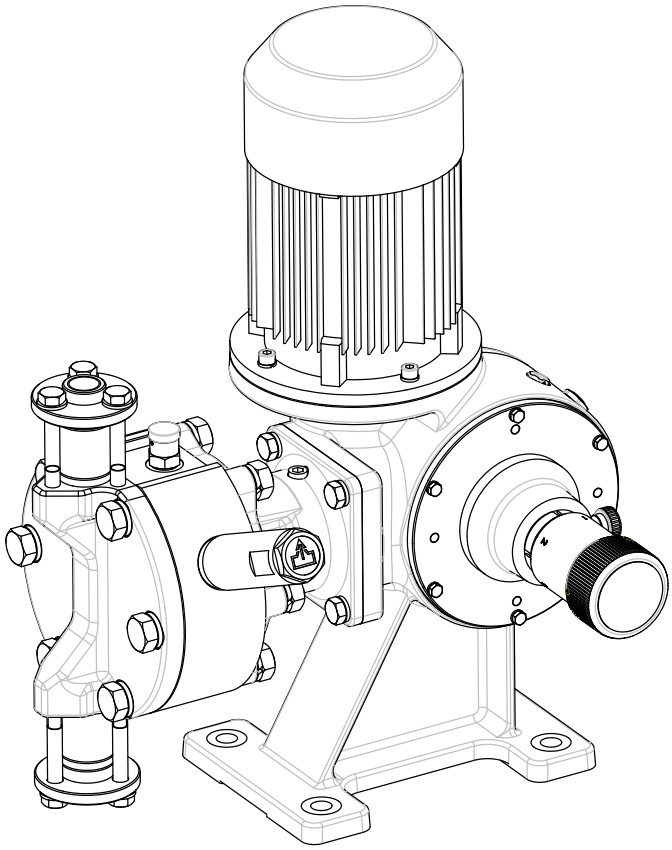


Technical characteristics

- Flow rates: from 18 to 660 lph @ 50Hz
- Max Pressure: 12,4 MPa (124 bar) for 316L version
- Ambient temperature: -10 °C + 40 °C
- Max altitude: 1000 m (A.S.L.)
- Fluid operating temperature: -5 °C + 50 °C
- Viscosity up to 1000 mPa•s (1000 cP)
- Stroke adjustment during operation from 0 to 100%
- Accuracy ± 1 % on the turndown ratio 10:1
- Built-in overpressure valve
- Single diaphragm
- Diaphragm duration up to 20.000 hours, depending of the application
- CE marking
- Electric motor protection: IP 55
- Epoxy painting at 125 micron

Nyva series includes hydraulic diaphragm dosing pumps designed according to **API 675 Standards**; the conformity to the API Standards implies a “heavy duty” design, high safety and severe controls during the performance tests. The broad variety of heads execution offers a wide selection of dosing pumps to cover practically any application needs.

Mechanism

The mechanism is mechanical return type, giving the maximum reliability in all working conditions.

General Specifications:

- Low noise integral gearbox, worm type, oil bath lubricated
- Reduced energy consumption based on low friction rolling bearings design
- Micrometric stroke lenght adjustment both manually or automatically actuated.
- Automatic stroke length variation by electrical servomotor, on request.
- Easy “on field” installation of electrical servomotor on manual stroke adjustment mechanism.

Diaphragm Pumphead

- Easy to change spares parts
- Maximum compatibility PTFE diaphragm

PUMP KEY CODE

1° Number of pump head

1	Simplex pump

2° Type of pump head (double diaphragm)

C	Single diaphragm with built-in overpressure valve, air-bleed valve and mechanically actuated oil replenishing

3°/4° Plunger diameter

15÷50	from 15 to 50 mm

5°/6° Mechanism model

B1	Stroke length 25 mm

7°/8° Pump head material

	HEAD	DIAPHRAGM	BALL	VALVE SEAL	VALVE SEAT
5B	PP	PTFE	CERAMIC	FPM	PVDF
4J	PVDF	PTFE	CERAMIC	FPM	PVDF
2F	316SS	PTFE	316SS	316SS	316SS
0Q	PVC-U	PTFE	CERAMIC	FPM	PVDF

