

AVAILABLE MOUNTING CONFIGURATIONS

4HH-RP-F REDI-PRIME FRAME MOUNT
4HH-F FRAME MOUNT
4HH-RP-EM REDI-PRIME ENGINE MOUNT
4HH-EM ENGINE MOUNT
4HH-VF VERTICAL FRAME MOUNT
4HH-VC VERTICAL COUPLED

OPERATING LEVELS

MIN FLOW	280 GPM	63.6 m ³ /h
MAX FLOW	1600 GPM	363.4 m ³ /h
DISCHARGE SIZE	4"	102 mm
SUCTION SIZE	6"	152 mm
SOLIDS HANDLING	.62"	1.6 cm
MAX SPEED	2300 RPM	2300 RPM
SHUT-OFF HEAD	422'	128.6 m
BEP HEAD	348'	106 m
BEP FLOW	1600 GPM	363.4 m ³ /h
BEP PERCENT	82%	82%



A typical picture of the pump is shown. Please contact Cornell Pump Company for further details. All information is approximate and for general guidance only.

PARTS	CAST IRON BRONZE FITTED (STANDARD)	ALL IRON
IMPELLER	BRONZE SAE 40 OR SILICON BRONZE	CAST IRON ASTM A48 CL30
VOLUTE	CAST IRON ASTM A48 CL30	CAST IRON ASTM A48 CL30
SHAFT	SAE 1144 "STRESSPROOF"	SAE 1144 "STRESSPROOF"
SHAFT SLEEVE	BRONZE SAE 660	416 STAINLESS STEEL
BEARING HOUSING	CAST IRON ASTM A48 CL30	CAST IRON ASTM A48 CL30
WEAR RINGS	BRONZE SAE 660	CAST IRON ASTM A48 CL30
SUCTION SPOOL	CAST IRON ASTM A48 CL30	CAST IRON ASTM A48 CL30
BACKPLATE	CAST IRON ASTM A48 CL30	CAST IRON ASTM A48 CL30
MECHANICAL SEAL (OPTIONAL)	T-1, BUNA, CARBON/CERAMIC/STAINLESS	T-1, BUNA, CARBON/CERAMIC/STAINLESS
PACKING	GRAPHITED ACRYLIC	GRAPHITED ACRYLIC

The 4HH pump is designed with Cornell's renowned quality and durability. It features a 4" discharge, 6" suction, enclosed impeller, and flanged tangential double volute. Available in all-iron or bronze-fitted materials. Graphited acrylic packing is standard, with Cornell's patented Cycloseal® available (with type 1 single mechanical seal). Grease lubrication standard - oil lubrication optional.

- External hydraulic balance line
- Back pullout design
- Replaceable hub & suction wear rings
- Replaceable shaft sleeve
- High efficiency hydraulics
- Low operating costs
- SAE #1, 2, 3, 4 & 5
- Modular bearing frame
- Oversized shaft and bearings
- Other mechanical seal (Cycloseal®) and material options available
- Two year warranty



AGRICULTURE



FOOD



INDUSTRIAL



MINING



MUNICIPAL



OIL & GAS



REFRIGERATION



RENTAL



Company: Centex Africa

Name:

Date: 2/24/2021

Pump:

Size: 4HH
Type: Clear Liquids
Synch Speed: Adjustable
Curve: 4HHVA
Specific Speeds:
Dimensions:
Speed: 1576 rpm
Dia: 387 mm
Impeller:
nq: 22
S: ---
Suction: 150 mm
Discharge: 100 mm

Pump Limits:

Temperature: 121 °C
Pressure: 1207 kPa g
Sphere Size: 15.7 mm

Power: ---
Eye Area: ---

Search Criteria:

