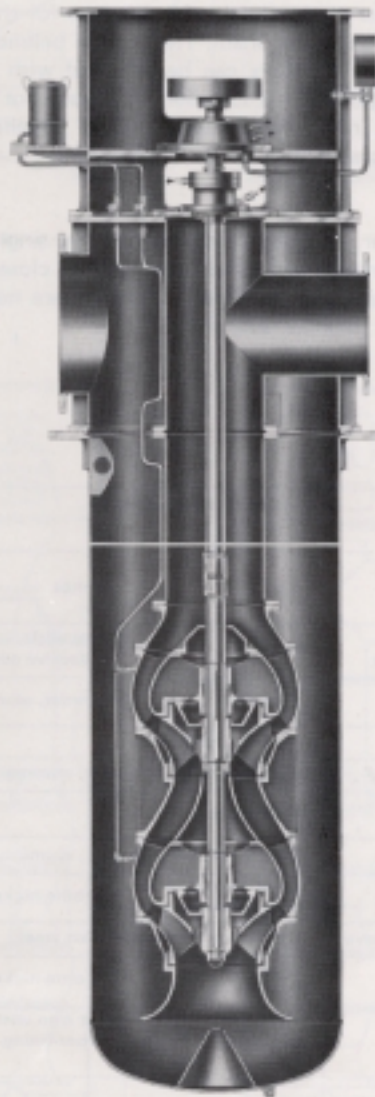


Diagonal Impeller Barrel Pumps SEZT with tubular casing

KSB

Capacities	700 to 25 000 m ³ /hr (2570 to 91660 Imp.g.p.m., 3080 to 110000 USgpm)
Total heads	6 to 68 m (20 to 223 ft) single stage up to 130 m (426 ft) two stage
Sizes	I.D. 300 to 1500 (12" to 60")
Temperatures	80 °C (175 °F) max. Higher temperatures on request



Applications

SEZT barrel pumps are mainly used as lye solution circulating pumps, lye solution draw-off pumps and distillate pumps in sea-water desalination plants, also as pipeline booster pumps and tank farm pumps.

Construction

Vertical, single or two stage barrel pump with mixed-flow impeller and radially split tubular casing. Suction nozzle below floor level and discharge nozzle above floor level, alternatively suction and discharge nozzles diametrically opposite one another in the same plane above floor level, depending on type of installation.

Pump Barrel

Fabricated barrel with dished bottom end. Constructions with one or two suction nozzles are available, and installation type D5 has no suction nozzle on the barrel.

Pump Casing

Tubular casing, consisting of suction bellmouth, diffuser and discharge elbow in the case of single stage pumps, or of suction bellmouth, diffuser, transition piece, diffuser and discharge elbow in the case of two stage pumps. A rising main is incorporated between the diffuser and the discharge elbow, on pumps with fairly long installed depths; if necessary, additional guide bearings for the shaft are provided in the rising main. The suction bellmouth of pumps with open impellers can be provided with a hard facing in the region of the impeller on request, or with a renewable wear ring. Pumps with closed impellers are fitted with casing wear rings on the pump casing.

Impeller

Diagonal impeller, of open or closed type on single stage pumps, depending on the total head, and of closed type only on two stage pumps. Closed impellers are normally supplied without impeller wear rings.

Shafting

The shafting is subdivided into individual shaft lengths, according to the installed depth, and the individual shafts are connected to one another by shell couplings above the shaft guide bearings. Renewable shaft protecting sleeves are fitted in the region of the bearings and stuffing box.

Shaft Seal

Soft-packed stuffing box or mechanical seal, as desired.

Bearings

The shafts are guided in grease-lubricated bronze bearings or water-lubricated rubber bearings. The residual axial thrust and the weight of the rotor are absorbed in a grease-lubricated antifriction bearing; on the larger size and more powerful pumps, an oil-lubricated antifriction thrust bearing or a segmental thrust bearing is provided in the drive stool or in the gearbox.

Lubrication

All the shaft guide bearings are grease-lubricated by a grease pump with separate electric motor drive. Each bearing has its own grease feed line.