9° Valve type

A	Single ball
B	Double balls
F	Wing

10° General options

7	Standard execution
F	Flanged connections (UNI EN 1092-1 for PP/PVDF/PVC-U) - (ANSI 300# for AISI36L)

11° Flow rate adjustment

M	Manual with adjustment knob (Standard execution)
E	Electric actuator

12° Gear ratio

D	1:12
F	1:15

13° Electric motors poles

2	2 poles
4	4 poles
6	6 poles

14° Installed power

F	0,75 kW
G	1,10 kW
H	1,50 kW

15° Pump head options

O	Standard

16° Mechanism options

C	Standard execution

1	C	30	B1	5B	A	7	M	F	2	H	O	C

HYDRAULIC CHARACTERISTICS

110/658 l/h 15 bar	Liquid end material PP			Flow rate at max pressure		Max speed	Max pressure		Suc/Dis Connec	Electric motor (kW)	NPSHr (barg)
Pump Model				lph	gph	Strokes /min	bar	psi	Ø BSPP		
1 C 3 0 B 1 5 B A 7 M D 4 G O C				110	29,1	117	15	218	1/2" F	1,10 (G)	-0,3
1 C 3 0 B 1 5 B A 7 M F 2 H O C				175	46,2	186	15	218	1/2" F	1,50 (H)	-0,1
1 C 4 0 B 1 5 B A 7 M D 6 F O C				131	34,6	78	15	218	1/2" F	0,75 (F)	-0,4
1 C 4 0 B 1 5 B A 7 M D 4 G O C				203	53,6	117	15	218	1/2" F	1,10 (G)	-0,3
1 C 4 0 B 1 5 B A 7 M D 2 H O C				422	111,5	235	15	218	1/2" F	1,50 (H)	-0,1
1 C 5 0 B 1 5 B A 7 M F 4 G O C				228	60,2	93	15	218	1/2" F	1,10 (G)	-0,3
1 C 5 0 B 1 5 B A 7 M D 4 G O C				300	79,3	117	15	218	1/2" F	1,10 (G)	-0,3
1 C 5 0 B 1 5 B A 7 M F 2 H O C				509	134,5	186	15	218	1/2" F	1,50 (H)	-0,1
1 C 5 0 B 1 5 B A 7 M D 2 H O C				658	173,8	235	15	218	1/2" F	1,50 (H)	-0,1

109/644 l/h 20 bar	Liquid end material PVDF			Flow rate at max pressure		Max speed	Max pressure		Suc/Dis Connec	Electric motor (kW)	NPSHr (barg)
Pump Model				lph	gph	Strokes /min	bar	psi	Ø BSPP		
1 C 3 0 B 1 4 J A 7 M D 4 G O C				109	28,8	117	20	290	1/2" F	1,10 (G)	-0,3
1 C 3 0 B 1 4 J A 7 M F 2 H O C				173	45,7	186	20	290	1/2" F	1,50 (H)	-0,1
1 C 4 0 B 1 4 J A 7 M D 6 F O C				127	33,5	78	20	290	1/2" F	0,75 (F)	-0,4
1 C 4 0 B 1 4 J A 7 M D 4 G O C				199	52,6	117	20	290	1/2" F	1,10 (G)	-0,3
1 C 4 0 B 1 4 J A 7 M D 2 H O C				418	110,4	235	20	290	1/2" F	1,50 (H)	-0,1
1 C 5 0 B 1 4 J A 7 M F 4 G O C				224	59,2	93	20	290	1/2" F	1,10 (G)	-0,3
1 C 5 0 B 1 4 J A 7 M D 4 G O C				295	77,9	117	20	290	1/2" F	1,10 (G)	-0,3
1 C 5 0 B 1 4 J A 7 M F 2 H O C				499	131,8	186	20	290	1/2" F	1,50 (H)	-0,1
1 C 5 0 B 1 4 J A 7 M D 2 H O C				644	170,1	235	20	290	1/2" F	1,50 (H)	-0,1

110/658 l/h 15 bar	Liquid end material PVC			Flow rate at max pressure		Max speed	Max pressure		Suc/Dis Connec	Electric motor (kW)	NPSHr (barg)
Pump Model				lph	gph	Strokes /min	bar	psi	Ø BSPP		
1 C 3 0 B 1 0 Q A 7 M D 4 G O C				110	29,1	117	15	218	1/2" F	1,10 (G)	-0,3
1 C 3 0 B 1 0 Q A 7 M F 2 H O C				175	46,2	186	15	218	1/2" F	1,50 (H)	-0,1
1 C 4 0 B 1 0 Q A 7 M D 6 F O C				131	34,6	78	15	218	1/2" F	0,75 (F)	-0,4
1 C 4 0 B 1 0 Q A 7 M D 4 G O C				203	53,6	117	15	218	1/2" F	1,10 (G)	-0,3
1 C 4 0 B 1 0 Q A 7 M D 2 H O C				422	111,5	235	15	218	1/2" F	1,50 (H)	-0,1
1 C 5 0 B 1 0 Q A 7 M F 4 G O C				228	60,2	93	15	218	1/2" F	1,10 (G)	-0,3
1 C 5 0 B 1 0 Q A 7 M D 4 G O C				300	79,3	117	15	218	1/2" F	1,10 (G)	-0,3
1 C 5 0 B 1 0 Q A 7 M F 2 H O C				509	134,5	186	15	218	1/2" F	1,50 (H)	-0,1
1 C 5 0 B 1 0 Q A 7 M D 2 H O C				658	173,8	235	15	218	1/2" F	1,50 (H)	-0,1

