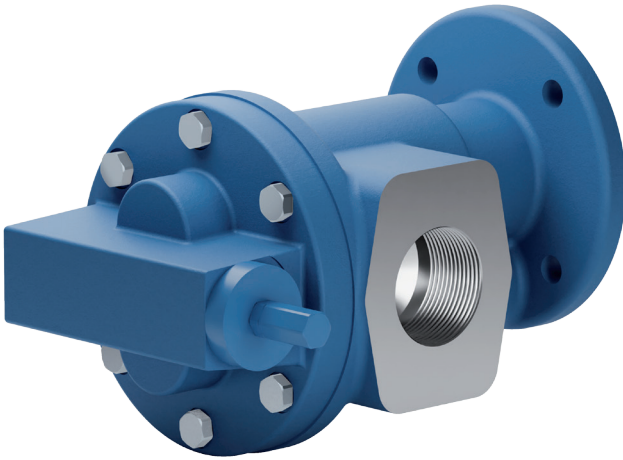


Gear flange-pumps with free shaft end series F



Construction

Self-priming external gear pumps with mounting flange, compact pump housing in cast iron. Standard suction and pressure port: pipe thread (opposite 180°), for type F5.. SAE-flange optionally. mounting position variable

Applications

The self-priming gear pumps are used in industrial applications as an oil pump, lubrication pump and capacity pump for oily and lubricating liquids.

- oil pumps in bearing systems
- mechanical engineering
- dosing pumps
- lubrication pumps in testing applications
- detergent dosing pump

Examples of liquids suitable for transport

Hydraulic oil, gear oil, engine oil, mineral oils, synthetic oils, emulsions and pastes without abrasives. For lubricating liquids.

Operating conditions

Liquid temperature: -10°C up to +60°C (NBR)

-40°C up to +250°C on request

Ambient temperature: -20°C up to +40°C

operating pressure: max. 100 bar
others on request

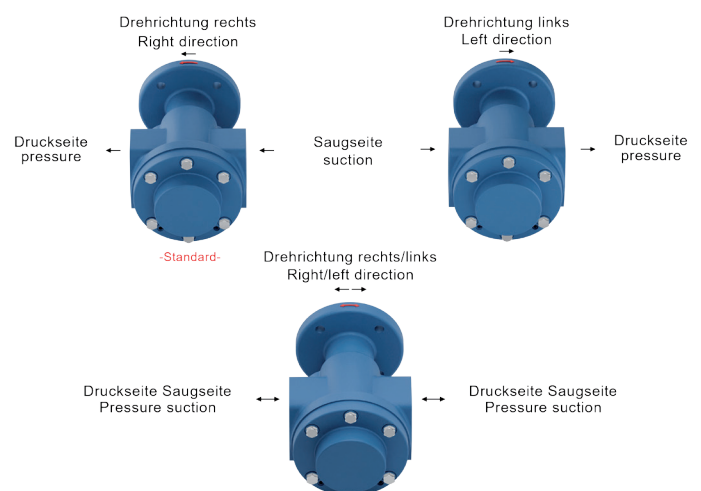
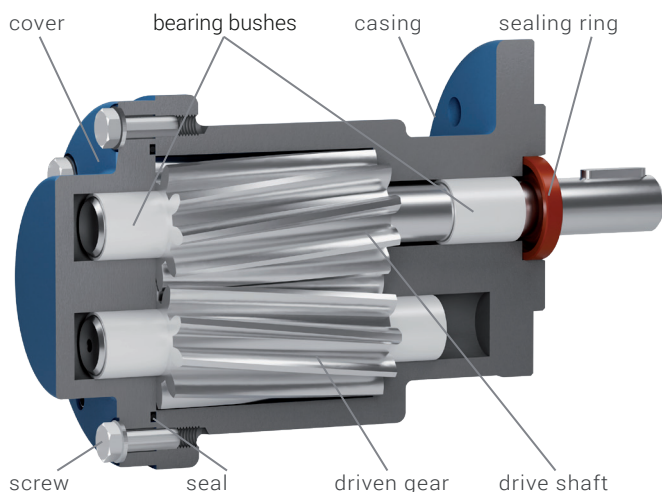
Drives

For example: hydraulic motor, electric motor
drives without axial / radial forces on the drive shaft

