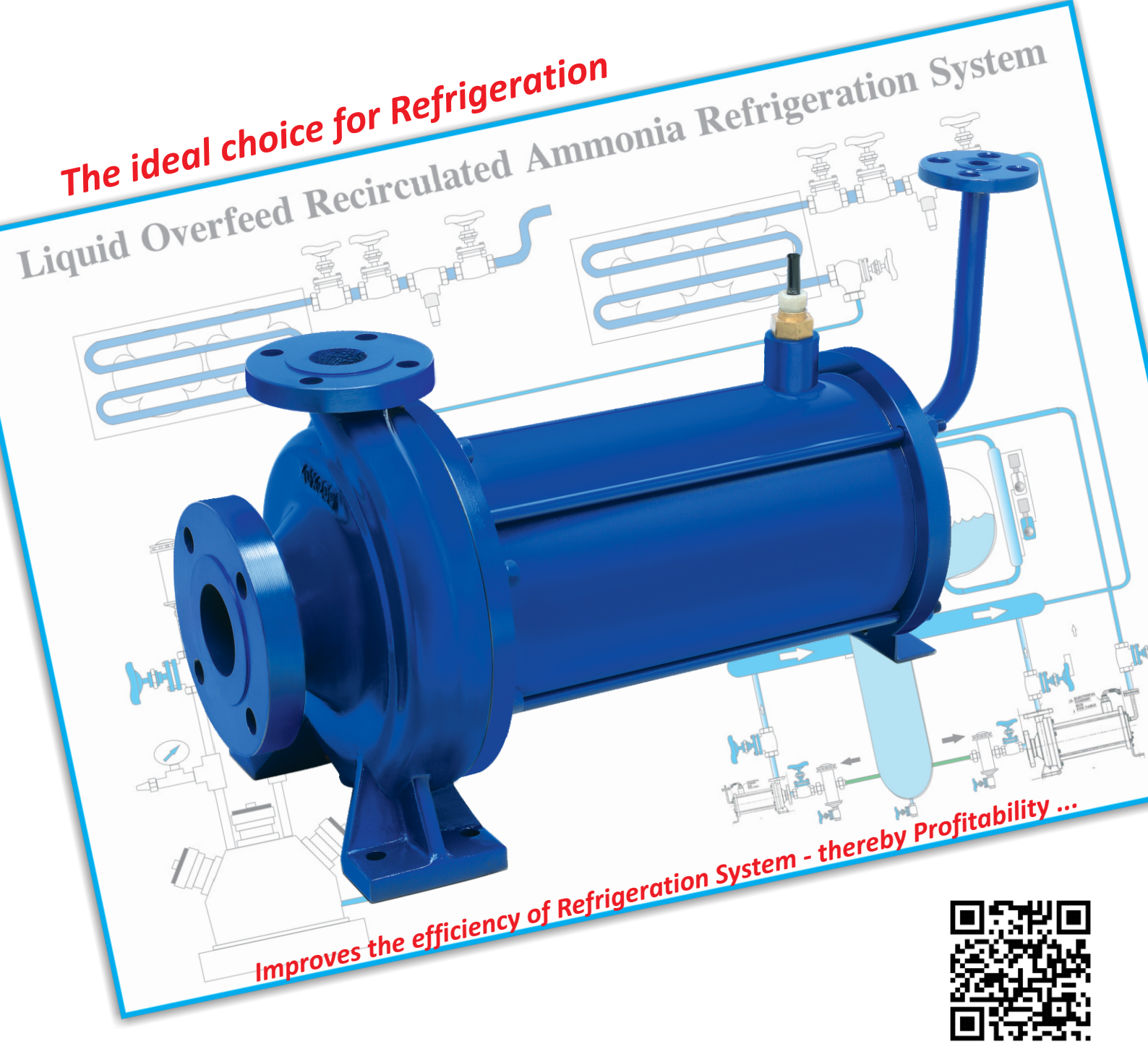
The ideal choice for Refrigeration



LIQUID AMMONIA PUMPS

- **No Mechanical Seal**
- **No Coupling**
- **No maintenance**
- **No Leakage**

Worldwide, Sealless Canned Motor pumps are fast becoming the first choice for demanding Liquid Overfeed System in the Refrigeration Industry. Typical application includes cold storages, dairies, IQF, blast freezers etc. Hydrodyne understands the important role, Liquid Overfeed and Transfer Pumps play in today's Industrial Refrigeration marketplace and therefore has dedicated from the past 25 years to the design, development, production and service of hermetically Sealed Canned Motor Liquid Ammonia Pumps for the Refrigeration industry.

