

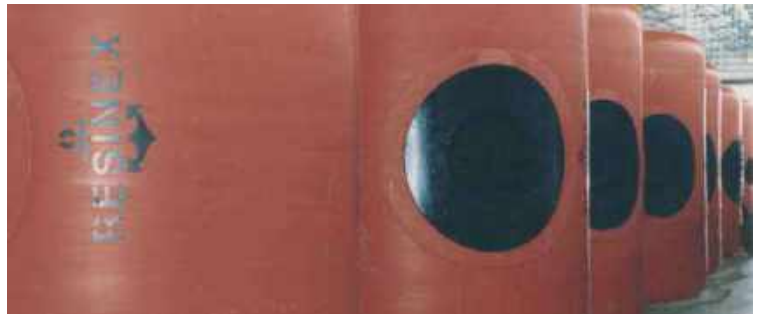
SUPPORT AND MOORING BUOYS

The widest range of floating equipment



Support and mooring buoys

Resinex is the manufacturer of the widest and most complete range of support and mooring buoys in the marine world. To meet their specific needs and requirements, our customers are able to choose from a series of products that range from 3 kilograms to over 120 tons nett buoyancy thanks to modularity. The Resinex technical department is also on hand to project models tailor-made for any particular need.



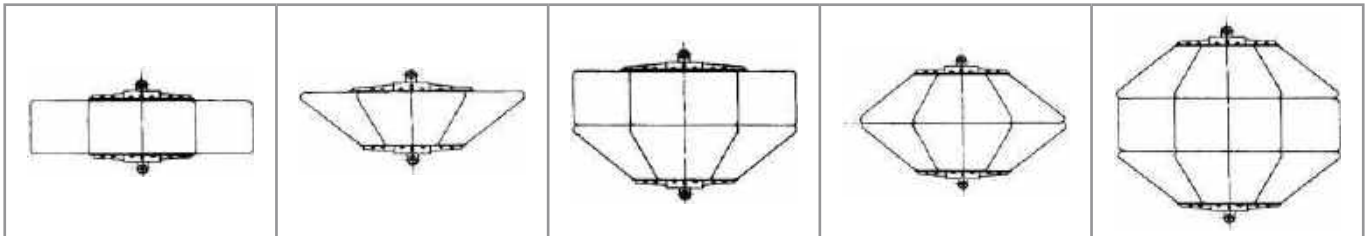
The versatility

From the offshore oil industry to the tourist ports, from the world's navies to the great ship-builders it is possible to find and satisfy any application and use.



