

# Aquapress EN

Fire Fighting Sets to EN 12845

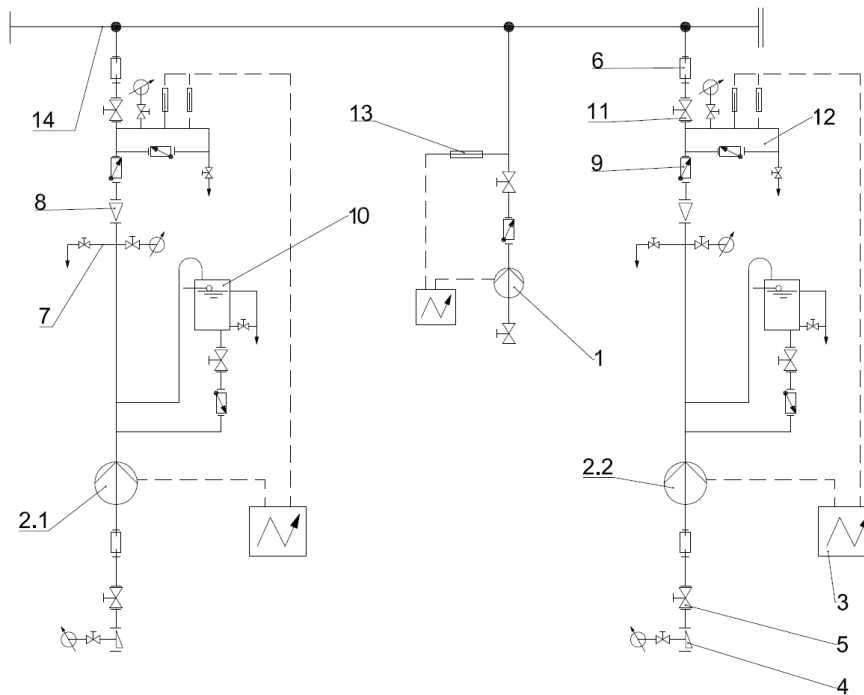
**DNP PUMPS**  
DRAKOS - POLEMIS S.A

## FIRE SETS VARIATIONS

- **AQUAPRESS F 330 EN**
  - One Electric driven pump
  - One Diesel driven pump
  - One jockey pump
- **AQUAPRESS F 312 EN**
  - One Electric driven pump (Duty)
  - One Electric driven pump (Stand-by)
  - One jockey pump
- **AQUAPRESS F 311 EN\***
  - One Electric driven pump
  - One jockey pump
- **AQUAPRESS F 320 EN\***
  - One Diesel driven pump
  - One jockey pump
- **AQUAPRESS F 101 EN\***
  - One Electric driven pump
- **AQUAPRESS F 401 EN\***
  - One Diesel driven pump

\* For more details contact the factory

### GENERAL ARRANGEMENT DIAGRAM



ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	Jockey pump	8	Discharge taper
2.1	Electric driven duty pump	9	Non-return valve
2.2	Diesel driven stand-by pump for type F330 EN or electric driven for type F312 EN	10	Priming tank
3	Electric panels	11	Discharge valve
4	Suction taper	12	Pressure switches and test arrangement
5	Suction valve	13	Jockey pressure switch
6	Anti-vibration joint	14	Discharge manifold
7	Bypass line		

## SYSTEM'S DESCRIPTION

### MAIN PUMPS

Back pull out design horizontal, end –suction pumps to EN 733, type LDP.

- Casing of cast iron GG 25.
- Impeller of cast iron GG 25 (other materials are also available)
- Shaft of stainless steel AISI 420.

Sealing by soft packing or by mechanical seal.

Pump is connected to electric motor or to diesel engine with a spacer flexible coupling, to enable the extraction of the rotating assembly, without disturbing the suction and discharge pipes and the motor as well.

### FUEL TANKS

The fuel tanks are made of steel and for capacities 20, 40, 80, 180 and 250 lt. The tanks of 20 and 40 lt, are fitted to the fire set. The tanks of 80, 180 and 250 lt are free standing and are supplied loose.

CODE	V (Lt)	A (mm)	B (mm)	H1 (mm)	H2 (mm)	h (mm)
1	20	300	220	380	-	50
2	40	400	280	400	-	50
3	80	400	400	550	1000	50
4	180	500	500	700	1200	50
5	250	600	600	750	1200	50

### JOCKEY PUMPS

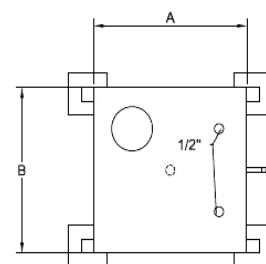
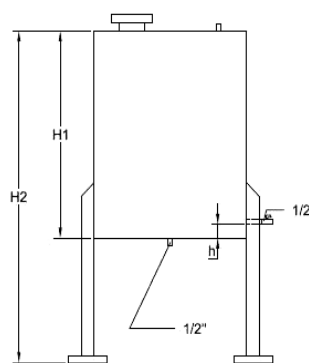
Vertical multistage pump, type MSV, is SS AISI304 construction, coupled to 3-phases TEFC, IP 55 protection and class F insulation Electric Motor, or horizontal self priming type or SCO.