Materials

components	standard	on request
casing & cover	cast iron- EN-GJL-250(GG25)	ductile cast iron(GGG40)
shaft	steel	
gears	Steel, hardened and grinded	
bearing bushes	composite bearings	
shaft seal	sealing ring NBR	FPM, PTFE, GLRD, packing gland

sectional drawing



Gear flange-pumps with free shaft end series F 1

Performance ($n \approx 1450$ 1/min)

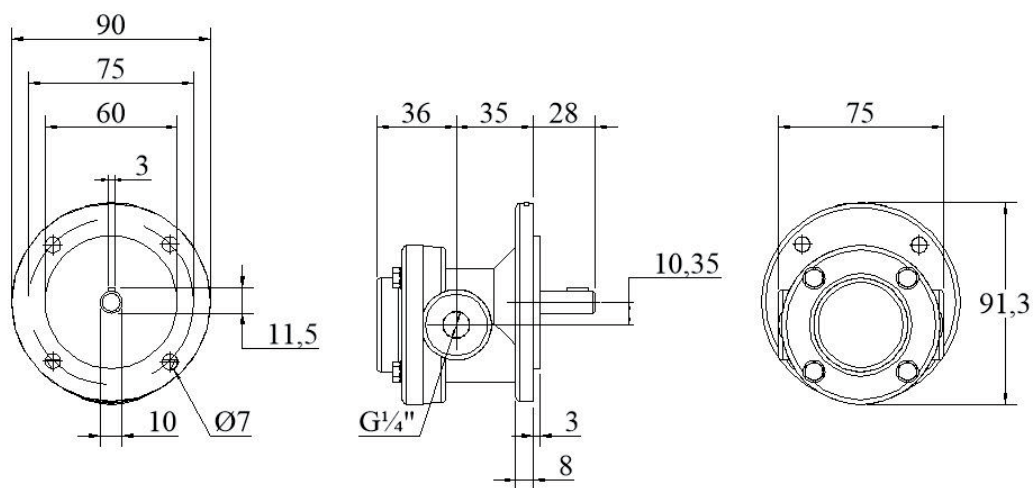
type	cm ³ /U	pressure (bar)	capacity						
			5	10	15	20	30	40	50
F 1-06	0,43	l/min	0,60	0,55					
		kW*	0,007	0,014					
F 15	0,85	l/min	1,15	1,10	1,05	1,00	0,90	0,80	0,60
		kW*	0,014	0,027	0,041	0,055	0,080	0,11	0,14
F 17	1,20	l/min	1,60	1,55	1,50	1,40	1,30	1,10	0,90
		kW*	0,019	0,038	0,057	0,076	0,11	0,15	0,19
F 110	1,80	l/min	2,30	2,25	2,20	2,10	2,00	1,80	1,60
		kW*	0,027	0,055	0,082	0,11	0,16	0,22	0,27

Valid for hydraulic oil with 35 mm²/s at 50 °C
Tolerance of capacity: +/- 3%

Oil-Speed: max. 1,5 m/s suction side, max. 4,5 m/s pressure side
* kW = required drive power in kW (without dissipation)