HYDRODYNE TEIKOKU

Since 1994

HYDRODYNE TEIKOKU

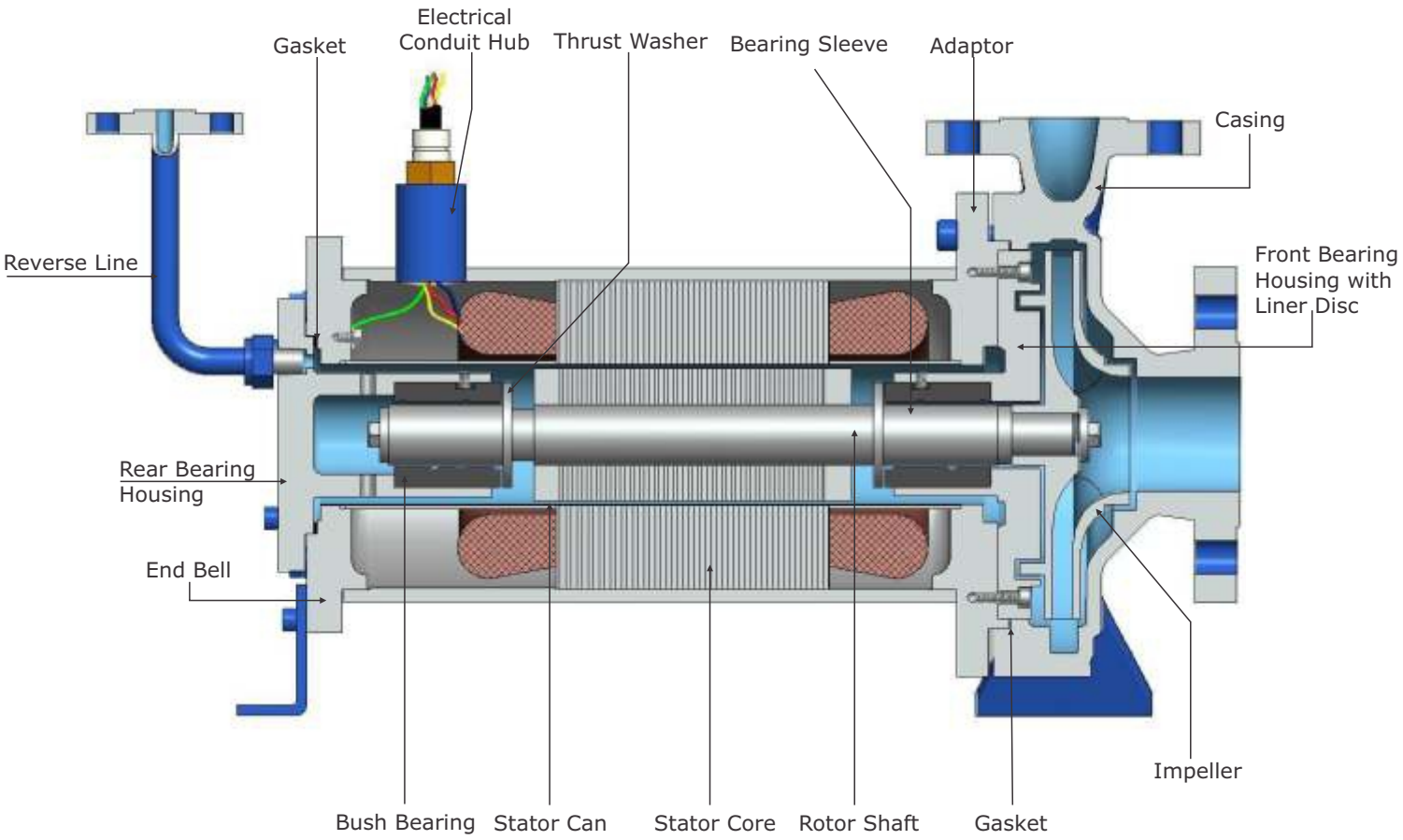
a joint venture partner

CERTIFIED :

