



AUG 1991
Received
CNFC

INQUIRY NO. 616184-RFP-015
INQUIRY DATE APRIL 19, 1991
YOUR REF. CNF CONSTRUCTORS
CODE NAME FITCHBURG
KSB OFFER NO. 104/e/229
OUR REF. EH
POSITION NO. FEED WATER PUMP

PAGE 1

DATE 07/05/91
EH 7/12/91

PUMP TYPE HORIZONTAL RING SECTION TYPE PUMP
PUMP SIZE/STAGES HGC 3 / 3
SERVING AS FULL LOAD PUMP
DRIVE E-MOTOR

QUANTITY 2

OPERATING DATA

MEDIUM HANDLED	Boiler Feed Water Demineralized		
	pH-value at 25 (C = 9.00, O2-cont. = 0.02 ppm		
OPERATING POINTS	UNITS	RATED LOAD	NORM LOAD MIN.FLOW
Operating Temperature	F	300	300
Specific Gravity	kg/dm**3	0.913	0.913
Pressure in Suction Vessel	psia	67.02	67.02
NPSH-available **)	ft	20.7	20.7
	psi	8.24	8.24
NPSH-required	ft	17.11	14.84
	psi	6.81	5.91
Pressure at Suction Nozzle	psig	60.61	60.61
Weight Rate of Flow at			
Discharge Nozzle *1000	lb/h	206.8	45.6
Capacity at Disch. Nozzle	USgpm	450	99.1
Total Head	ft	4200	4631
	psi	1672	1843
Pump Discharge Pressure	psig	1732	1904
Efficiency *)	%	72.3	31.8
Power Consumption	HP	607	336
Pump Speed	rpm	3570	3570

Direction of Rotation clockwise, viewed from drive end

*) hot water efficiency adjusted according to Karassik

**) strainer losses not included

ADDITIONAL DATA

Disch. Press. in psig at Q = 0 and Density = 1.0: 2071 (+/- 5 %)

KSB Pumpen
Armaturen

Item No.

Code

Date

Page

KES FITCHBURG

18.07.91

Project-No.