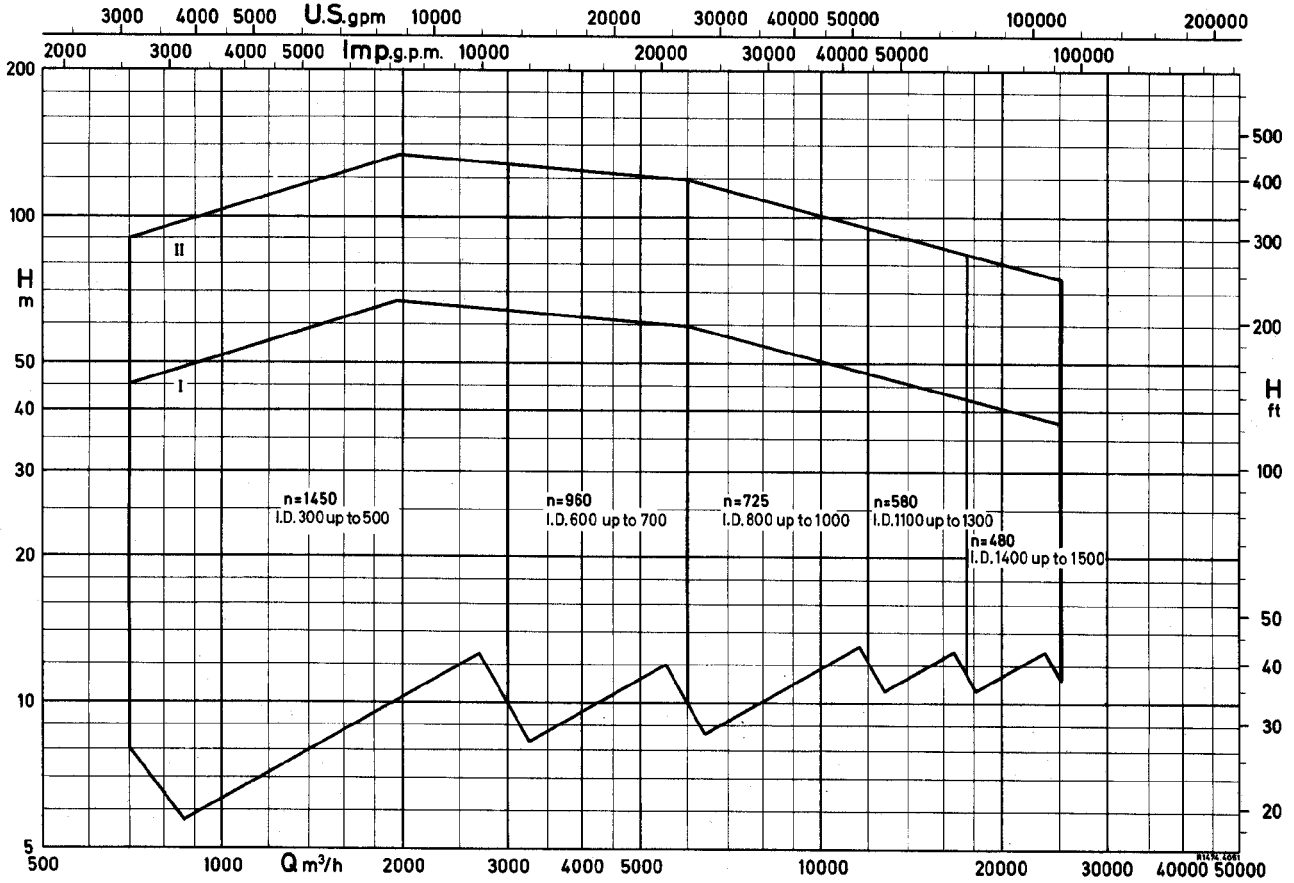
In the case of water lubrication, the lubricating water is fed from the water distributor above the top bearing through the shaft protecting tube to all the bearings in succession. In the case of lubrication by the product pumped, no separate lubrication system is necessary.

The grease pump, or lubricating water distributor respectively, is mounted on the drive stool.