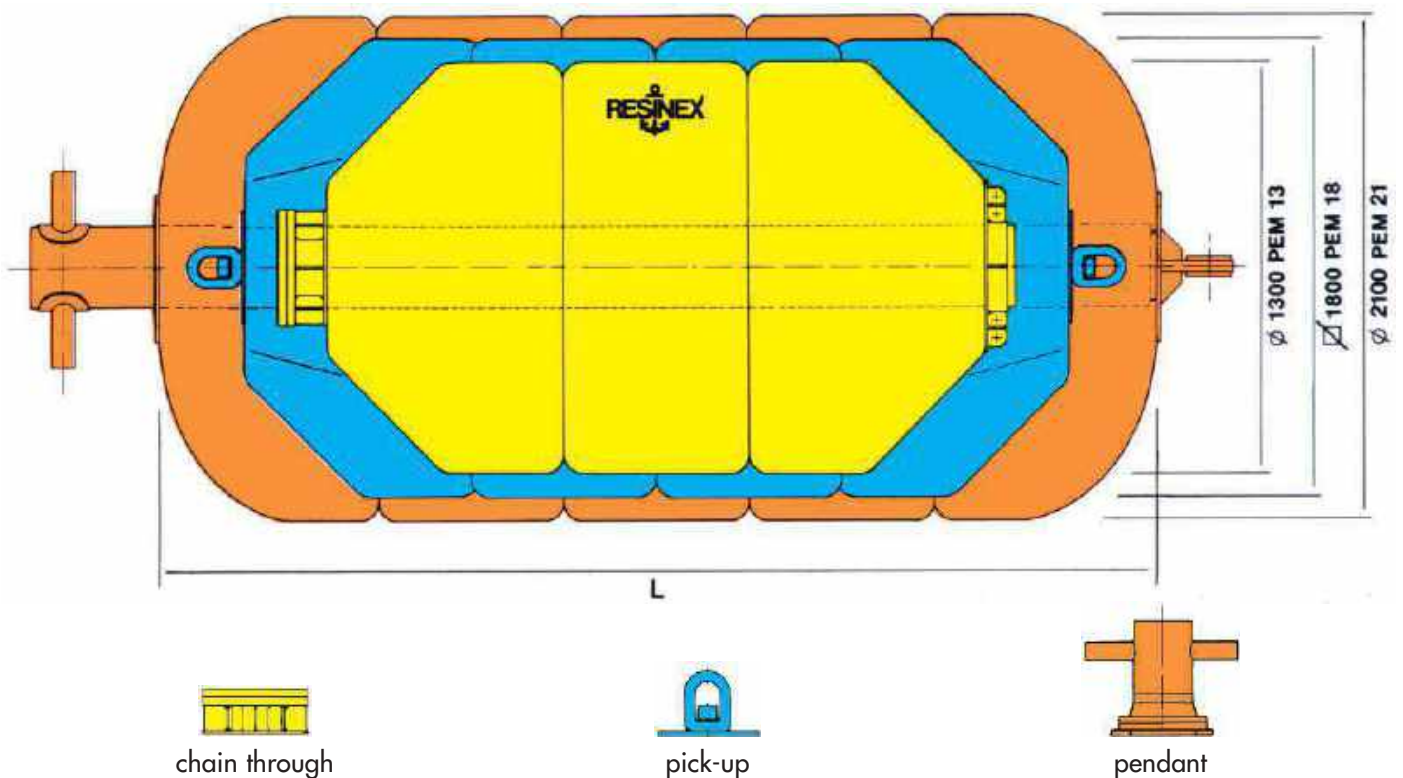
The modularity

The use of first rate raw materials - special steel, linear polyethylene, elastomer polyurethane, high density polyurethane foam - guarantees the solidity, long life and collision resistance of the Resinex buoys. The buoys are also modular in construction so as to guarantee unsinkability and maximum adaptability to the needs of the customers. Modularity gives also opportunity to reduce transportation costs of maxi buoys.



The offshore

In the offshore oil industry, the vast range of Resinex support buoys is even more articulated. The design at the bottom has three different types of mooring that can be mounted on all the floats: chain through (that is with an internal passage of the chain), pick-up (swivel mooring) and pendant (crucifix mooring).