### ELECTRIC MOTORS

TEFC Horizontal, 3-phases, squirrel cage induction type el-motors, to IP 55 protection and class F insulation.

### DIESEL ENGINES

Air, or water cooled diesel Engines, rated to ISO 3046 for continuous operation. Are fully in compliance to EN 12845 rules and are delivered with fuel tank ,of suitable capacity for up to 6 hours of operation & two sealed type Lead-Acid batteries



**ELECTRIC PANELS**

**for the electric driven Pump Unit**

- Waterproof metal enclosure protection degree IP54
- Main load switch
- High rupture fuses for protection from overcurrent and short-circuit
- Fuses for control circuit
- 3 phase pilot lights
- Phase asymmetry, phase loss and sequence monitoring relay
- Ammeter with current transformer
- Y-D starter for low inrush current during electrical motor starting, AC-3 rated
- Transformer 230v/24v for low voltage at control circuit
- Possibility of connecting float switch for dry running protection
- Selector switch for selecting manual or automatic operation
- Automatic operation via two pressure switches in parallel
- Pressure switch test arrangement
- Start button for manual starting of pump
- Stop button for stopping of pump in manual operation, or in automating when the pressure rises above the cut off pressure of pressure switches
  
- Pilot lights indicating :
  - Pump on demand
  - Dry running
  - Pump running
  - Pump fault
  - Pump starting failure
  - Pilot light test arrangement via a press button
  
- Free voltage contacts:
  - Lower loss
  - Pump on demand
  - Pump running
  - Pump starting failure
  - Possibility of connecting alarm siren with silence button
  
- Terminal connection diagram

**for the diesel engine driven Pump Unit**

- Waterproof metal enclosure protection degree IP54
- Main load switch for the battery chargers and preheat resistors
- Power supply drained from 2 batteries with arrangements for avoiding adverse effects between the batteries
- Possibility of connecting float switch for dry running protection
- Selector switch for selecting manual or automatic operation
- Diesel motor control, indications and adjustments via programmable logic controller and LCD screen
- Main cranking program for cranking with adjustable duration adjustable repetitions, powered from different battery at each cranking
- Secondary cranking program for cranking with adjustable duration, adjustable repetitions powered from both batteries
- Automatic operation via two pressure switches in parallel
- Pressure switch test arrangement
- Start button for manual starting of pump
- Stop button for stopping of pump by continuous pressing in manual, and stop button for automatic operation when pressure rises above the cut pressure of the pressure switches
- Motor running stop with “energized to stop” valve at the fuel supply line
- Cranking stop with proximity switch
- “Test” indication after each starting failure or after automatic operation
- Test button for test powered from both batteries
- Emergency start button with clear cover powered by both batteries
- Indications for :
  - Test demand(screen and panel)
  - Pump in automatic or off(screen)
  - Controller fault(screen)
  - Pump starting failure(screen)
  - Battery 1 charging fault(screen)
  - Battery 2 charging fault(screen)
  - Battery 1 voltage indicator(screen)
  - Battery 2 voltage indicator(screen)
  - General fault(screen and panel)
  
- Free voltage contacts for:
  - Pump running
  - Controller error
  - Pump starting failure
  - Pump in automatic or off
  - Possibility of connecting alarm siren with silence button
  
- Terminal connection diagram

**for the jockey Pump**

- Waterproof metal enclosure protection degree IP54
- Main load switch
- 3 phase pilot lights
- Phase asymmetry, phase loss and sequence monitoring relay
- Fuses for control circuit
- Transformer 230v/24v for low voltage at control circuit
- Direct on line pump starter
- Thermal relay for protection from overload
- Possibility of connecting float switch for dry running protection
- Selector switch for selecting manual or automatic operation
  
- Pilot lights indicating:
  - Pump running
  - Pump fault
  - Dry running
  
- Free voltage contacts for:
  - Pump running
  - Pump fault
  
- Terminal connection diagram

## Other Components of the fire set

- Membrane type pressure vessel (supplied loose )
- Two (2) Batteries chargers
- Discharge flexible joints (only for sets including diesel engine)
- Two (2) discharge tapers
- Two (2) discharge butterfly valves (or ball valves for sizes up to 2 1/2")
- Two (2) swing check valves
- Two (2) intermediate pieces, between the valve and the check valve for the connection of the control and automation instruments, to EN 12845.
- Hydraulic parts for the connection of the Jockey pump.
- Discharge manifold of galvanized steel
- By-pass line to each main pump, to prevent the pump overheating when it is operated against closed valve condition.
- Pressure gauge on the discharge of each main pump.
- Two (2) pressure switches, in series connection for the automatic start of each main pump to EN 12845.
- Pressure switches testing arrangement, to EN 12845 .
- One (1) pressure switch for the start-stop of the jockey pump.
- The pump units, the jockey pump and the rest components, are assembled on a common base plate of welded steel. The fire set is pre-wired, pre-adjusted, tested and delivered ready for operation.