ISO 9001:2015

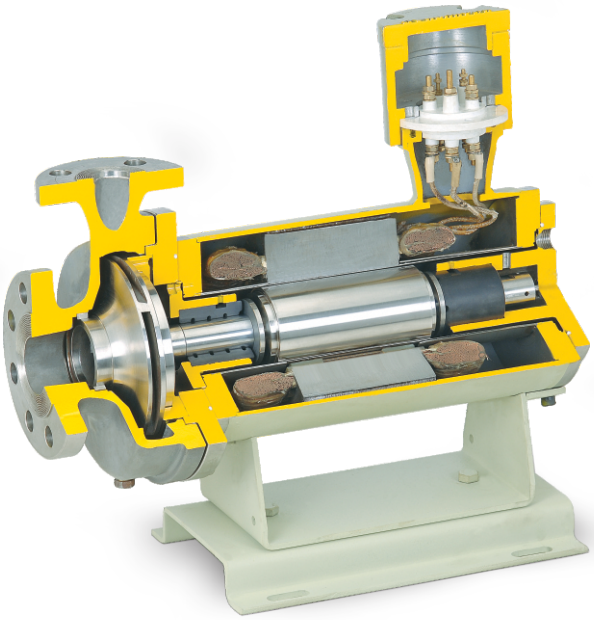
ISO 45000:2018

www.hydrodynepumps.com

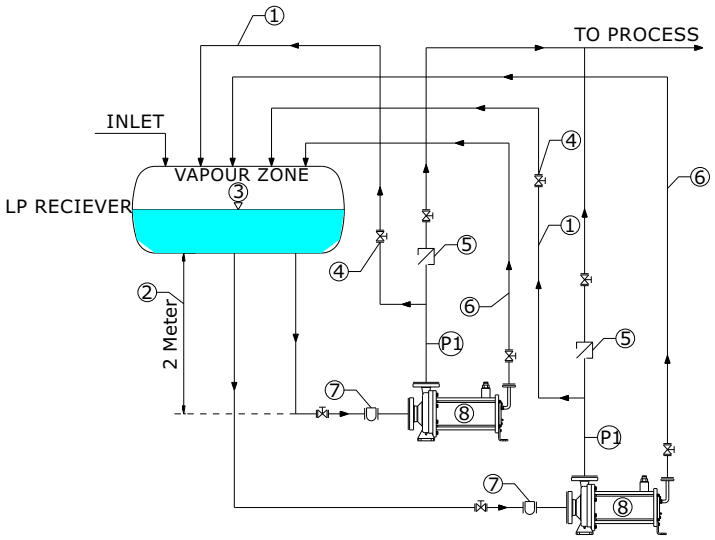


REVERSE CIRCULATION PIPING

The key to a successful ammonia process application, is the circuit design. All piping should be installed in such a way as to permit any trapped gas to migrate into the L.P Reciever. Liquid with steep vapour pressure (i.e NH_3) may vaporize on picking up the motor heat and result in cavitation conditions. The circulation/pumping fluid is passed from the casing volute chamber into the rotor chamber. After being extracted from the outlet of rear bearing housing, the liquid is returned to the vapour zone of the L.P Receiver through the reverse circulation line.



TYPICAL INSTALLATION OF HYDRODYNE CANNED PUMP IN OVERFEED SYSTEM.



1. By Pass Line
2. Suction Head
3. Liquid Separator
4. Gate Valve
5. Non-return Valve
6. Reverse Circulation Line
7. Bucket Strainer
8. Hydrodyne Liquid Ammonia Pump

APPLICATIONS

- Blast Freezer / Plate Freezer / IQF
- Marine / Sea Food Plants
- Meat Plants
- Cold Storage
- Ice Plant

