

CPC COOPERATIVE PATENT CLASSIFICATION

F04F PUMPING OF FLUID BY DIRECT CONTACT OF ANOTHER FLUID OR BY USING INERTIA OF FLUID TO BE PUMPED {(evacuating by sorption F04B)}; SIPHONS {(Conveying materials in bulk by flows of gas, liquid of foam B65G 53/00)}

NOTES

1. Attention is drawn to the notes preceding class F01.
2. Combinations of pumps belonging to this subclass with other pumps are only classified in this subclass if such other pumps are fore pumps of diffusion pumps.

1/00	Pumps using positively or negatively pressurised fluid medium acting directly on the liquid to be pumped (using only negative pressure F04F 3/00; jet pumps F04F 5/00; siphons F04F 10/00)	5/30 with axially-slidable combining nozzle
		5/32 with hinged flap in combining nozzle
		5/34	. . characterised by means for changing inducing fluid source
1/02	. using both positively and negatively pressurised fluid medium, e.g. alternating	5/36	. . characterised by using specific inducing fluid
1/04	. . generated by vaporising and condensing	5/38	. . . the inducing fluid being mercury vapour
1/06	. the fluid medium acting on the surface of the liquid to be pumped (F04F 1/02 takes precedence)	5/40	. . . the inducing fluid being oil vapour
1/08	. . specially adapted for raising liquids from great depth, e.g. in wells	5/42	. characterised by the input flow of inducing fluid medium being radial or tangential to output flow (cyclones B04C)
1/10	. . of multiple type, e.g. with two or more units in parallel (F04F 1/08 takes precedence)	5/44	. Component parts, details, or accessories not provided for in, or of interest apart from, groups F04F 5/02 - F04F 5/42
1/12	. . . in series	5/46	. . Arrangements of nozzles
1/14	. . adapted to pump specific liquids, e.g. corrosive or hot liquids	5/461	. . . {Adjustable nozzles}
1/16	. . characterised by the fluid medium being suddenly pressurised, e.g. by explosion	5/462	. . . {with provisions for cooling the fluid}
1/18	. the fluid medium being mixed with, or generated from the liquid to be pumped	5/463	. . . {with provisions for mixing}
1/20	. . specially adapted for raising liquids from great depths, e.g. in wells	5/464	. . . {with inversion of the direction of flow}
		5/465	. . . {with supersonic flow (mixing of supersonic fluids B01F 5/04)}
3/00	Pumps using negative pressure acting directly on the liquid to be pumped (siphons F04F 10/00)	5/466	. . . {with a plurality of nozzles arranged in parallel}
5/00	Jet pumps, i.e. devices in which flow is induced by pressure drop caused by velocity of another fluid flow (diffusion pumps F04F 9/00; combination of jet pumps with pumps of other than jet type F04B; use of jet pumps for priming or boosting non-positive-displacement pumps F04D)	5/467	. . . {with a plurality of nozzles arranged in series}
		5/468	. . . {with provisions for priming}
		5/469	. . . {for steam engines}
		5/48	. . Control
5/02	. the including fluid being liquid	5/50	. . . of compressing pumps
5/04	. . displacing elastic fluids	5/52	. . . of evacuating pumps
5/06	. . . of rotary type	5/54	. Installations characterised by use of jet pumps, e.g. combinations of two or more jet pumps of different type
5/08	. . . the elastic fluid being entrained in a free falling column of liquid	7/00	Pumps displacing fluids by using inertia thereof, e.g. by generating vibration therein
5/10	. . displacing liquids, e.g. containing solids, or liquids and elastic fluids	7/02	. Hydraulic rams
5/12	. . . of multi-stage type	9/00	Diffusion pumps
5/14	. the inducing fluid being elastic fluid	9/02	. of multi-stage type
5/16	. . displacing elastic fluids	9/04	. in combination with fore pumps, e.g. use of isolating valves
5/18	. . . for compressing	9/06	. Arrangement of vapour traps
5/20	. . . for evacuating	9/08	. Control
5/22 of multi-stage type	10/00	Siphons
5/24	. . displacing liquids, e.g. containing solids, or liquid and elastic fluids	10/02	. Gravity-actuated siphons
5/26	. . . of multi-stage type (F04F 5/28 takes precedence)	13/00	Pressure exchangers
5/28	. . . Restarting of inducing action	99/00	Subject matter not provided for in other groups of this subclass