## OPTIONS

- Suction manifold (Only in case of positive suction)
- Suction kit consisting off:
  - Eccentric suction taper to EN 12845
  - Butterfly valve
  - Suction flexible joint
  - Pressure gauge
- Discharge flexible joints for sets with electric driven pumps
- Test line with flow meter
- Priming Tank
- Valves ON-OFF position indicators
- Door locks for the EI-panels
- RPM-meter and HOUR-meter for the diesel engine Alarm Panel to EN 1284

## OTHER VARIATIONS

Depending of the application, the Fire Sets are also available with other types of pumps like:

- End suction pumps (types MDP, LDP-X or NA)
- Vertical multi stage pumps (Type MS/V and MS-E/V, or MSV)
- Vertical deep well pumps (Type DWP or MV)
- Submersible borehole pumps (Type SDWP)

## SYSTEM'S CHARACTERISTICS

### A. PRE-CALCULATED SYSTEMS LH

HAZARD CLASS	SPRINKLER HEIGHT	PUMP SIZE	ELEC MOTOR P (Kw)	DIESEL ENGINE P(Kw)	FUEL TANK (Lt)	NOMINAL DATA		CHARACTERISTICS				JOCKEY PUMP TYPE MSV			
						Q (m3/h)	H (m)	Q1 (m3/h)	H1 (m)	Q2 (m3/h)	H2 (m)	SIZE	Pmot (kw)	Q (m3/h)	H (m)
LH	h≤15	32-250 OP	7,5	7	20	18	15	13,5	37	-	-	4-40	0,75	4	32
	15<h≤30	40-250 OP	11	10		20,4	18	13,5	52	-	-				
	30<h≤45	40-250 OP	15	13,5		22,5	23	13,5	67	-	-				
OHI	h≤15	50-125 OP	5,5	6	40	54	12	32,4	22	22,5	25	4-50	1,1	4	40
	15<h≤30	65-160 OP	11	10		69	19	32,4	37	22,5	40				
	30<h≤45	65-200 OP	18,5	17,5		81,6	27	32,4	52	22,5	55				
OHI & OH2	h≤15	65-160 OP	11	10	20	105	14	60	25	43,5	29	4-40	0,75	4	32
	15<h≤30	80-200 OP	22	17,5	40	123	20	60	40	43,5	44				
	30<h≤45		30	27	80	141	26	60	55	43,5	59				
OH2 & OH3	h≤15	80-160 OP	15	13,5	20	135	14	81	29	66	32	4-40	0,75	4	32
	15<h≤30	80-200 OP	30	27	80	162	20	81	44	66	47				
	30<h≤45	100-250 OP	37	31		186	25	81	59	66	62				
OH3 & OH4	h≤15	100-200 OP	30	27	180	159	19	126	30	108	35	4-50	1,1	4	40
	15<h≤30		45	48		183	24	126	45	108	50				