Revision

Hydraulic

1039150380

01

06.1N + 5.0

Type/No. of stages

Speed

Temperature

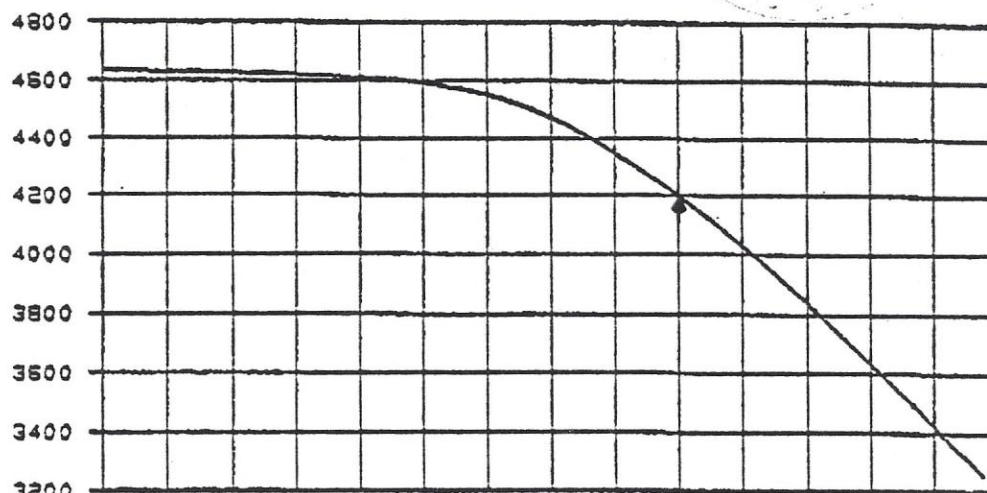
HGC 3/ 8

3570 1/min

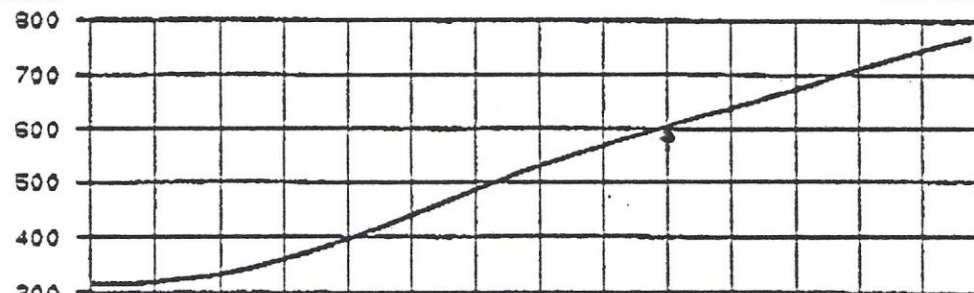
300 °F

TOTAL HEAD

FT

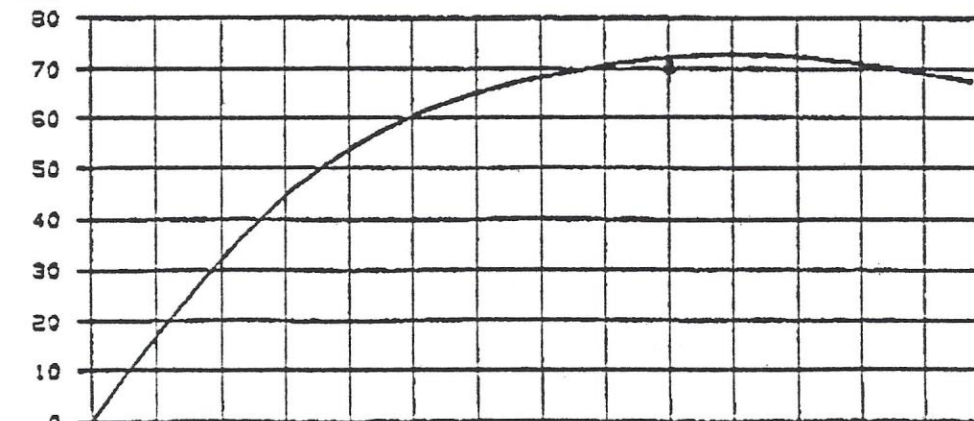
POWER CONSUMPTION
AT SHAFT

HP



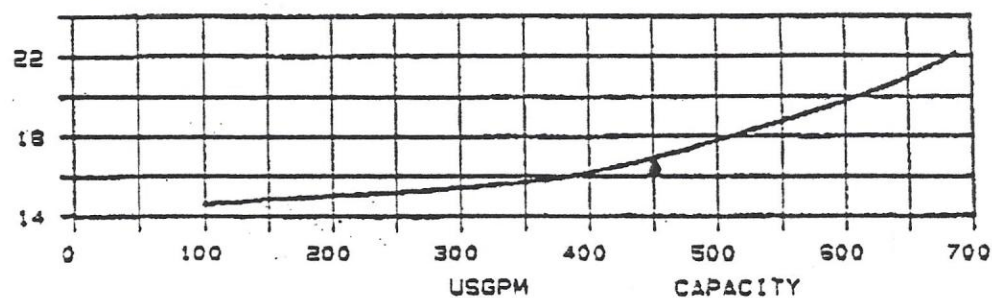
EFFICIENCY

%



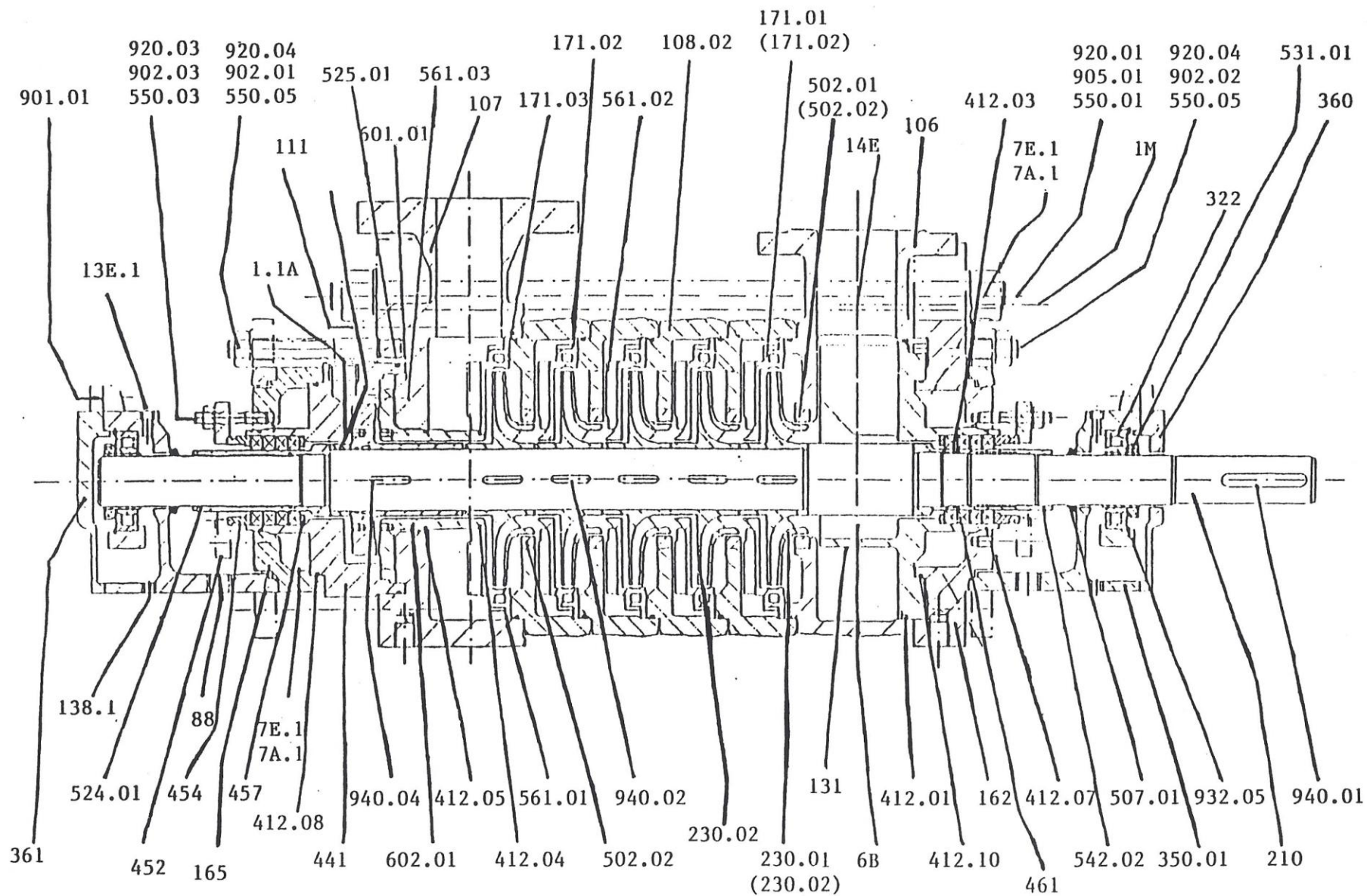
NPSH REQUIRED

FT

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spez. Gravity

0.92 KG/DM³=3



**KSB** inc.

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 FAX (804) 226-6961
 TELEX: 82710

PARTS LIST FOR HG TYPE SERIES PUMPS

<u>ITEM NUMBER</u>	<u>DESIGNATION</u>	<u>ITEM NUMBER</u>	<u>DESIGNATION</u>
106	Suction Casing	+501.01	Multiple Ring
107	Discharge Casing	+502.01	Casing Wear Ring, 1st Stage
108.01	Stage Casing, 1st Stage	+502.02	Casing Wear Ring, 1st-Last Stage
108.02	Stage Casing, 2nd -Last Stage	+503.01	Impeller Wear Ring, 1st Stage
108.03	Stage Casing, with Bleed-off	+503.02	Impeller, Wear Ring, 1st-Last Stg
13-6	Casing Insert	+504.01-03	Spacer Ring
130	Casing Part	+505.01	Collar
131.01	Inlet Ring	507.01	Thrower
171.01	Diffuser, 1st Stage	+522.01	Throttle Sleeve
171.02	Diffuser, 2nd-Last Stage	+523.01	Shaft Sleeve(Mech. Seal)
171.03	Diffuser, Last Stage	+524.01	Shaft Prot. Sleeve(for Packing)
+210	Shaft	+525.01-05	Spacer Sleeve
+230.01	Impeller(Suction Stage)	+529.01	Bearing Sleeve
+230.02	Impeller	+531	Clamping Sleeve
+314	Thrust Bearing	54-1	Blind Bush
+320	Ball Bearings	+542.01/02	Throttling Bush
+322	Radial Roller Bearing	550.01-07	Disc