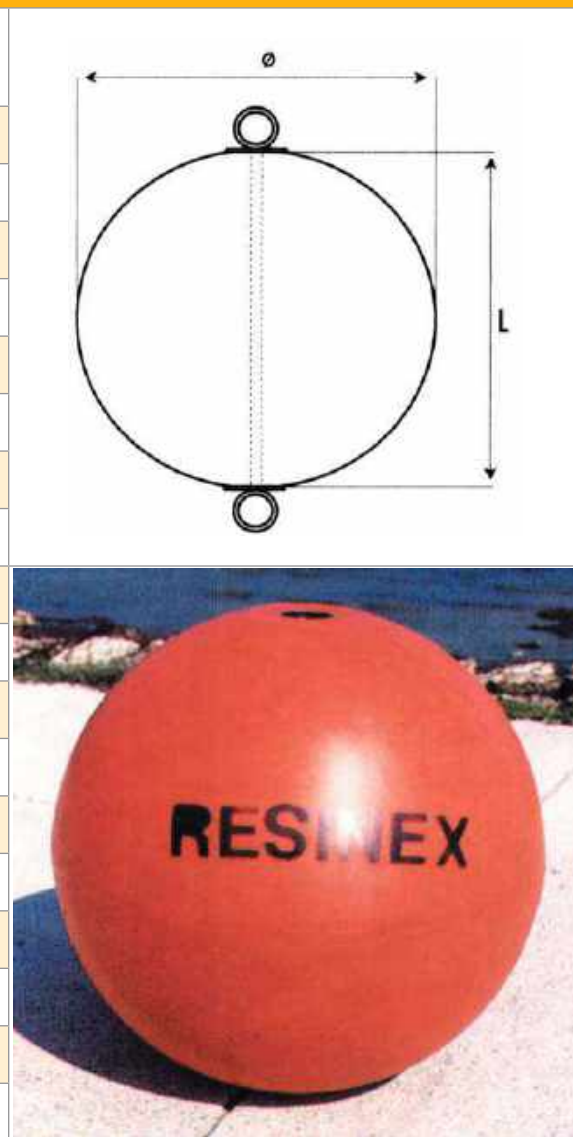


Small and Medium buoys

Principally used in the offshore fields, in the harbours, in the marine parks and in the aquaculture, the performance of the "small" Resinex is high. As it also guarantees a long life without maintenance.

RS: FROM 3,3 TO 240 KG OF NETT BUOYANCY

TYPE	Ø (mm)	L (mm)	WEIGHT (kg)	N.B. ^{a)} (kg)
RS2	200	200	0,9	3,3
RS2,5	250	250	1,5	6,5
RS3	300	300	2,2	12
RS 3,7	370	370	2,5	22,5
RS 3,8	380	380	5	26,5
RS3x500	300	500	3,5	24,5
RS3x700	300	700	5,7	37,5
RS4	400	400	4	28
RS4/MP	400	700	5	29
RS4x600	400	600	6	52
RS5	500	500	6,5	60
RS5/MP	500	800	7,5	62,5
RS5x700	500	700	10	94,5
RS6	620	600	13	112
RS6 - La	620	760	17	148
RS6 - Lb	620	940	21	200
RS6 - Lc	620	1080	26	240
RS 75	750	750	10,4	200,5

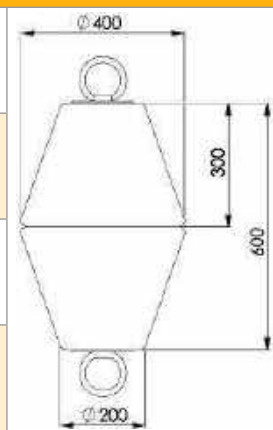


a) Nett buoyancy of the modules without metallic part

E4: FROM 21,3 TO 44,5 KG OF NETT BUOYANCY

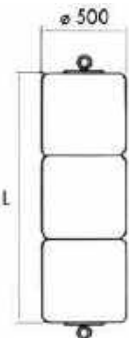


TYPE	Ø (mm)	L (mm)	WEIGHT (kg)	N.B. ^{a)} (kg)
E4 TC	400	300	2,7	21,3
E4X400	400	400	5	44,5
E4x600	400	600	5,4	42,6



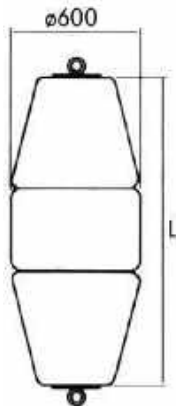
a) Nett buoyancy of the modules without metallic part

E5: FROM 55 TO 345 KG OF NETT BUOYANCY

TYPE	Ø (mm)	L (mm)	WEIGHT (kg)	N.B. ^{a)} (kg)	 
E5X400 TC	500	400	5	55	
E5	500	500	12	85	
E5x1000	500	1000	25	170	
E5x1500	500	1500	35	260	
E5x2000	500	2000	50	345	

a) Nett buoyancy of the modules without metallic part

E6: FROM 95,5 TO 488 KG OF NETT BUOYANCY

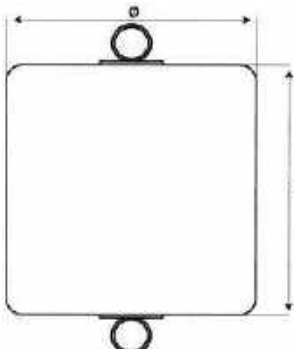
 	TYPE	Ø (mm)	L (mm)	WEIGHT (kg)	N.B. ^{a)} (kg)
	E6x400	600	400	13	99
	E6x550	600	550	15	139
	E6x550TC	600	550	12,5	95,5
	E6x950TC	600	950	25,5	194,5
	E6x1100TC	600	1100	25	191
	E6x1500TC	600	1500	38	290
	E6x1900TC	600	1900	51	389
	E6x2300TC	600	2300	64	488