### B. PRE-CALCULATED SYSTEMS – HHP & HHS AND CALCULATED SYSTEMS

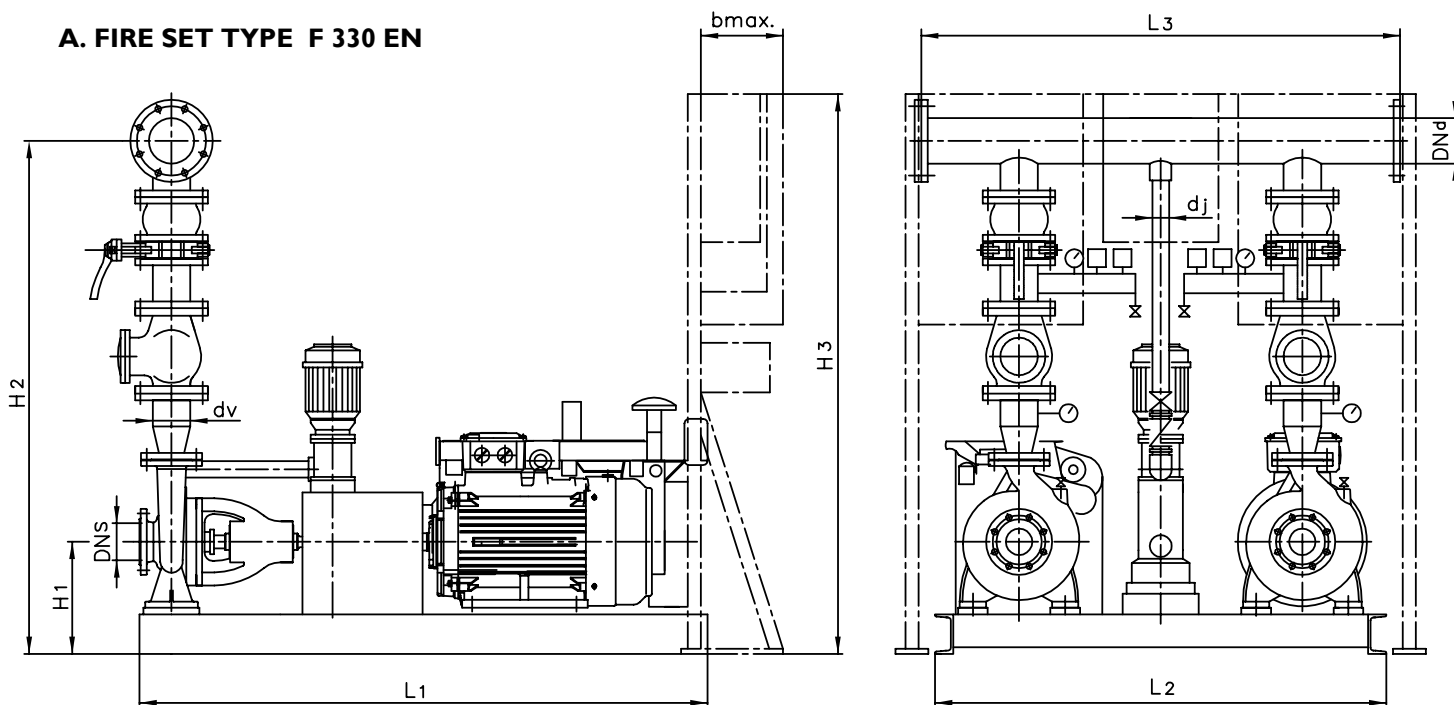
PUMP SIZE	ELEC. MOTOR (KW)	DIESEL ENGINE (KW)	FUEL TANK (Lt)	Q (m3/h)			H(m)			TYPE	Pmot (kw)	Q (m3/h)	H (m)
				min	nom	max	max	nom	min				
40-200	11	10	20	20	29	40	57	52	42	MSV 4-70	1,5	3	60
	7,5	7		15	25	35	51	45	37				MSV 4-60
	5,5	6		15	23	32	44	40	30				
40-250	15	17,5	40	14	21	30	95	93	86	MSV 4-120	2,2	4	95
		14		20	29	90	88	82	MSV 4-100				2,2
		11		13,5	14	20	28	84		82	77		
50-200	15	7	20	30	212	65	60	57	49	MSV 4-70	1,5	3	60
	11			30	45	63	53	50	42				MSV 4-60
	7,5			30	44	62	47	45	37				
50-250	37	31,5	80	40	64	90	94	87	75	MSV 4-120	2,2	4	95
	30	27		40	60	85	86	80	69				MSV 4-100
	22	18,5		35	52	73	80	76	66				
65-200	30	27	80	60	93	130	60	55	43	MSV 4-70	1,5	3	60
	22	27	60	90	125	53	48	36	MSV 4-60				1,5
	18,5	17,5	40	60	85	120	47	42		31			
65-250	45	48	180	64	96	135	90	83	65	MSV 4-120	2,2	4	95
	37	48	62	93	130	83	75	60	MSV 4-100				2,2
	37	31,5	80	50	75	105	85	81		71			
80-200	30	31,5	80	57	85	120	76	72	57	MSV 4-100	2,2	4	60
	37	31,5		80	115	160	60	58	51				MSV 4-70
	22	27		83	125	175	53	49	35				
80-250.1	75	66	180	90	140	200	93	89	76	MSV 4-120	2,2	4	95
	55	48		80	120	170	87	84	75				MSV 4-100
	45	48		85	130	180	73	68	58				
80-250.2	110	100	250	140	215	300	110	104	90	MSV 4-130	3	3	113
	90			130	200	280	100	95	80				MSV 4-120
	75			66	130	200	280	91	86	68			
100-200	55	48	180	130	190	270	81	76	57	MSV 4-100	2,2	3	80
	45			150	230	320	55	53	35				MSV 4-70
	37			31,5	80	140	210	290	42	40	22		
100-250	110	100	250	180	260	370	83	92	70	MSV 4-120	2,2	4	95
	90			160	240	340	75	85	65				MSV 4-100
	75			66	180	260	370	83	92	70			

**Notes:**

1. Hydraulic characteristics are indicative. Other choices upon request.
2. Motor power are according to EN 12845 requirements. I.E. to ISO 3046-1 (ICXN) for continuous operation.