350.01/02	Bearing Housing	550.13/14	Disc
354	Thrust Bearing Housing	551.01	Spacer Ring
360	Bearing Cover	560.01-02	Pin
361	Bearing End Cover	561.01-03	Grooved Pin
+370	Bearing Shell	562.01-05	Cylindrical Pin
381	Bearing Cartridge	562.12/13	Cylindrical Pin(Mech. Seal)
+384	Thrust Bearing Plate	+59-1.01/02	Feed Screw(Mech. Seal)
+400.11	Gasket(Mech. Seal)	+601.01	Balancing Disc
+411.01-05	Gasket	+602.01/02	Balancing Counter Disc
+412.01-16	O-Rings	+603.01/02	Balancing Piston
+412.20/22	O-Rings(Mech. Seal)	638	Constant Level Oiler
+420.01	Shaft Seal Ring	642.01/02	Oil Level Sight Glass
+421.11	Radial Seal Ring(Mech. Seal)	644	Lubrication Ring
+422	Felt Ring	662	Cooling Coil
441	Seal Casing	692.01/02	Local Bearing Thermometer
452	Gland Cover	897	Guide Piece
454	Stuffing Box Ring	900.11	Screw(Mech. Seal)
+461	Gland Packing	902.01-06/14	Stud
471	Seal Cover(Mech. Seal)	904.11/12	Threaded Pin(Mech Seal)
+472	Rotating Seal Ring(Mech. Seal)	905.01	Tie Bolt
+473	Rotating Seal Ring Holder(Mech. Seal)	913.01/02	Vent Plug
+474	Thrust Ring(Mech. Seal)	914.03-10	Socket Head Cap Screw
+475	Stationary Seal Ring(Mech. Seal)	920.12/14/16	Nut
+476	Stationary Seal Ring Holder	932.01-05	Circlip
+477	Spring(Mech. Seal)	+940.01-07	Key
483	Spring Casing	+940.11/12	Key(Mech. Seal)
+485	Spring Holder(Mech. Seal)	+950	Spring
50-3	Back Ring(Mech. Seal)	901.01/05	Hexagon Head Bolt
+388	Counter Thrust Bearing Plate	920.01-11	Nut

+ = Recommended Spare Parts

NOTE: Some of the parts contained on this list may not be found in the subject pump. For details, see the sectional drawing and/or documents attached.