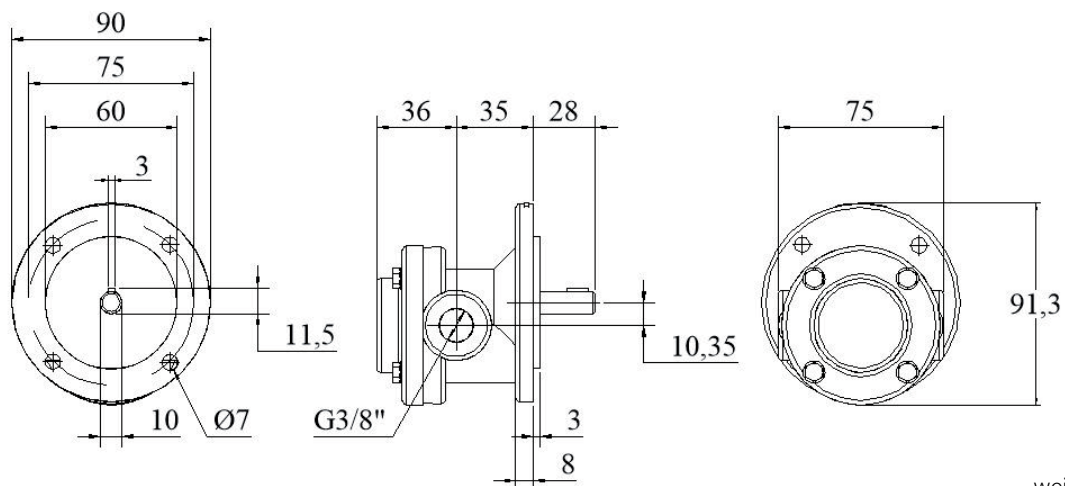
Dimensions and weight

F 1-06 - F17



weight: 1,5 kg

F110



weight: 1,5 kg

Gear flange-pumps with free shaft end series F 2

Performance ($n \approx 1450$ 1/min)

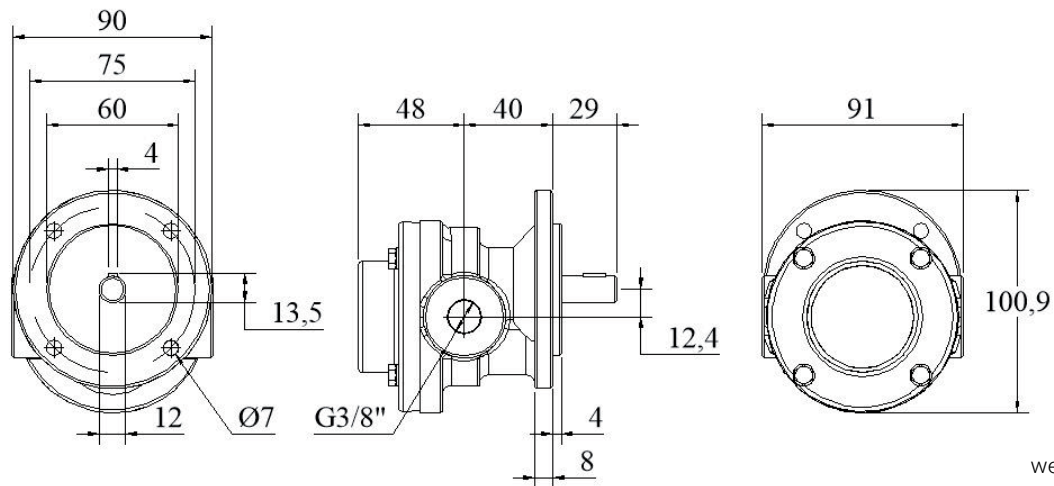
type	cm ³ /U	pressure (bar)	capacity								
			5	10	15	20	30	40	50	60	70
F 210	2,30	l/min	3,00	2,95	2,90	2,80	2,70	2,60	2,40	2,20	2,00
		kW*	0,036	0,072	0,11	0,14	0,21	0,29	0,36	0,43	0,50
F 214	3,20	l/min	4,50	4,45	4,40	4,30	4,20	4,10	3,90	3,70	3,50
		kW*	0,054	0,11	0,16	0,21	0,32	0,43	0,54	0,64	0,75
F 219	4,30	l/min	6,00	5,95	5,90	5,85	5,80	5,70	5,50	5,30	5,10
		kW*	0,072	0,15	0,22	0,29	0,44	0,58	0,73	0,87	1,02

Valid for hydraulic oil with 35 mm²/s at 50 °C
Tolerance of capacity: +/- 3%

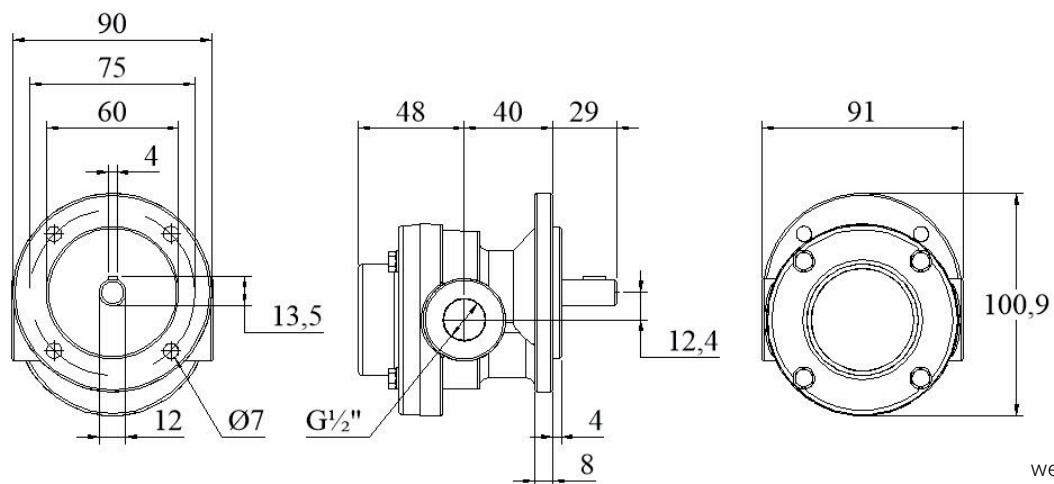
Oil-Speed: max. 1,5 m/s suction side, max. 4,5 m/s pressure side
* kW = required drive power in kW (without dissipation)