## DIMENSIONS

### A. FIRE SET TYPE F 330 EN



PUMP SIZE	ELECTRIC MOTOR (Kw)	DIESEL ENGINE (Kw)	JOCKEY PUMP TYPE MSV		FUEL TANK (Lt)	DNs	DNd	dv	dj	SUCTION KIT CODE		SUCTION MANIFOLD (I)	TEST LINE CODE	DIMENSIONS													
			SIZE	Pmot (kw)						u=1,5 m/s	u=1,8 m/s			L1	L2	L3	H1	H2	H3	bmax							
32-250 OP	7,5	7	4-40	0,75	20	50	65	2"	1 1/4"	1	1	80	1	1067	1200	1170	320	1428	1700	250							
40-250 OP	11	10				65	80			2	14			2			1212	325			1438						
	15	14				80	80			4	3			3			1067	295			1418						
50-125 OP	5,5	6	4-50	1,1	40	80	100	80	1 1/4"	7	6	150	4	1212	1200	1170	300	1436	1700	250							
65-160 OP	11	10												80			100	7			6	4	1257	320	1481		
65-200 OP	18,5	18												80			100	8			7	4	1212	300	1436		
80-200 OP	22	18	4-40	0,75	40	100	125	100	1 1/4"	9	9	200	5	1427	1250	1220	320	1592	1700	250							
	30	27												80			125	9			9	5	1507	355	1627		
80-160 OP	15	14												100			125	100			9	9	1237	1200	1170	325	1572
80-200 OP	30	27	4-50	1,1	80	125	150	125	1 1/4"	12	11	200	6	1507	1250	1220	355	1627	1700	250							
100-250 OP	37	31												125			150	12			11	6	1752	1400	1370	390	1806
100-200 OP	30	27												125			150	11			11	7	1507	1350	1320	355	1771
100-250 OP	45	48	4-50	1,1	180	125	150	125	1 1/4"	12	11	200	7	1737	1350	1320	390	1806	1700	250							
100-250 OP	55	66												125			150	12			11	7	1910	1400	1370	420	1836