a) Nett buoyancy of the modules without metallic part

TYPE	Ø (mm)	L (mm)	WEIGHT (kg)	N.B. ^{a)} (kg)	
E6 - C	600	520	8	50,5	
E6 - DC	600	1040	16	101	
E67	670	1100	34,5	325,5	

a) Nett buoyancy of the modules without metallic part

E7 - E8 - E11: FROM 62 TO 1020 KG OF NETT BUOYANCY

 	TYPE	Ø (mm)	L (mm)	WEIGHT (kg)	N.B. ^{a)} (kg)
	E7X400 TC	700	400	11	124
	E7	700	400	17	137
	E75X1500	750	1500	32	638
	E8x150	800	150	13	62
	E8	800	800	50	350
	E8x1050	800	1050	57	515
	E8x1200	800	1200	70	545
	E11X500	1100	500	28	422
	E11X900	1100	900	42	808
	E11	1150	1150	130	1020

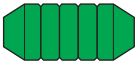
a) Nett buoyancy of the modules without metallic part

Modular buoys

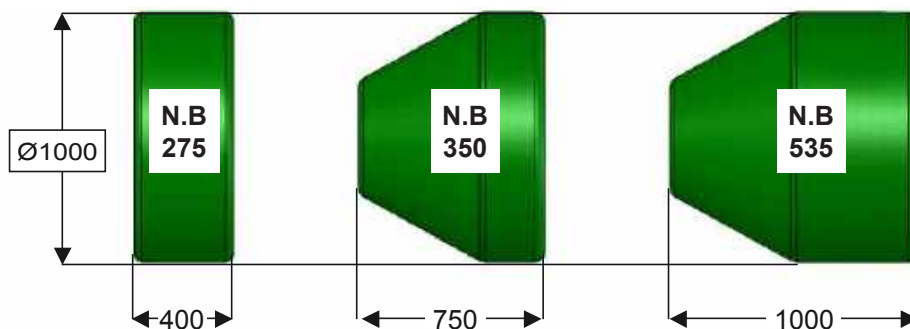
These sea giants range from 1 metre to 5,8 metres in diameter and can arrive up to over 120 tons nett buoyancy thanks to modularity.

They are assembled in polyethylene modules filled with polyurethane foam.

The possibility of varying the module combinations assures the versatility to meet any type of requirement needed by the marine world.

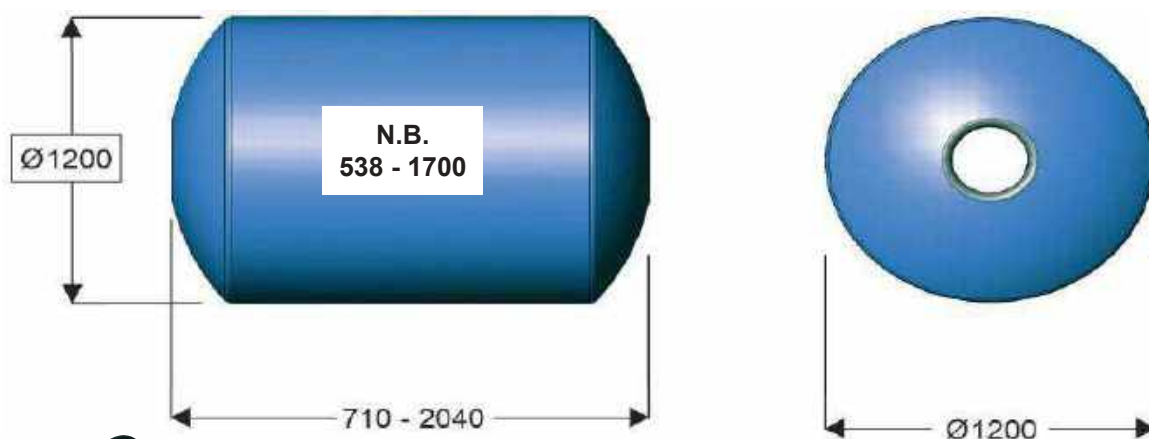
CONFIGURATION	PEM 10: FROM 205 TO 1795 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	3500	600	1775	580	1795	600	1775
	3100	530	1530	510	1550	530	1530
	2700	450	1295	430	1315	450	1295
	2300	400	1030	380	1050	400	1030
	1900	340	775	320	795	340	775
	1500	280	520	260	540	280	520
	1000	245	355	225	375	245	355
	750	175	225	165	235	175	225
	400	110	205	100	215	110	205