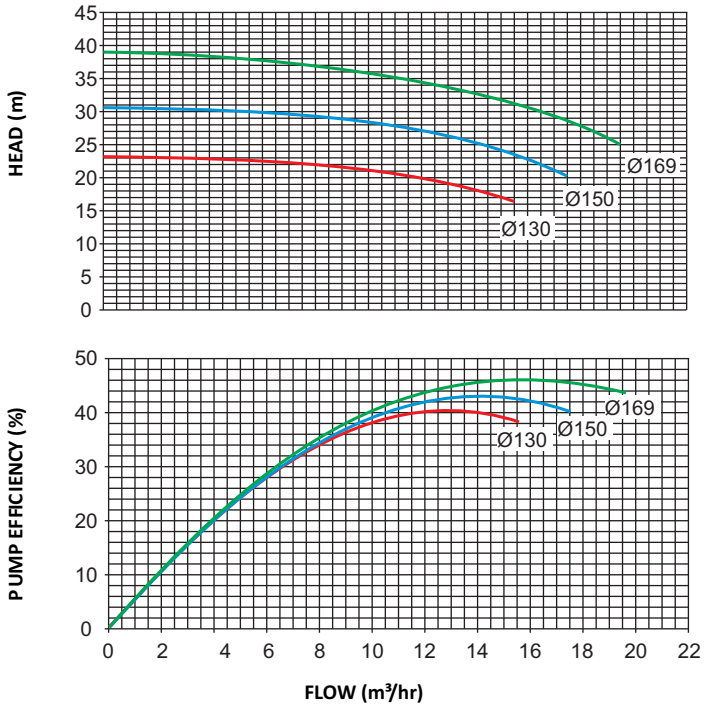
LIQUID OVERFEED SYSTEM WITH HYDROYNE LIQUID AMMONIA PUMP

The liquid Overfeed System is the most advanced and energy efficient technique in ammonia refrigeration technology. The ammonia liquid from L.P Receiver is forced circulated in the evaporators or air-cooling units through liquid-feed-pumps. For multiple cold rooms and freezers it is the best choice to save electric energy in addition to getting the highest efficiency of the refrigeration systems.

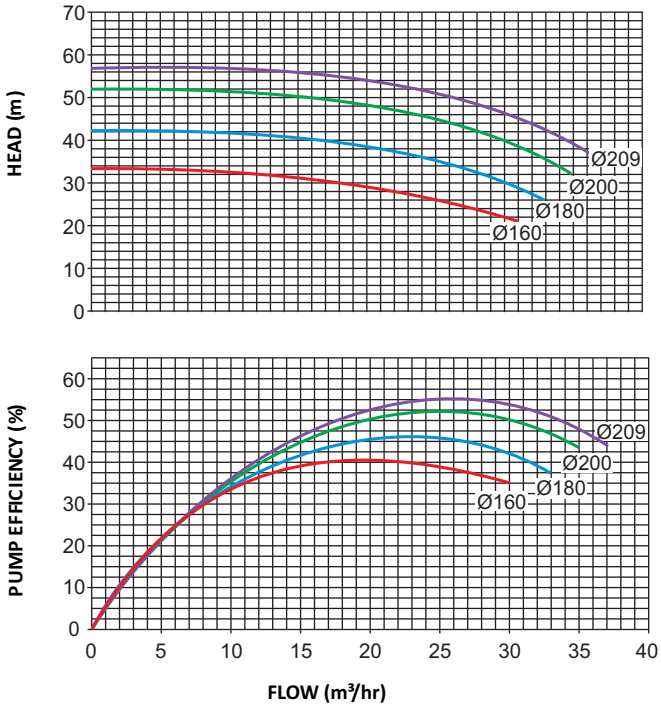
HYDRODYNE CANNED MOTOR LIQUID AMMONIA PUMP TECHNOLOGY

- Allows the pump to operate without mechanical shaft seal thus contributing to leak free pumping.
- Ideal for vacuum services or for fluids that react when in contact with atmosphere.
- The two pump models 32-160 and 40-200 are ideally suited for most of flow and head requirement.