Dimensions and weight

F 210 - F 214



F 219



Gear flange-pumps with free shaft end series F 3

Performance (n ≈ 1450 1/min)

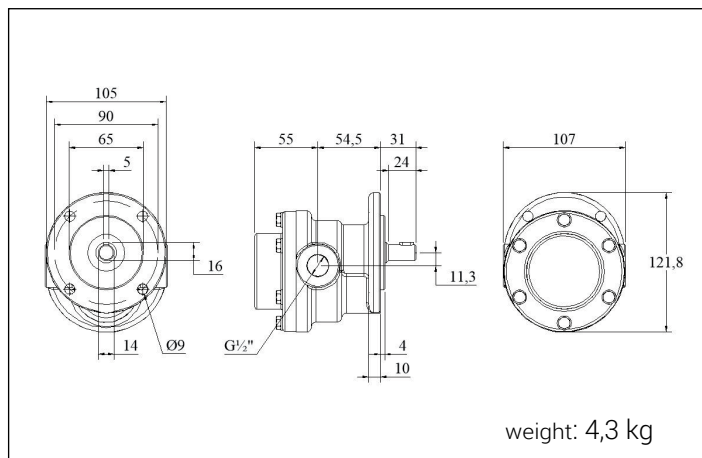
type	cm ³ /U	pressure (bar)	capacity											
			5	10	15	20	30	40	50	60	70	80	90	100
F 310	5,10	l/min	7,40	7,35	7,30	7,25	7,20	7,10	7,00	6,90	6,80	6,70	6,60	6,50
		kW*	0,09	0,18	0,26	0,35	0,53	0,71	0,88	1,06	1,24	1,41	1,59	1,77
F 314	7,10	l/min	10,20	10,15	10,10	10,00	9,90	9,70	9,40	9,10	8,80	8,50	8,00	7,40
		kW*	0,12	0,24	0,37	0,49	0,73	0,97	1,22	1,46	1,70	1,95	2,19	2,43
F 318	9,10	l/min	13,20	13,10	13,00	12,80	12,60	12,40	12,10	11,80	11,50	11,20	10,80	10,40
		kW*	0,16	0,31	0,47	0,63	0,94	1,26	1,57	1,89	2,20	2,52	2,83	3,15
F 323	11,70	l/min	16,70	16,60	16,50	16,40	16,20	16,00	15,60	15,20	14,80	14,40	14,00	13,60
		kW*	0,20	0,40	0,60	0,80	1,20	1,59	1,99	2,39	2,79	3,19	3,59	3,98
F 328	14,10	l/min	20,30	20,20	20,10	20,00	19,80	19,60	19,40	19,00	18,60	18,20	17,70	17,20
		kW*	0,24	0,48	0,72	0,96	1,45	1,93	2,41	2,89	3,37	3,86	4,34	4,82
F 333	16,70	l/min	24,10	24,00	23,90	23,80	23,60	23,40	23,20	22,90	22,50	22,10	21,60	21,10
		kW*	0,28	0,57	0,85	1,14	1,70	2,27	2,84	3,41	3,97	4,54	5,11	5,68