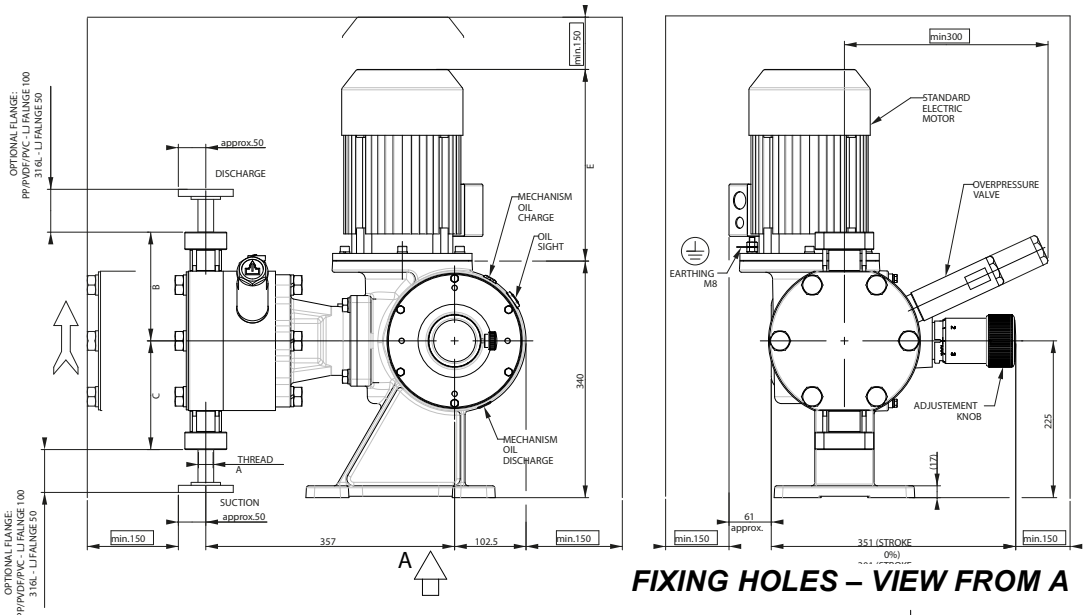
18/659 l/h 124 bar	Liquid end material 316L			Flow rate at max pressure		Max speed	Max pressure		Suc/Dis Connec	Electric motor (kW)	NPSHr (barg)
Pump Model				lph	gph	Strokes /min	bar	psi	Ø BSPP		
1 C 1 5 B 1 2 F B 7 M F 4 G O C				18,0	4,8	93	124	1798	1/4" F	1,10 (G)	-0,3
1 C 2 0 B 1 2 F B 7 M F 4 G O C				35,5	9,4	93	124	1798	1/4" F	1,10 (G)	-0,3
1 C 2 0 B 1 2 F B 7 M D 4 G O C				44,8	11,8	117	124	1798	1/4" F	1,10 (G)	-0,3
1 C 2 0 B 1 2 F B 7 M D 2 H O C				90,0	23,8	235	124	1798	1/4" F	1,50 (H)	-0,1
1 C 3 0 B 1 2 F A 7 M F 6 F O C				63,0	16,6	63	68	986	3/4" F	0,75 (F)	-0,4
1 C 3 0 B 1 2 F A 7 M D 4 G O C				109,0	28,8	117	68	986	3/4" F	1,10 (G)	-0,3
1 C 3 0 B 1 2 F A 7 M F 2 H O C				168,0	44,4	186	68	986	3/4" F	1,50 (H)	-0,1
1 C 4 0 B 1 2 F A 7 M D 6 F O C				130,0	34,3	78	35	508	3/4" F	0,75 (F)	-0,4
1 C 4 0 B 1 2 F A 7 M D 4 G O C				202,0	53,4	117	35	508	3/4" F	1,10 (G)	-0,3
1 C 4 0 B 1 2 F A 7 M F 2 H O C				329,0	86,9	186	35	508	3/4" F	1,50 (H)	-0,1
1 C 4 0 B 1 2 F A 7 M D 2 H O C				420,0	111,0	235	35	508	3/4" F	1,50 (H)	-0,1
1 C 5 0 B 1 2 F A 7 M F 6 F O C				148,0	39,1	63	24	348	3/4" F	0,75 (F)	-0,4
1 C 5 0 B 1 2 F A 7 M F 4 G O C				240,0	63,4	93	24	348	3/4" F	1,10 (G)	-0,3
1 C 5 0 B 1 2 F F 7 M D 4 G O C				311,0	82,2	117	24	348	1" F	1,10 (G)	-0,3
1 C 5 0 B 1 2 F F 7 M F 2 H O C				514,0	135,8	186	24	348	1" F	1,50 (H)	-0,1
1 C 5 0 B 1 2 F F 7 M D 2 H O C				659,0	174,1	235	24	348	1" F	1,50 (H)	-0,1