Materials

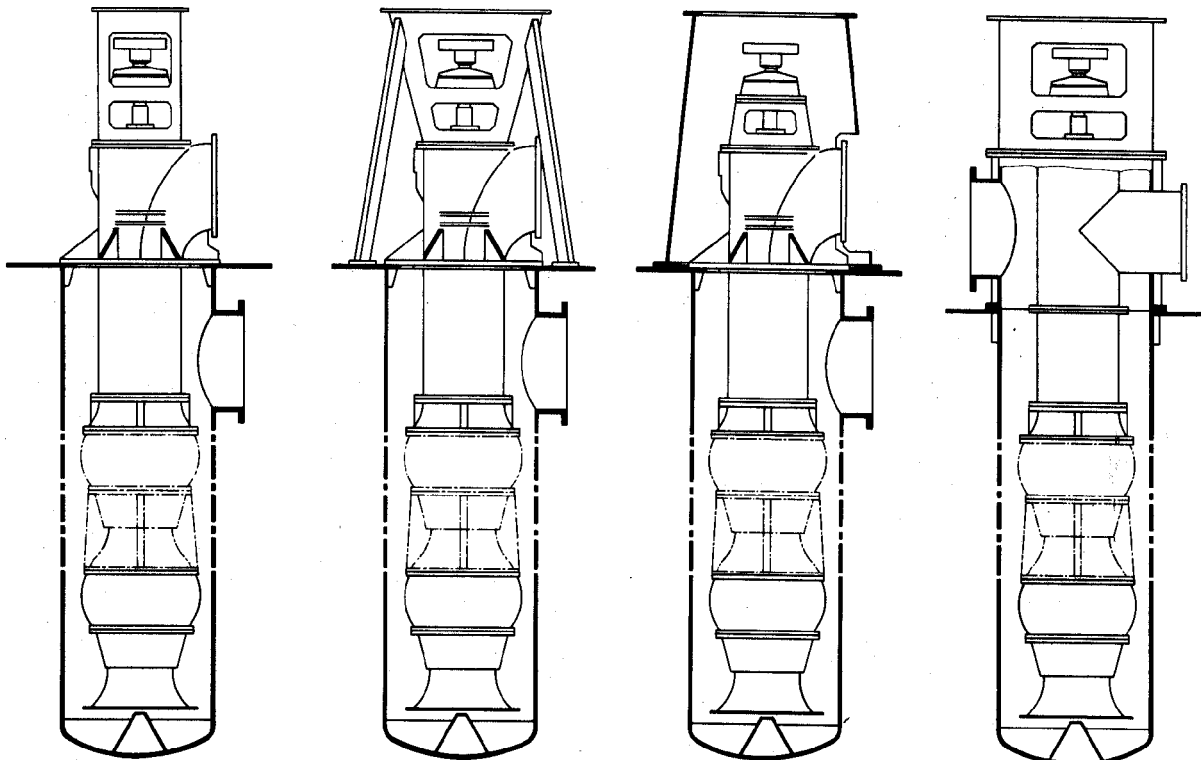
Designation	Material constructions					
	I	II	III	IV	V	VI
Suction bellmouth Diffuser	Cast iron	Bronze	Ni-resist	Aluminium bronze	Chrome-nickel-molybdenum cast steel	Aluminium bronze
Barrel Distributor housing	Steel	Steel with protective coating	Chrome-nickel-molybdenum steel, aluminium bronze			Aluminium bronze
Discharge elbow	Cast iron	Ni-resist, aluminium bronze				Aluminium bronze
Impeller	Aluminium Bronze					
	Chrome-nickel cast steel, chrome-nickel-molybdenum cast steel, aluminium bronze					
Casing wear ring	Gun metal		Ni-resist, chrome-nickel cast steel, aluminium bronze			Aluminium bronze
Wear ring	Chrome-nickel cast steel, aluminium bronze					
Shafting	Steel, chrome steel, chrome-nickel steel	Chrome-nickel steel	Chrome-nickel-molybdenum steel	Aluminium bronze	Chrome-nickel-molybdenum steel	Aluminium bronze
Shaft protecting sleeve	Chrome-molybdenum cast steel					
Rising main	Cast iron Steel	Chrome-nickel-molybdenum steel, aluminium bronze				Aluminium bronze
Bearing spider	Cast iron	Cast iron with soft rubber lining	Ni-resist	Aluminium bronze	Chrome-nickel-molybdenum cast steel	Aluminium bronze
Shell coupling	Cast iron	Chrome-nickel-molybdenum cast steel		Aluminium bronze	Chrome-nickel-molybdenum cast steel	Aluminium bronze
Drive stool	Steel	Steel with protective coating				