a) The weight and the buoyancy include the metallic part



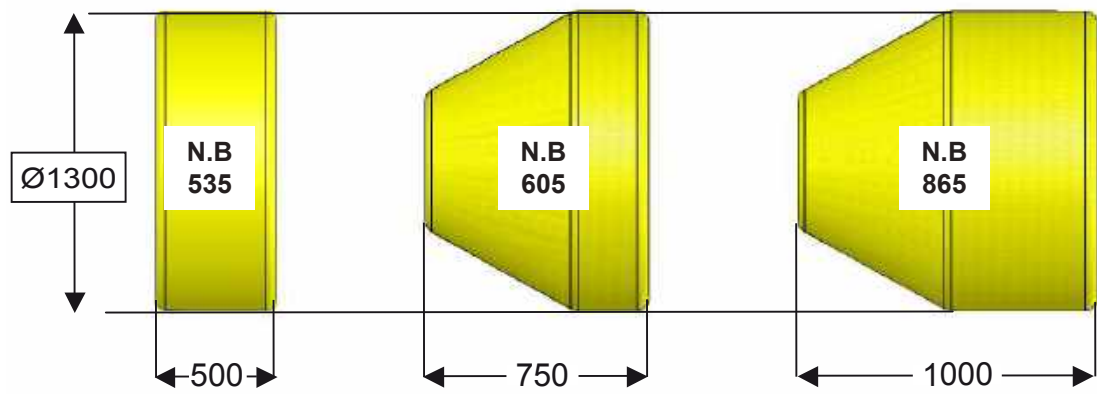
CONFIGURATION	PEM 12: FROM 450 TO 1420 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	2040	520	1400	500	1420	520	1400
	1640	360	1140	340	1160	360	1140
	1445	320	1090	300	1110	320	1090
	1240	280	790	260	810	280	790
	1050	250	740	230	760	250	740
	905	220	560	200	580	220	560
	710	180	450	160	470	180	450

a) The weight and the buoyancy include the metallic part



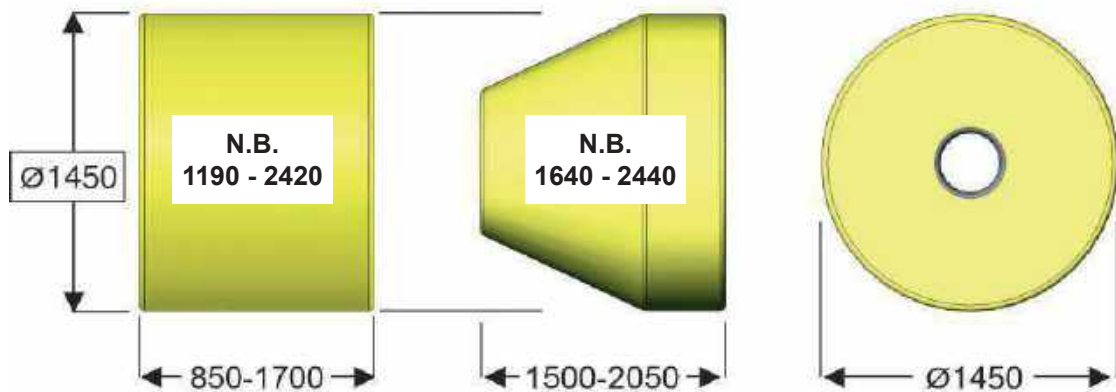
CONFIGURATION	PEM 13: FROM 390 TO 3800 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	4000	1200	3800	1150	3800	1200	3600
	3500	1050	3200	1000	3200	1050	3000
	3000	880	2600	830	2600	880	2450
	2500	730	2050	680	2150	730	1950
	2000	660	1500	610	1600	660	1400
	1500	500	1000	450	1050	500	900
	1000	400	550	380	570	390	550
	750	350	400	280	450	340	400
	500	240	390	210	420	240	390