Valid for hydraulic oil with 35 mm²/s at 50 °C
Tolerance of capacity: +/- 3%

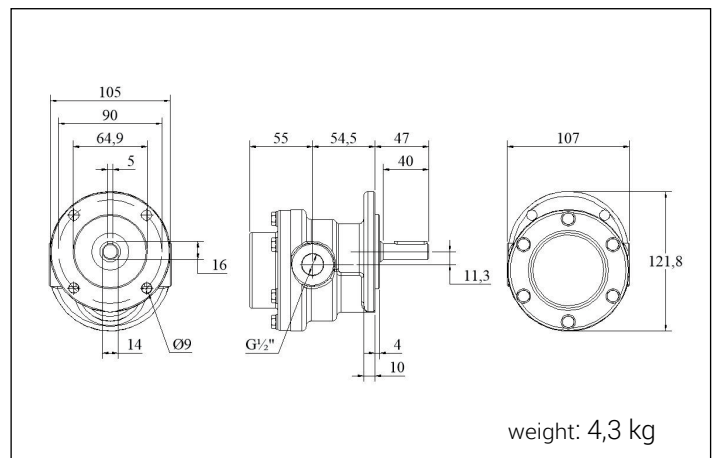
Oil-Speed: max. 1,5 m/s suction side, max. 4,5 m/s pressure side
* kW = required drive power in kW (without dissipation)

Dimensions and weight

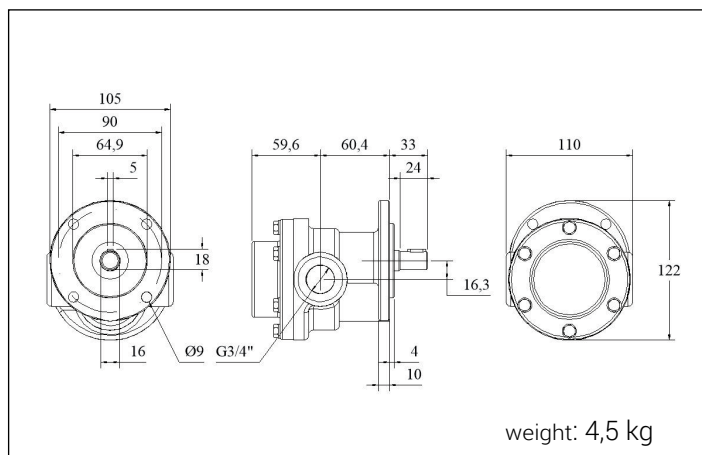
F 310 - 323



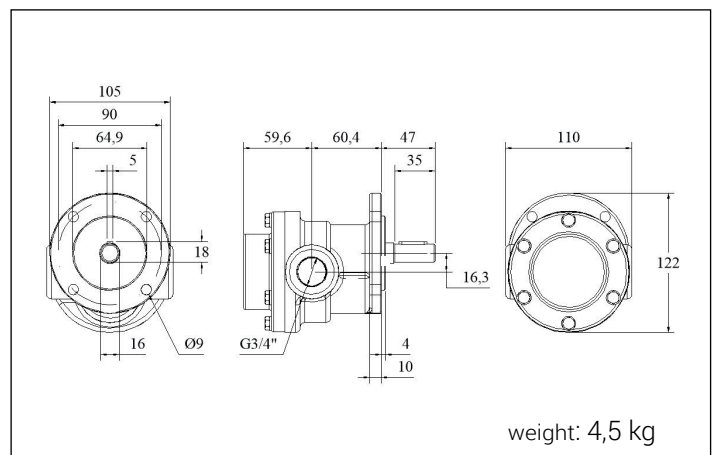
F 310 - 323 -long shaft end-



F 328 - 333



F 328 - 333 -long shaft end-



Gear flange-pumps with free shaft end series F 4

Performance ($n \approx 1450$ 1/min)