Test with water @ 20°C @ 50 Hz.

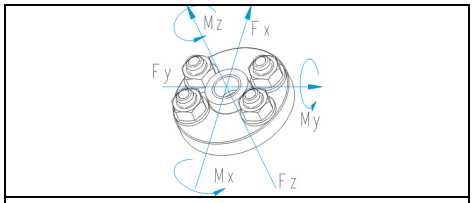
Max Pressure is the Max. setting of the safety valve.

Flow rate values with motor at 50Hz and in relation with the indicated "Strokes/min". Multiply by 1,2 for 60Hz

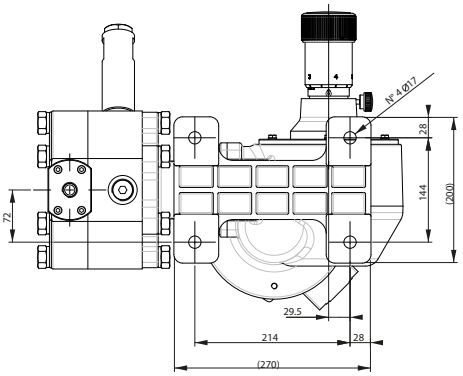
Models not suitable for 60Hz



FIXING HOLES – VIEW FROM A



Allowable loads referred to pump nozzles			
Fx	0.10 kN	Mx	0.04 kNm
Fy	0.12 kN	My	0.04 kNm
Fz	0.10 kN	Mz	0.04 kNm



	PUMP MODEL	DIMENSIONS [mm] A	B	C	EXTIMATED WEIGHT kg (without motor)	OPTIONAL FLANGE TYPE and SIZE: MAX. TEMP. 38°C MAX. PRESSURE 40 BAR (for ANSI 300)
PP	1C30B15BB..	BSPP 1/2"F	156	156	60	PN 16 DN15
	1C40B15BB..	BSPP 1/2"F	156	156	59	PN 16 DN15
	1C50B15BB..	BSPP 1/2"F	156	156	59	PN 16 DN15
PVDF	1C30B14JB..	BSPP 1/2"F	156	156	59	PN 16 DN15
	1C40B14JB..	BSPP 1/2"F	156	156	59	PN 16 DN15
	1C50B14JB..	BSPP 1/2"F	156	156	59	PN 16 DN15
PVC	1C30B10QB..	BSPP 1/2"F	156	156	59	PN 16 DN15
	1C40B10QB..	BSPP 1/2"F	156	156	59	PN 16 DN15
	1C50B10QB..	BSPP 1/2"F	156	156	59	PN 16 DN15
316L	1C15B12FB..	BSPP 1/4"F	159	159	54	1/2" ANSI 300
	1C20B12FB..	BSPP 1/4"F	159	159	54	1/2" ANSI 300
	1C30B12FA..	BSPP 3/4"F	182	182	66	1" ANSI 300
	1C40B12FA..	BSPP 3/4"F	182	182	65	1" ANSI 300
	1C50B12FF..	BSPP 1"F	207	207	68	1" ANSI 300

Electric motor size	2 Poles kW	4 Poles kW	6 Poles kW	TEFC 1xM20x1.5 E	kg
90	1.50	1.10	0.75	274	12

* Motor power supply: 230 ÷ 400Vac