a) The weight and the buoyancy include the metallic part

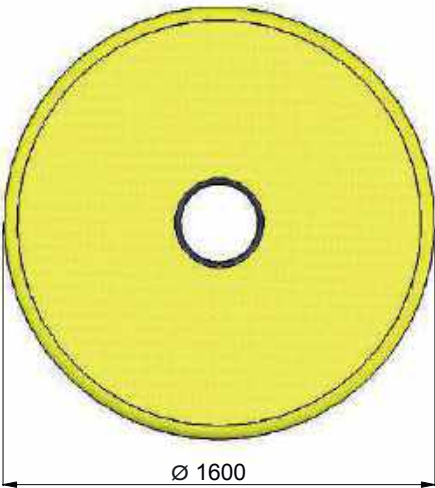
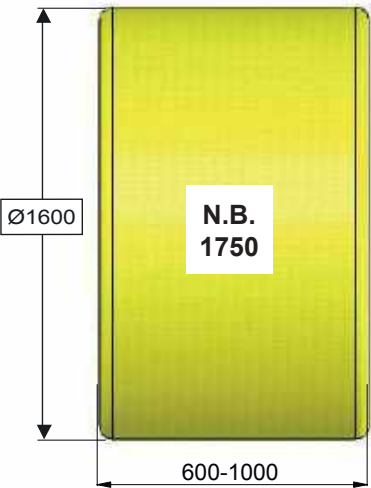


CONFIGURATION	PEM 15: FROM 1030 TO 6750 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	5800	1350	6710	1310	6750	1350	6710
	2050	490	2190	450	2230	490	2190
	1500	380	1430	340	1470	380	1430
	1700	540	2160	500	2200	540	2160
	1450	460	1820	420	1860	460	1820
	1150	380	1450	340	1490	380	1450
	850	320	1030	280	1070	320	1030

a) The weight and the buoyancy include the metallic part

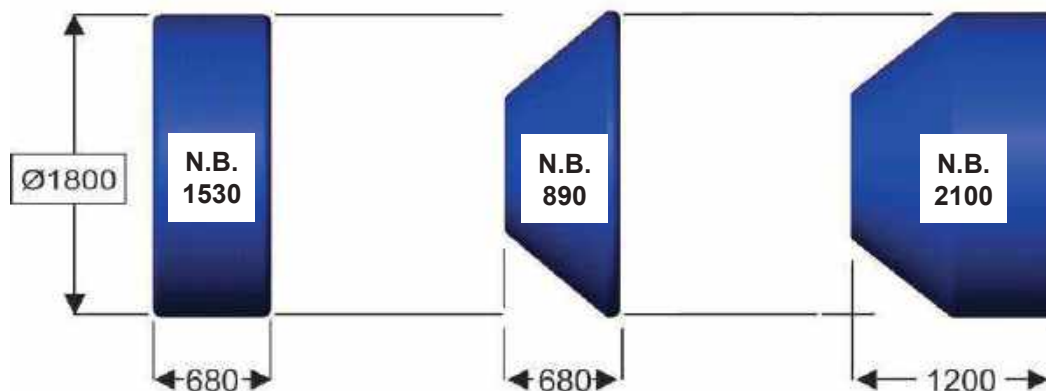


CONFIGURATION	PEM 16: FROM 765 TO 3660 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	2600	600	3380	540	3660	600	3400
	2200	540	2650	480	2710	540	2670
	1600	410	1630	350	1690	410	1650
	1000	325	1615	285	1655	325	1615
	800	255	765	215	805	255	765
	600	250	900	210	940	250	900
a) The weight and the buoyancy include the metallic part							