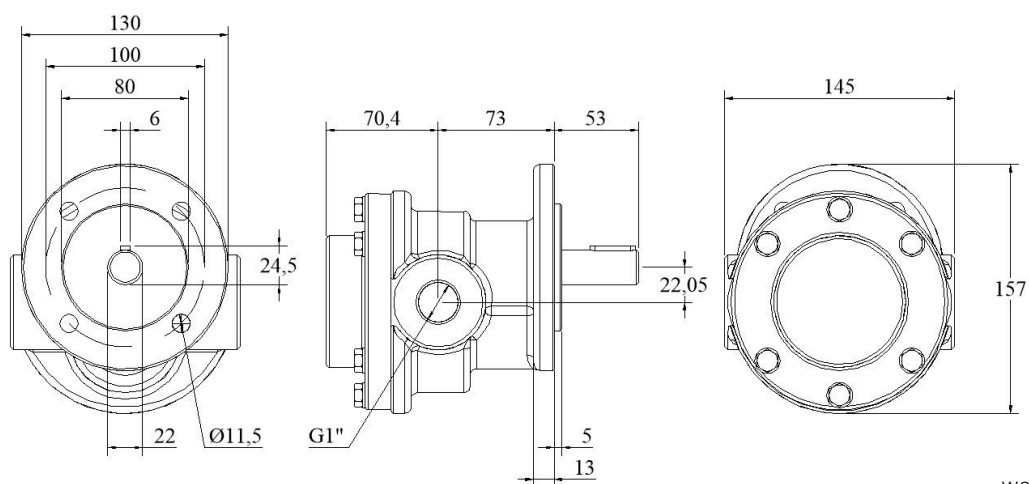
type	cm ³ /U	pressure (bar)	capacity						
			5	10	15	20	30	40	50
F 422	21,20	l/min	30,5	30,3	30,1	29,8	29,4	29,0	28,5
		kW*	0,35	0,69	1,04	1,38	2,08	2,77	3,46
F 426	25,00	l/min	36,2	36,0	35,8	35,5	35,1	34,7	34,2
		kW*	0,42	0,83	1,25	1,66	2,49	3,32	4,15
F 430	28,90	l/min	41,6	41,4	41,2	40,9	40,5	40,1	39,6
		kW*	0,48	0,97	1,45	1,94	2,91	3,87	4,84
F 434	32,80	l/min	47,3	47,1	46,9	46,6	46,2	45,8	45,3
		kW*	0,55	1,11	1,66	2,21	3,32	4,43	5,53
F 438	36,70	l/min	53,0	52,8	52,6	52,3	51,9	51,5	51,0
		kW*	0,62	1,25	1,87	2,49	3,74	4,98	6,23

Valid for hydraulic oil with 35 mm²/s at 50 °C
Tolerance of capacity: +/- 3%

Oil-Speed: max. 1,5 m/s suction side, max. 4,5 m/s pressure side
* kW = required drive power in kW (without dissipation)

Dimensions and weight

F 422 - F 438



Gear flange-pumps with free shaft end series F 5

Performance ($n \approx 1450$ 1/min)

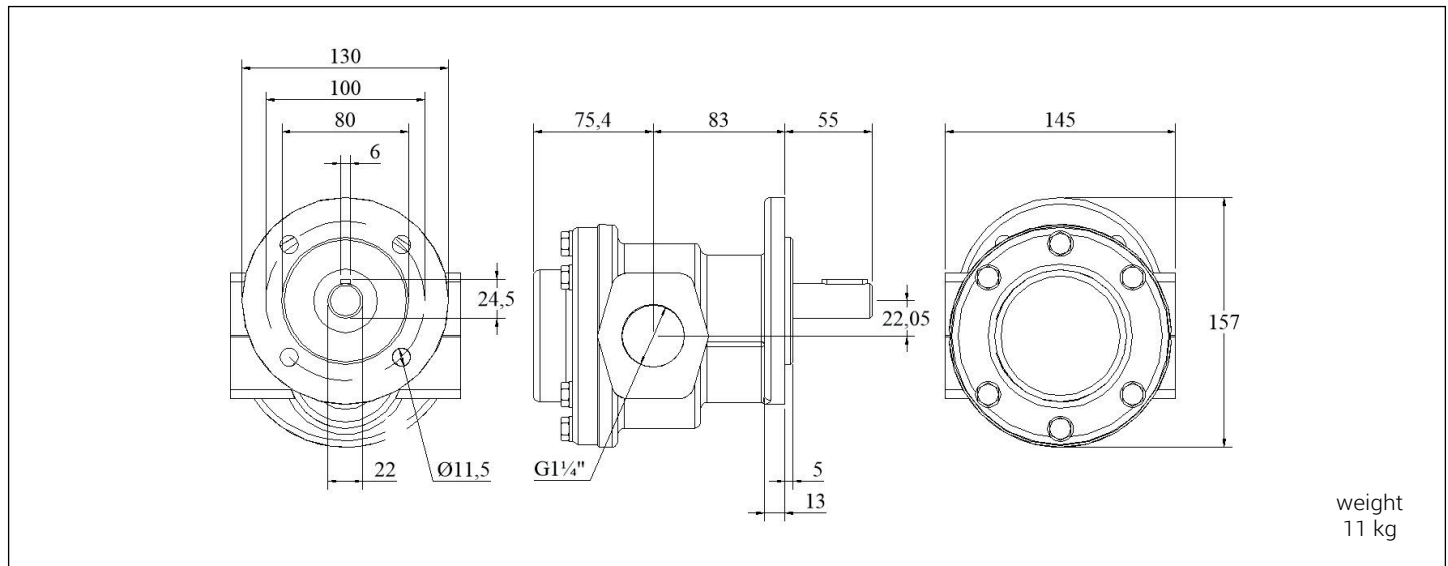
type	cm ³ /U	pressure (bar)	capacity						
			5	10	15	20	30	40	50
F 545	43,4	l/min	62,7	62,5	62,3	61,8	61,3	60,8	60,3
		kW*	0,74	1,49	2,23	2,97	4,46	5,95	7,43
F 556	54,0	l/min	78,1	77,9	77,7	77,2	76,7	76,2	75,7
		kW*	0,90	1,80	2,70	3,60	5,40	7,20	9,00
F 570	67,5	l/min	97,7	97,5	97,2	96,7	96,2	95,7	95,2
		kW*	1,14	2,28	3,42	4,57	6,85	9,13	11,4
F 590	86,8	l/min	124,0	123,8	123,6	123,1	122,6	122,1	121,6
		kW*	1,49	2,97	4,46	5,95	8,92	11,9	14,9