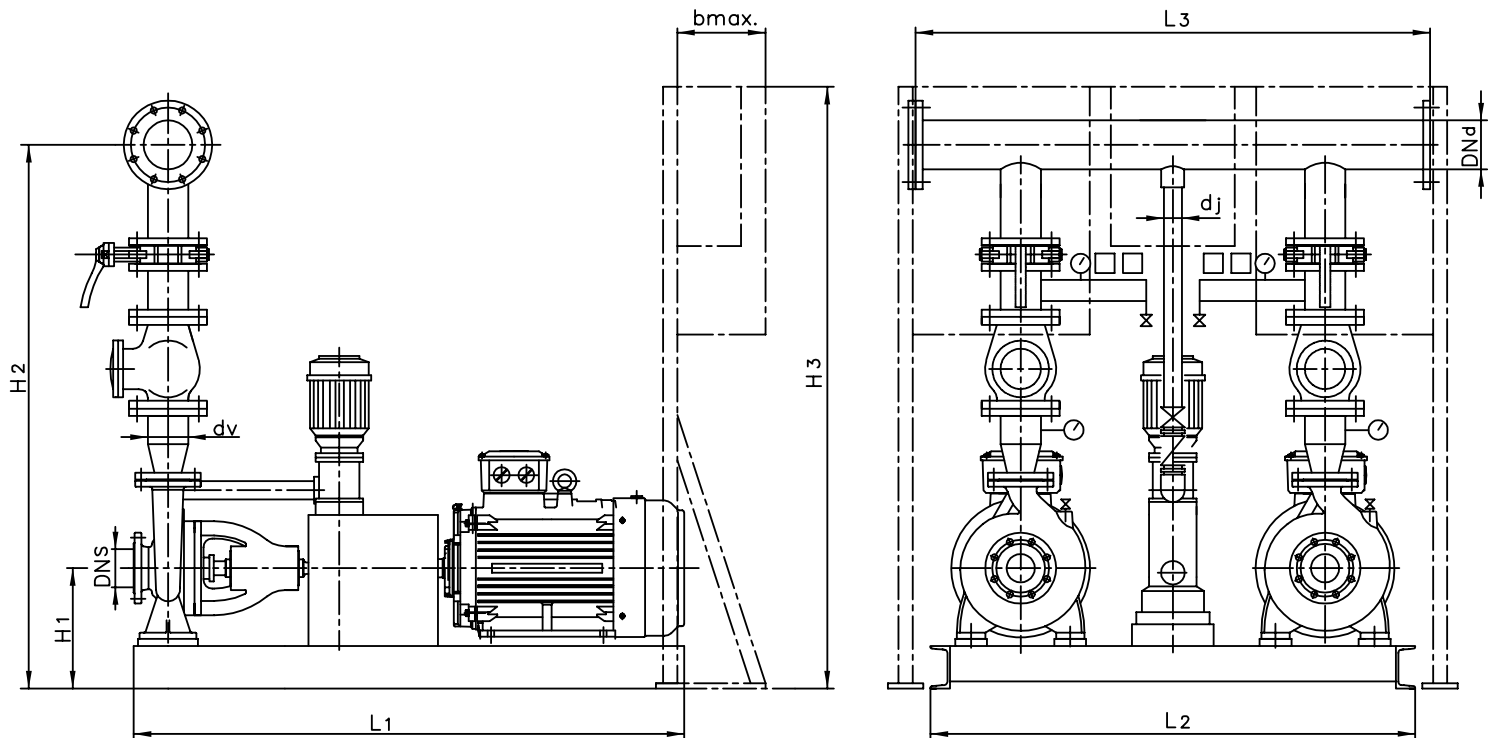


PUMP SIZE	ELECTRIC MOTOR (Kw)		DIESEL ENGINE (Kw)		JOCKEY PUMP TYPE MSV		FUEL TANK (Lt)	DNs	DNd	dv	dj	SUCTION KIT CODE		SUCTION MANIFOLD (I)	TEST LINE CODE	DIMENSIONS								
	SIZE	Pmot (kw)	SIZE	Pmot (kw)	u=1,5 m/s	u=1,8 m/s						L1	L2			L3	H1	H2	H3	bmax				
40-200	11	10	4-70	1,5	20	3	125	65	80	2"	3	2	1212	2	300	1373	250							
	7,5	7	4-60										1067											
	5,5	6	4-120										320					1438						
40-250	15	18	4-120	2,2	40	2	100	65	80	2"	2	3	1212	1200	1170	325	1443	250						
	15	14																	4-100	1488				
	11	14	4-70																1067	300	1463			
50-200	15	14	4-70	1,5	20	4	4	150	80	2 1/2"	3	4	1604	1350	1320	390	1551	1700						
	11	14	4-60																1372	355	1516			
	7,5	7	4-120																1292	320	1481			
50-250	37	32	4-120	2,2	80	5	5	200	80	1 1/4"	5	4	150	1257	1200	1170	320	1481	250					
	30	27	4-100																	1372	355	1516		
	22	27																		1292	320	1481		
	18,5	18	4-70																	1257	320	1481		
65-200	30	32	4-70	1,5	80	8	8	100	80	1 1/4"	4	7	1372	1350	1320	355	1516	1700						
	22	27	4-60																1292	320	1481			
	18,5	18	4-120																1714	300	1486			
65-250	45	48	4-120	2,2	180	8	8	100	125	100	8	200	7	1739	1350	1320	320	1506	250					
	37	48	4-100																	1507	1250	1220	325	1597
	37	32																		1427	325	1597		
	30	32	4-70																	1895	1400	1370	300	1602
80-200	37	32	4-70	1,5	80	9	9	100	125	100	6	9	1507	1250	1220	325	1597	300						
	30	27	4-60																1427	325	1597			
	22	27	4-120																1895	1400	1370	300	1602	
80-250.1	75	66	4-120	2,2	180	9	9	200	125	150	6	9	1739	1400	1370	300	1602	250						
	55	48	4-100																1739	1400	1370	300	1602	
	45	48	4-100																1739	1400	1370	300	1602	
80-250.2	110	100	4-130	3	250	13	13	250	125	150	9	9	2279	1700	1670	390	1806	300						
	90	100	4-120																1600	1570	355	1771		
	90	100	4-100	1895	1400	1370	320	1736																
	75	66	4-70	1739	1350	1320	355	1781																
100-200	55	66	4-70	1,5	180	13	13	250	125	150	9	9	1739	1350	1320	320	1746	250						
	45	48	4-60																1739	1350	1320	320	1746	
	37	32	4-120																2294	1700	1670	500	1926	
100-250	110	100	4-120	2,2	250	13	13	300	125	150	9	9	2294	1700	1670	500	1926	300						



## DIMENSIONS

### B. FIRE SET TYPE F 312 EN



PUMP SIZE	ELECTRIC MOTORS (Kw)	JOCKEY PUMP TYPE MSV		DNs	DNd	dv	dj	SUCTION KIT CODE		SUCTION MANIFOLD (1)	TEST LINE CODE	DIMENSIONS						
		SIZE	Pmot (kw)					u=1,5 m/s	u=1,8 m/s			L1	L2	L3	H1	H2	H3	bmax
32-250 OP	2 x 7,5	4-40	0,75	50	65	2"	1 1/4"	1	1	80	1	1067	1000	970	320	1428	1700	250
40-250 OP	2 x 11			65	80			2	14			2			1212	320		
	2 x 15				80	2 1/2"		4	3	125	3	1067	900	870	272	1395		
50-125 OP	2 x 5,5							7	6	150	4	1212	1000	970	300	1436		
65-160 OP	2 x 11			80	100	80		8	7			1257			320	1481		
65-200 OP	2 x 18,5	4-50	1,1					9	9	200	5	1212	1000	970	320	1436		
65-160 OP	2 x 11			100	125	100		12							1427	1050	1020	320
80-200 OP	2 x 22	4-40	0,75					11			7	1507	1150	1120	340	1612		
80-200 OP	2 x 30			125	150	125		1237	1000	970		320			1567			
80-160 OP	2 x 15							12			8	1507	1150	1120	340	1612		
80-200 OP	2 x 30							11	11			1522			365	1781		
100-250 OP	2 x 37							12			7	1507	1200	1170	340	1756		
100-200 OP	2 x 30							11				1552			365	1781		
100-200 OP	2 x 45	4-50	1,1					12			8	1652	1350	1320	410	1826		300
100-250 OP	2 x 55																	