Performance Chart



I = single-stage II = two stage

Installations
single and two stage



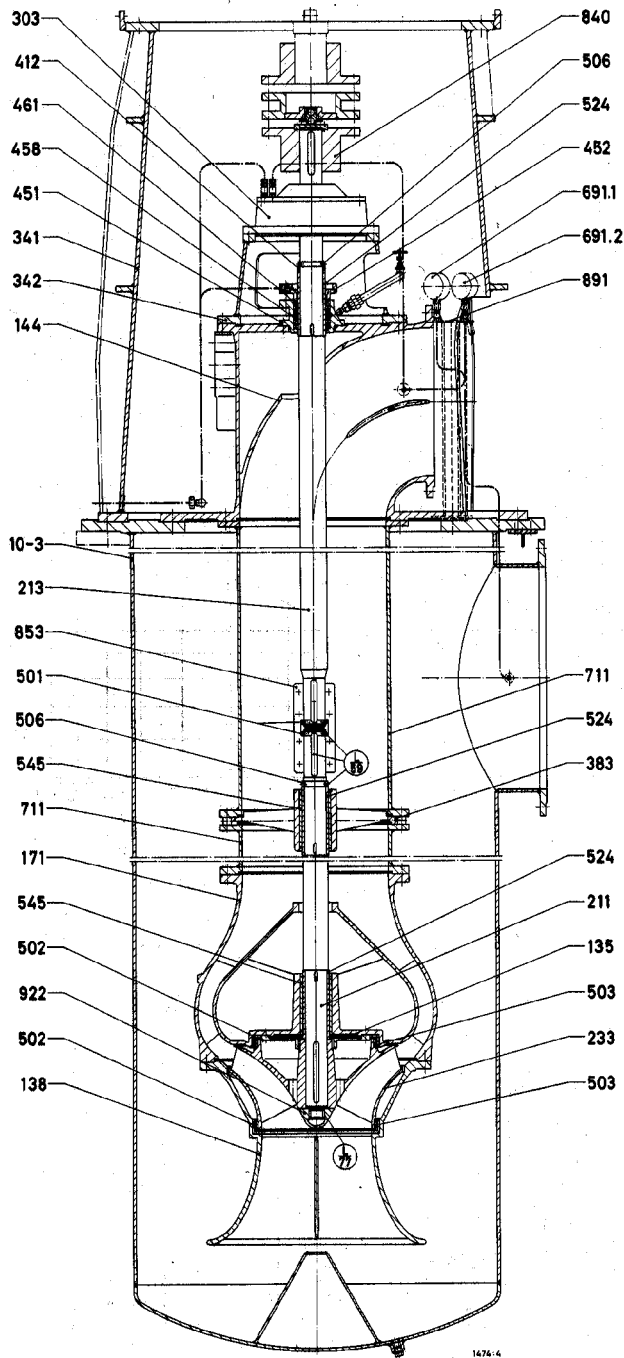
Installation D1

Installation D2

Installation D4

Installation D5

Sectional Drawing and List of Components



Part No.	Designation
10-3	Barrel
135	Wear plate
138	Suction bellmouth
144	Discharge elbow
171	Diffuser
211	Pump shaft
213	Drive shaft
233	Counterclockwise impeller
303	Thrust bearing
341	Drive stool
342	Thrust bearing lantern
383	Bearing spider
412	O-ring
451	Stuffing box housing
452	Stuffing box gland
458	Lantern ring
461	Stuffing box packing
501	Split ring
502	Casing wear ring
503	Impeller wear ring
506	Retaining ring
524	Shaft protecting sleeve
545	Bearing bush
691.1	Pressure vacuum gauge
691.2	Pressure vacuum gauge
711	Rising main
840	Coupling
853	Shell coupling
891	Support bracket
922	Impeller nut