Valid for hydraulic oil with 35 mm²/s at 50 °C
Tolerance of capacity: +/- 3%

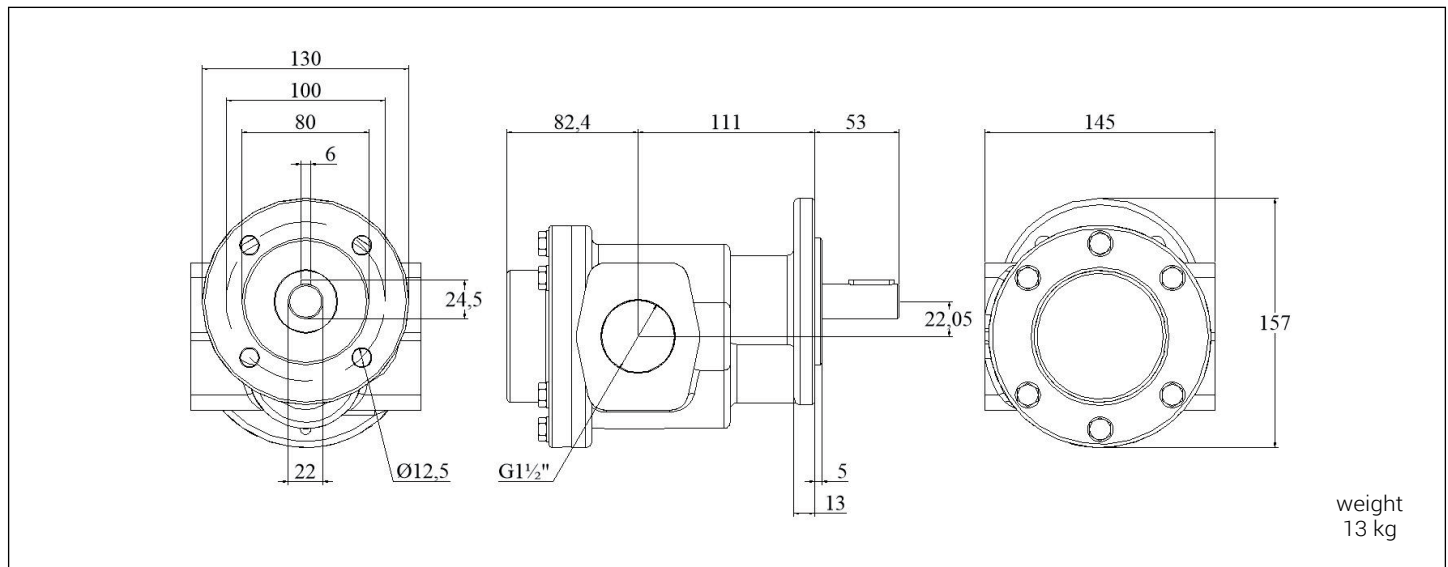
Oil-Speed: max. 1,5 m/s suction side, max. 4,5 m/s pressure side
* kW = required drive power in kW (without dissipation)