PUMP SIZE	ELECTRIC MOTORS (kw)	JOCKEY PUMP TYPE MSV		DN <sub>s</sub>	DN <sub>d</sub>	dv	dj	SUCTION KIT CODE		SUCTION MANIFOLD (I)	TEST LINE CODE	DIMENSIONS																	
		SIZE	P <sub>mot</sub> (kw)					u=1,5 m/s	u=1,8 m/s			L1	L2	L3	H1	H2	H3	bmax											
40-200	2 x 11	4-70	1,5	65	80	2"	1 1/4"	3	3	125	2	1212	1000	970	300	1373	250												
	2 x 7,5	4-60	1,5									1067	900	870															
	2 x 5,5																												
40-250	2 x 15	4-120	2,2					80	2"			1 1/4"	2	2	100	100		2	1212	1000	970	320	1438	250					
	2 x 15																												
	2 x 11																								4-100				
50-200	2 x 15	4-70	1,5		80	2 1/2"		1 1/4"	3	4	150	150	3	1067	900	870		300	1463	250									
	2 x 11																												
	2 x 7,5	4-60																											
50-250	2 x 37	4-120	2,2			80			80	1 1/4"	4	5	200	200	4	1372		1150	1120	340	1501	250							
	2 x 30	4-100														150		150	150	4	1292		1050	1020	320	1481			
	2 x 22																												
	2 x 18,5																												
65-200	2 x 30	4-70	1,5	80	80		1 1/4"	4			8	200	200	4	1372	1150	1120	340	1501	250									
	2 x 22																												
	2 x 18,5																												
65-250	2 x 45	4-120	2,2			80		80	1 1/4"	4	8				200	200	4	1527	1200		1170	365	1551	250					
	2 x 37	4-100																200	200		4	1482					1526		
	2 x 30																												
80-200	2 x 37	4-70	1,5	100	125		100			6	9	9	250	6				1507	1150	1120	340	1612	300						
	2 x 30																												
	2 x 22	4-60																											
80-250.I	2 x 75	4-120	2,2			100		125	100	6	10	10			250	6	1707	1450	1420	460	1762	300							
	2 x 55	4-100															250	250	6	1637	1350			1320	410	1712			
	2 x 45																												
80-250	2 x 110	4-130	3	125	150		125			9	13	250	300	9			1937	1600	1570	495	1911	300							
	2 x 90																												
	2 x 90	4-120	2,2														250	250	9	1757	1450		1420	460	1876				
	2 x 75	4-100																											
100-200	2 x 55	4-70	1,5			125		150	125	9	13	250			300	9	1637	1350	1320	410	1836		250						
	2 x 45	4-60															250	250	9	1552	1200			1170	365	1791			
	2 x 37																												
100-250	2 x 110	4-120	2,2	125	150		125			9	13		250	300			9	1952	1600	1570	495	1921	300						
	2 x 90																												
	2 x 75	4-100																											

**Notes:**

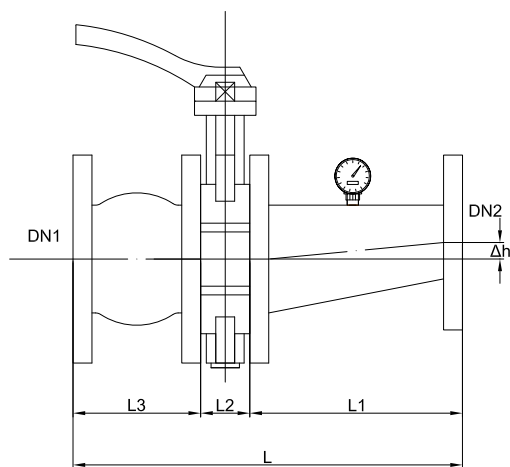
I. In case of positive suction only

## ACCESSORIES

### SUCTION KIT (OPTIONAL)

The fire fighting sets can be delivered with suction kit on the pump suction side. The kit is sized to the EN 12845 requirements and includes:

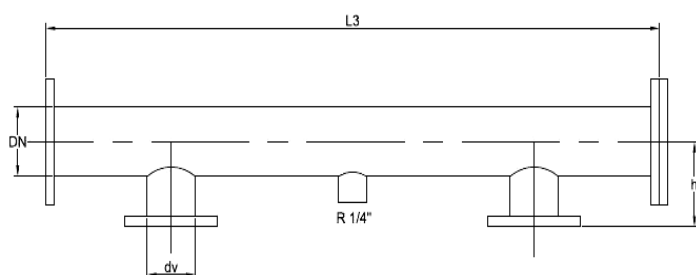
- Flexible joint and butterfly valve on the larger diameter of the cone, as they are not permitted to be fitted directly on the pump suction side
- Eccentric cone with horizontal top side, of a length not less than two diameters and included angle up to 20°. The minimum permitted suction pipe diameter must be at least 65 mm for installations with positive suction and 80 mm, in case of negative suction. Respectively the maximum flow velocity must be less than 1,8 m/s and 1,5 m/s.



CODE	TYPE	DN1	DN2	L1 (mm)	L2 (mm)	L3 (mm)	L (mm)	Δh (mm)
1	50-65	50	65	150	46	115	311	8
2	65-80	65	80	150	46	135	331	8
3	65-100	65	100	150	52	150	352	18
4	65-125	65	125	200	56	165	421	30
5	65-150	65	150	300	56	180	536	43
6	80-125	80	125	200	56	165	421	23
7	80-150	80	150	250	56	180	486	35
8	80-200	80	200	400	60	205	665	60
9	100-200	100	200	300	60	205	565	50
10	100-250	100	250	450	68	230	748	75
11	125-200	125	200	300	60	205	565	38
12	125-250	125	250	400	68	230	698	63
13	125-300	125	300	500	78	245	823	88
14	65-65	65	65	130	46	115	291	0

### SUCTION MANIFOLD (OPTIONAL)

As the EN 12845 permits the inter-connection of the pumps, in case of positive suction our fire sets can be delivered with suction manifold. The manifolds are made of galvanized steel, or in SS AISI 316 for sea water applications.