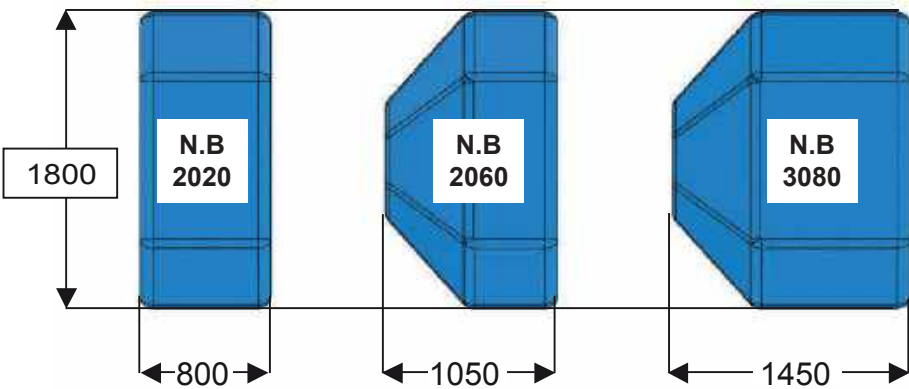
CONFIGURATION	PEM 18 CYLINDRICAL: FROM 690 TO 10670 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	5800	1200	10650	1180	10670	1200	10650
	5120	1100	9220	1080	9240	1100	9220
	4440	1000	7790	980	7810	1000	7790
	3760	900	6360	880	6380	900	6360
	3080	800	4930	780	4950	800	4930
	2400	700	3500	680	3520	700	3500
	1200	360	1740	340	1760	360	1740
	680	200	690	180	710	200	690
	680	250	1280	230	1300	250	1280

a) The weight and the buoyancy include the metallic part



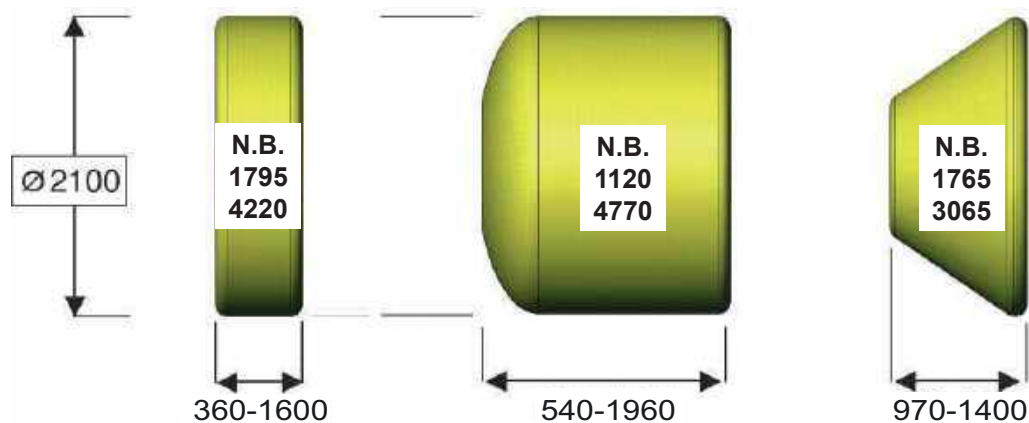
CONFIGURATION	PEM 18 SQ*: FROM 1750 TO 13800 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	6225	3100	13700	3000	13800	3100	13700
	5400	2700	11400	2600	11500	2700	11400
	4575	2300	9200	2200	9300	2300	9200
	3750	1900	7100	1800	7200	1900	7100
	2925	1500	5900	1400	6000	1500	5900
	2100	1100	3800	1000	3900	1100	3800
	1450	850	2285	800	2335	850	2285
	1050	700	1750	600	1850	700	1750
	800	450	1835	380	1905	450	1835

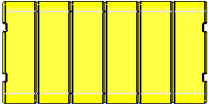
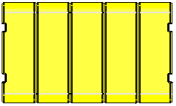
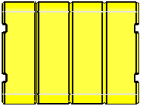
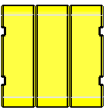
a) The weight and the buoyancy include the metallic part
* The shape of the modules is squared to avoid movements on the supply vessel deck



