. Pump with
antifriction bearing with sump oil
lubrication and plain bearing with
ring oil lubrication is also possible.

Labyrinth rings prevent the ingress of
flow medium, sealing liquid and
contamination as well as leaking of
lubricating oil.



Soft packed cooled stuffing box with external sealing

Miller rings,
the sleeve of
anti-galling
request