Flow: 50 l/s Head: 56 m

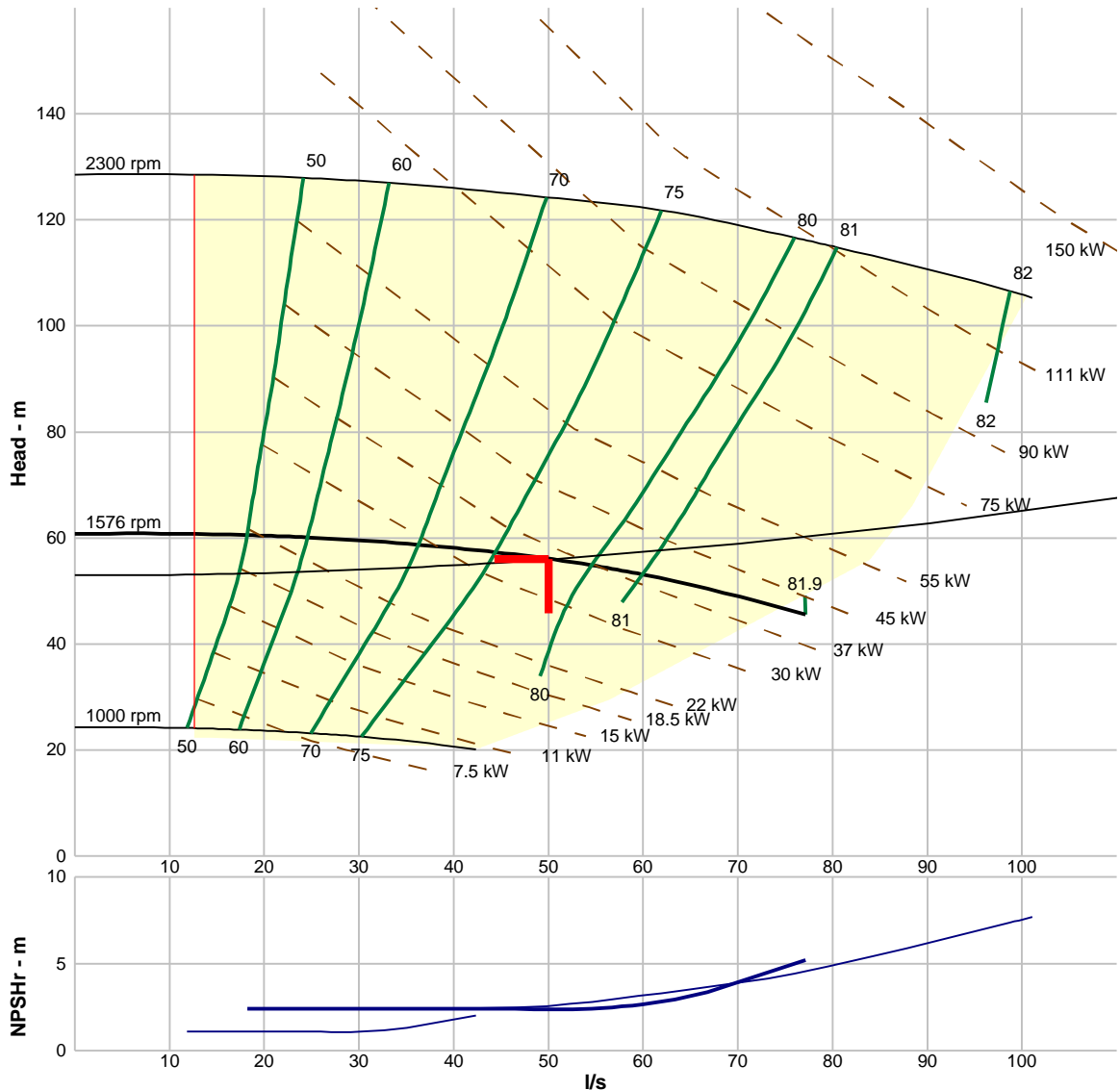
Fluid:

Water
Density: 998.3 kg/m³
Viscosity: 0.9946 cP
NPSHa: ---
Temperature: 20 °C
Vapor Pressure: 2.339 kPa a
Atm Pressure: 101.4 kPa a

Motor:

Standard: ---
Enclosure: ---
Speed: ---
Frame: ---
Sizing Criteria: Max Power on Design Curve

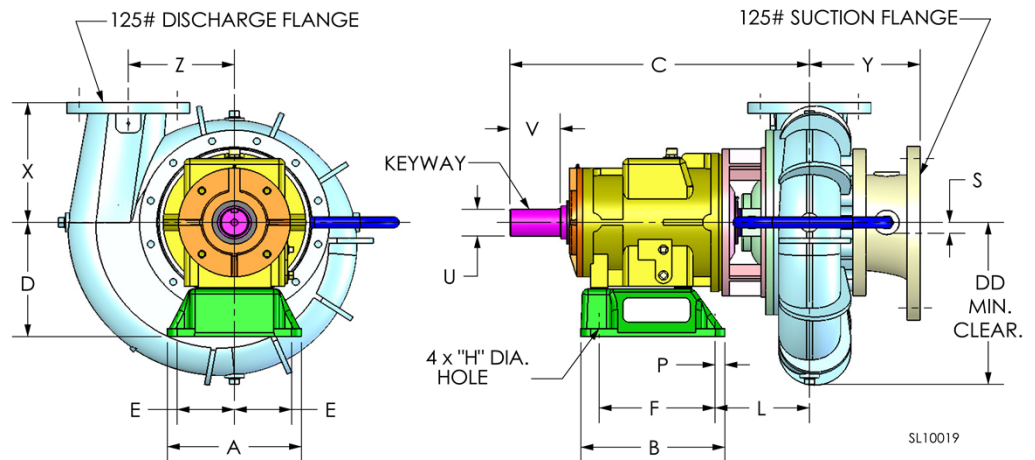
---- Duty Point ----	
Flow:	50 l/s
Head:	56 m
Eff:	78%
Power:	35.1 kW
NPSHr:	2.44 m
---- Design Curve ----	
Shutoff Head:	60.8 m
Shutoff dP:	595 kPa
Min Flow:	12.6 l/s
BEP:	81.9% @ 77.1 l/s
NOL Power:	42 kW @ 77.1 l/s
-- Max Curve --	
Max Power:	127 kW @ 101 l/s



Consult Cornell for operation above 400 gpm. Min flow line represents the absolute lowest flow pump can operate.
Consult with factory if operating below 50% of BEP flow

Performance Evaluation:

Flow l/s	Speed rpm	Head m	Efficiency %	Power kW	NPSHr m
60	1576	53.1	81	38.5	2.7
50	1576	56	78	35.1	2.44
40	1576	58.1	72	31.4	2.44
30	1576	59.5	65	26.7	2.44
20	1576	60.5	53	22.3	2.44



SL10019

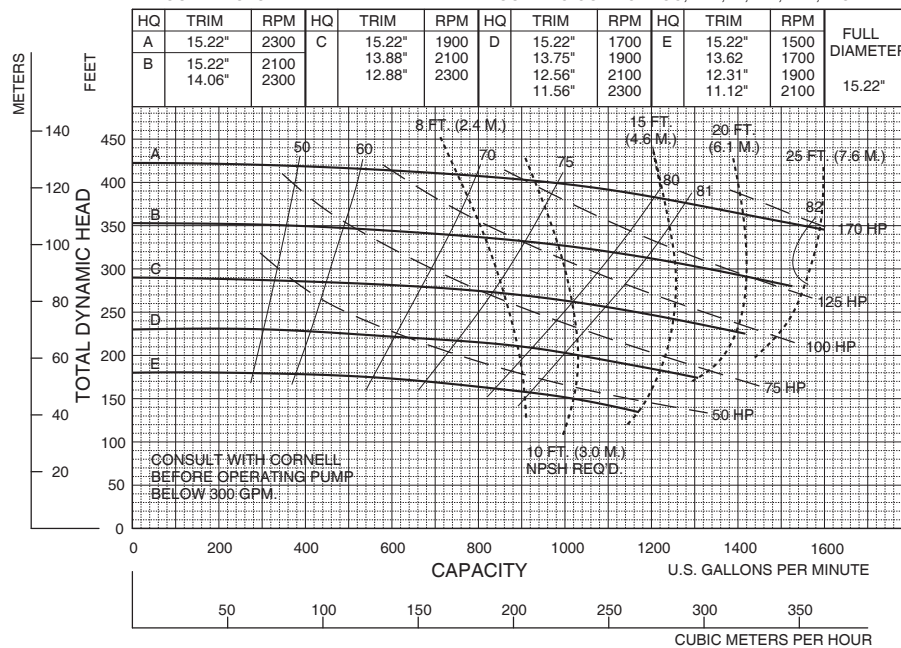
PUMP DIMENSIONS

MODEL	FRAME	CONNECTION		DISCH. INCR.																	KEYWAY
		DISCH.	SUCT.		A	B	C	D	DD	E	F	H	L	P	S	U	V	X	Y	Z	
3HA	F18	3	6	90°	12	12.88	29.11	10.5	11.12	5.12	10.38	0.81	10.74	0.88	0.44	2.5	4.5	10	8.53	8.5	.62X.31
3HC	F18	3	6	90°	12	12.88	25.88	10.5	11.12	5.12	10.38	0.81	7.5	0.88	0.44	2.5	4.5	10	8.53	8.5	.62X.31
4HC	F18	4	8	90°	12	12.88	26.97	10.5	12.62	5.12	10.38	0.81	8.6	0.88	0.88	2.5	4.5	11	10.88	9.75	.62X.31
4HH	F18	4	6	90°	12	12.88	29.14	10.5	15	5.12	10.38	0.81	10.77	0.88	0.44	2.5	4.5	9.5	8.97	11.25	.62X.31
5H	F18	5	8	90°	12	12.88	29.17	10.5	14.75	5.12	10.38	0.81	10.8	0.88	0.88	2.5	4.5	13	9.66	11.62	.62X.31
5HH	F18	5	8	90°	12	12.88	29.84	10.5	16.25	5.12	10.38	0.81	11.47	0.88	0.44	2.5	4.5	11	10.56	10.25	.62X.31
6H	F18	6	8	90°	12	12.88	29.14	10.5	14.75	5.12	10.38	0.81	10.77	0.88	0.44	2.5	4.5	14	10.18	11.62	.62X.31
6HH	F18	6	8	90°	12	12.88	30.13	10.5	17.12	5.12	10.38	0.81	11.91	0.88	0.44	2.5	4.5	12	10.43	12	.62X.31
8H	F18	8	10	90°	12	12.88	30.41	10.5	16.75	5.12	10.38	0.81	12.03	0.88	0.75	2.5	4.5	13	10.41	11.5	.62X.31

Feet x .305 = Meters
Inches x 25.4 = Millimeters
GPM x .227 = Cubic Meters/Hour
GPM x 3.785 = Liters/Minute
HP x .746 = KW

Speed	Impeller Dia.	Style	Solids Dia.	N _S	Suction	Discharge	No. vanes
VARIOUS	VARIOUS	ENCLOSED	.62"	1135	6"	4"	6

DOUBLE VOLUTE MOUNTING CONFIG.: CC, VM, F, VF, EM, VC



Performance shown are for cool water, close-coupled, standard liquid, and standard liquid. Other mounting styles or liquids may require horsepower and/or performance adjustments.

NEW PAGE

4HHVA



Cornell Pump Company • Portland, Oregon

4HH - VARIOUS RPM

DS214-1609-GE