Performance Curve 32-160



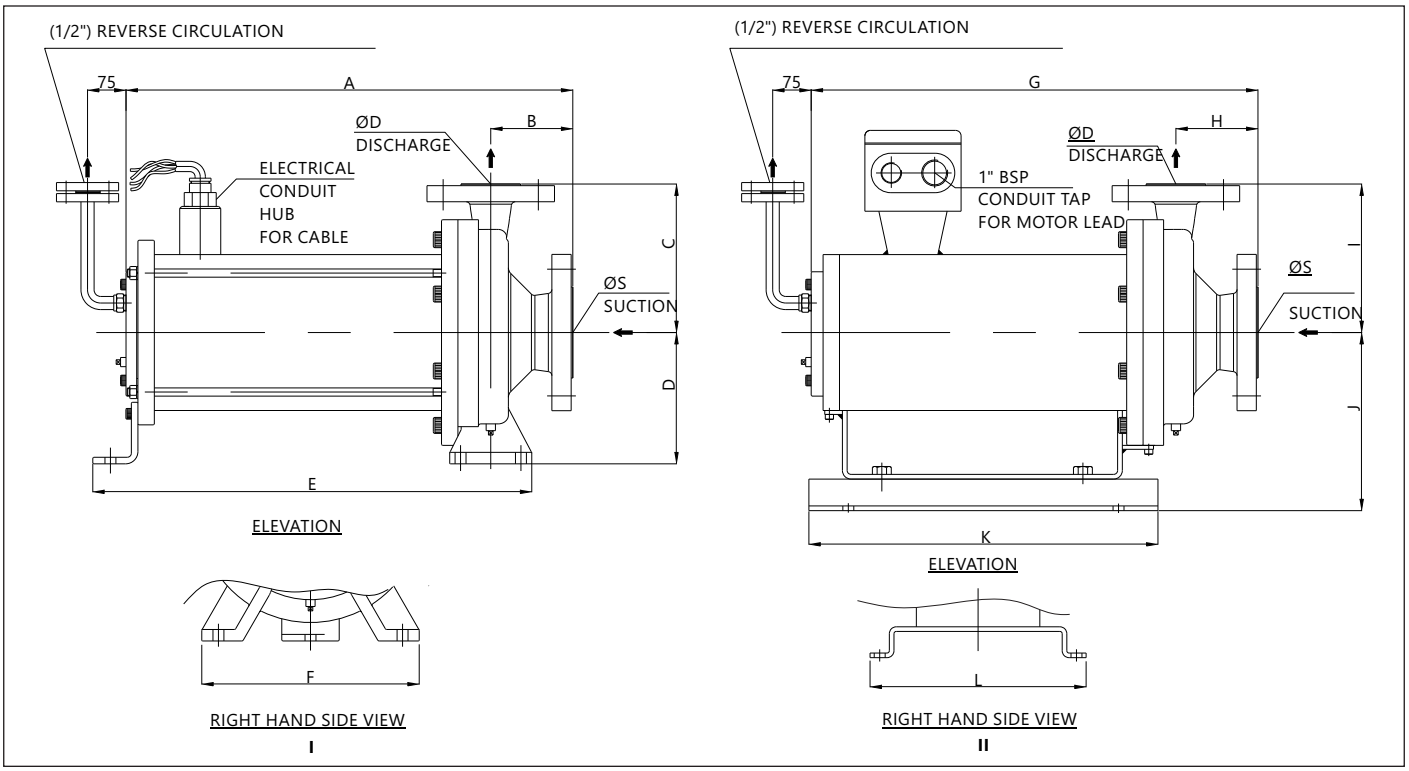
Performance Curve 40-200



HYDRODYNE RANGE OF AMMONIA PUMP MODELS (TYPE HR SERIES)

PUMP MODEL	FLOW RANGE (m³/h) Min	Max	HEAD RANGE (m) Min	Max	MOTOR POWER (K.W.)	RATED CURRENT (AMP.)	WEIGHT (K.G)
CHB1-B1HE5A-B2AAX-XXX	1 .0	12.0	20	35	2.6 (3 HP)	6.8	88
CHB1-B2HE5A-C3AAX-XXX	3.0	15.0	30	55	3.7 (5 HP)	8.0	100
CHB1-B3HE5A-C3AAX-XXX	3.0	20.0	30	55	5.5 (7.5HP)	12.5	110
CHB1-B4HE5A-D3AAX-XXX	6.0	30.0	30	55	7.5 (10 HP)	15.2	120
CHB1-B4HE5A-C4SAX-XXX	3.0	20.0	55	75	7.5 (10 HP)	15.2	125
CHB1-B5HE5A-C4SAX-XXX	3.0	25.0	55	80	9.0 (12 HP)	18.0	140

Note : Motors upto 18.5 KW (25HP) are available on demand as per requirement



OVERALL DIMENSIONS - I

PUMP MODEL	A	B	C	D	E	F	ØS SUCTION	ØD DISCHARGE
CHB1-B1HE5A-B2AAX-XXX	490	80	160	130	495	250	50 (2")	32 (1¼")
CHB1-B2HE5A-C3AAX-XXX	545	100	180	160	520	265	65 (2½")	40 (1½")
CHB1-B3HE5A-C3AAX-XXX	575	100	180	160	550	265	65 (2½")	40 (1½")

OVERALL DIMENSIONS - II

PUMP MODEL	G	H	I	J	K	L	ØS SUCTION	ØD DISCHARGE
CHB1-B4HE5A-D3AAX-XXX	610	100	200	220	475	280	80 (3")	50 (2")
CHB1-B4HE5A-C4SAX-XXX	620	100	225	220	475	280	65 (2½")	40 (1½")
CHB1-B5HE5A-C4SAX-XXX	640	100	225	220	530	280	65 (2½")	40 (1½")

- All Dimensions are in mm
- Dimensions/Specifications may change without prior notice

Contact +91-22-50592300 - 30 +91-22-50592318 E-Mail : info@hydrodynepumps.com

HYDRODYNE TEIKOKU (INDIA) PVT. LTD. S. No. 18, H. No. 3, 4 & 5 of Village Ghodbunder, Mira Bhayandar Road, Near R. T. O. Office, Mira Road (East), Thane - 401107., Maharashtra - INDIA.