Dimensions and weight

F 545 / F 556



F 570 / F 590



Gear flange-pumps with free shaft end series F 5.. (SAE)

Performance (n ≈ 1450 1/min)

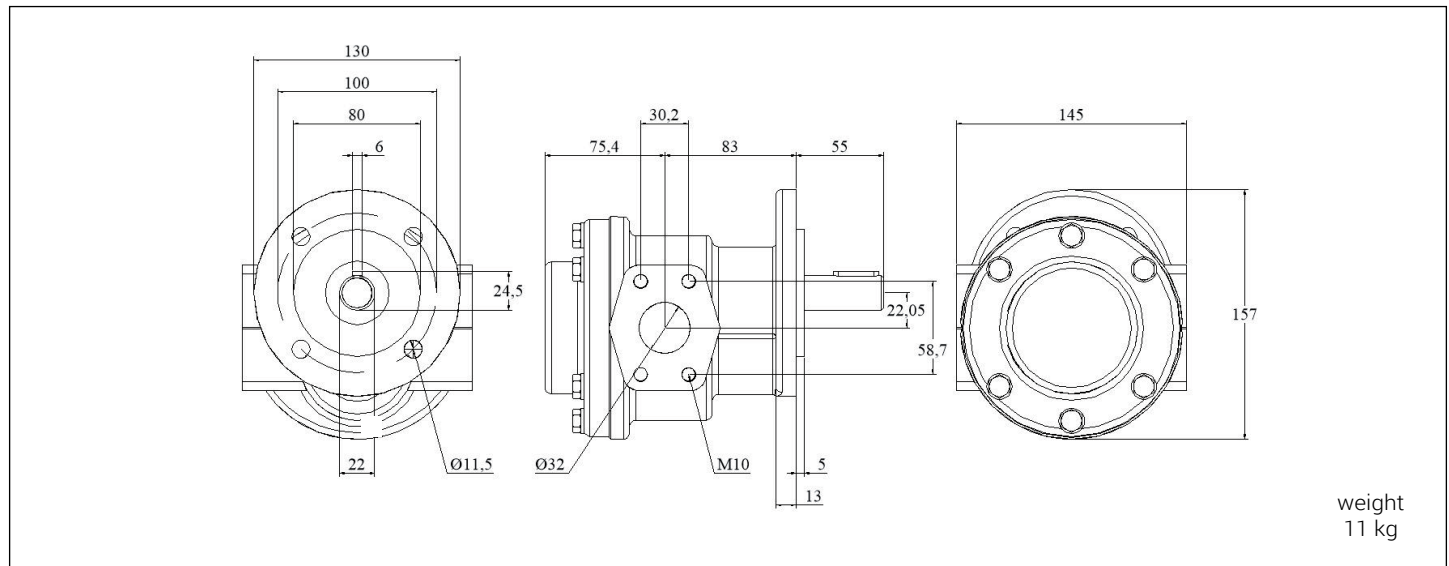
type	cm ³ /U	pressure (bar)	capacity						
			5	10	15	20	30	40	50
F 545	43,4	l/min	62,7	62,5	62,3	61,8	61,3	60,8	60,3
		kW*	0,74	1,49	2,23	2,97	4,46	5,95	7,43
F 556	54,0	l/min	78,1	77,9	77,7	77,2	76,7	76,2	75,7
		kW*	0,90	1,80	2,70	3,60	5,40	7,20	9,00
F 570	67,5	l/min	97,7	97,5	97,2	96,7	96,2	95,7	95,2
		kW*	1,14	2,28	3,42	4,57	6,85	9,13	11,4
F 590	86,8	l/min	124,0	123,8	123,6	123,1	122,6	122,1	121,6
		kW*	1,49	2,97	4,46	5,95	8,92	11,9	14,9

Valid for hydraulic oil with 35 mm²/s at 50 °C
Tolerance of capacity: +/- 3%

Oil-Speed: max. 1,5 m/s suction side, max. 4,5 m/s pressure side
* kW = required drive power in kW (without dissipation)

Dimensions and weight

F 545 / F 556 (SAE)



F 570 / F 590 (SAE)