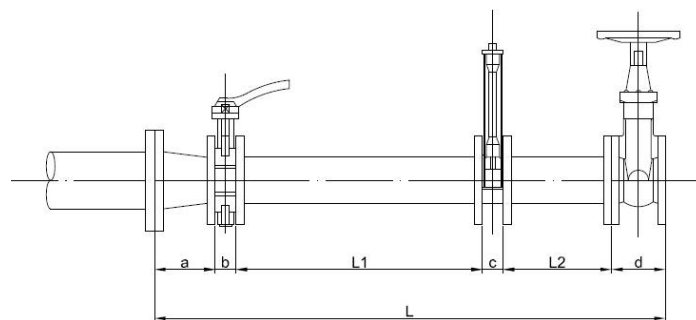


ITEM	DNs	dv	L3	h
1	80	65	SAME WITH THE LENGTH OF THE DISCHARGE MANIFOLD (SEE THE DIM. DRAWING)	145
2	100	80		155
3	125	100		170
4	150	125		185
5	200	150		210
6	200	200		210
7	250	250		235
8	300	300		260

### TEST KIT (OPTIONAL)

The Test Kit is fitted on the Discharge manifold, and includes:

- On-Off butterfly valve (or ball-valve up-to 2 1/2" diameter)
- Flow Meter to EN 12845
- Piping before and after the flow meter of suitable length
- Gate valve for the flow adjustment



CODE	TYPE	DNI	DN2	a (mm)	b (mm)	c (mm)	d (mm)	L1 (mm)	L2 (mm)	L (mm)
1	65/40-40	65	40	110	90	52	60	200	100	612
2	80/40-40	80	40	110	90	52	60	200	100	612
3	80/50-65	80	50	110	105	52	67	300	100	734
4	100/80-130	100	80	120	46	52	180	400	200	998
5	125/100-150	125	100	150	52	52	190	500	200	1144
6	125/100-200	125	100	150	52	52	190	500	200	1144
7	150/100-200	150	100	160	52	52	190	500	200	1154
8	150/100-280	150	100	160	52	52	190	500	200	1154
9	150/125-420	150	125	160	56	52	200	700	250	1418

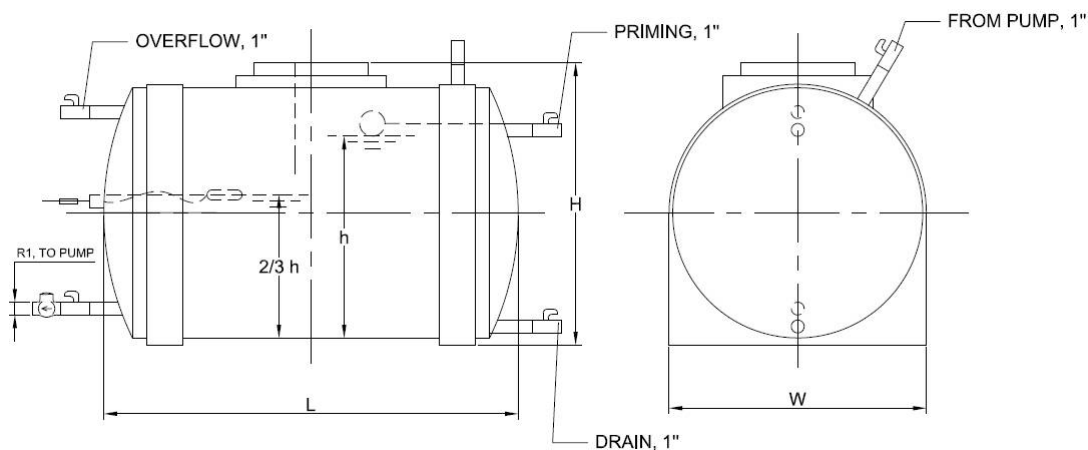
### PRIMING TANK (OPTIONAL)

The priming tanks are used in installations, where the pumps are installed under negative suction conditions, to keep the pump casing and the suction pipe filled with water, in case that there is a leakage to the foot valve.

Each pump must be equipped with a separate priming tank.

The priming tank is delivered with mechanical floating device, electrical float switch, 5 ball valve and 1 non-return valve.

ITEM	V (Lt)	L (mm)	W (mm)	H (mm)	RI
1	300	990	650	710	1"
2	500	1160	790	900	2"



# notes

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KOLOKOTRONI St 16, KRYONERI, ATTICA, GREECE

TEL.: +30 - 210 8161402, FAX: +30 210 - 8161262

## POSTAL ADDRESS

P.O. BOX: 51024, 14510 KIFISSIA, GREECE

[info@dppumps.gr](mailto:info@dppumps.gr)

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