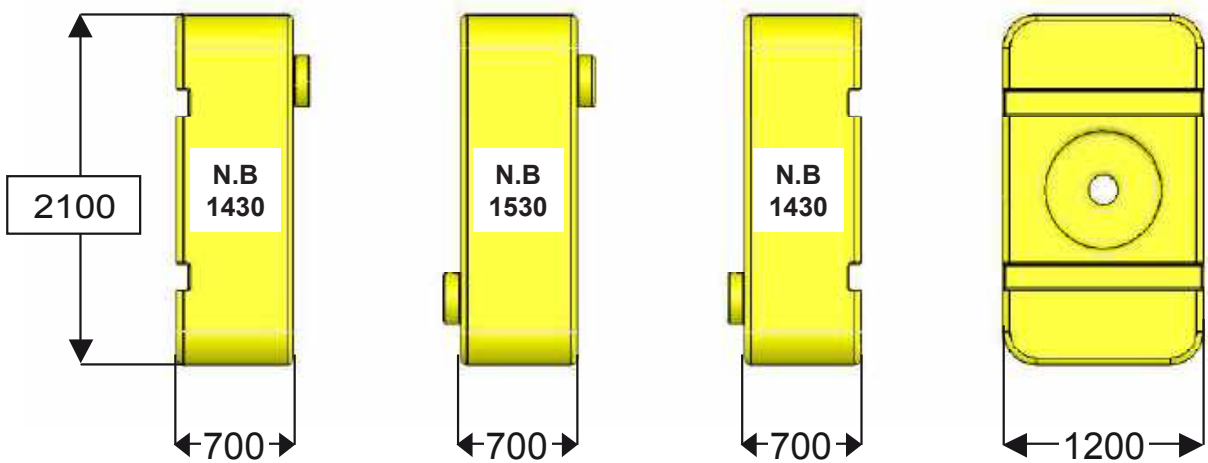
CONFIGURATION	PEM 21: FROM 950 TO 13500 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	4930	3000	13400	2900	13500	3000	13400
	4320	2700	11550	2800	11600	2700	11550
	3710	2250	9750	2150	9800	2250	9750
	2560	1700	6850	1600	6900	1700	6850
	2300	1450	5600	1350	5500	1450	5600
	1760	1250	4450	1150	4500	1250	4450
	1150	850	2700	780	2750	850	2700
	970	450	1550	440	1560	450	1550
	800	530	2120	520	2130	530	2120
	610	450	1580	440	1590	450	1580
	540	350	950	340	960	350	950

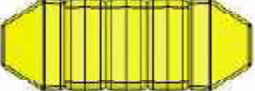
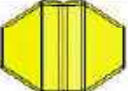
a) The weight and the buoyancy include the metallic part



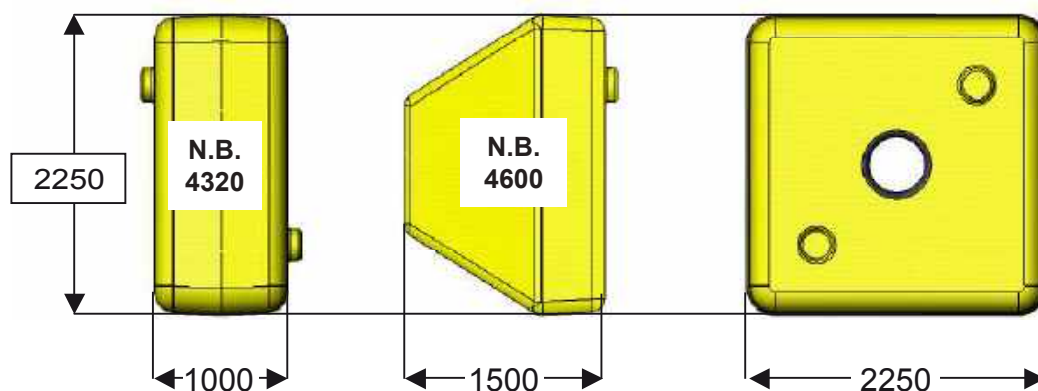
CONFIGURATION	PEM 21 SQ: FROM 2710 TO 8800 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	4200	1360	8760	1320	8800	1360	8760
	3500	1150	7260	1110	7300	1150	7260
	2800	950	5760	900	5800	950	5760
	2100	730	4260	690	4300	730	4260
	1400	520	2710	480	2750	520	2710

a) The weight and the buoyancy include the metallic part



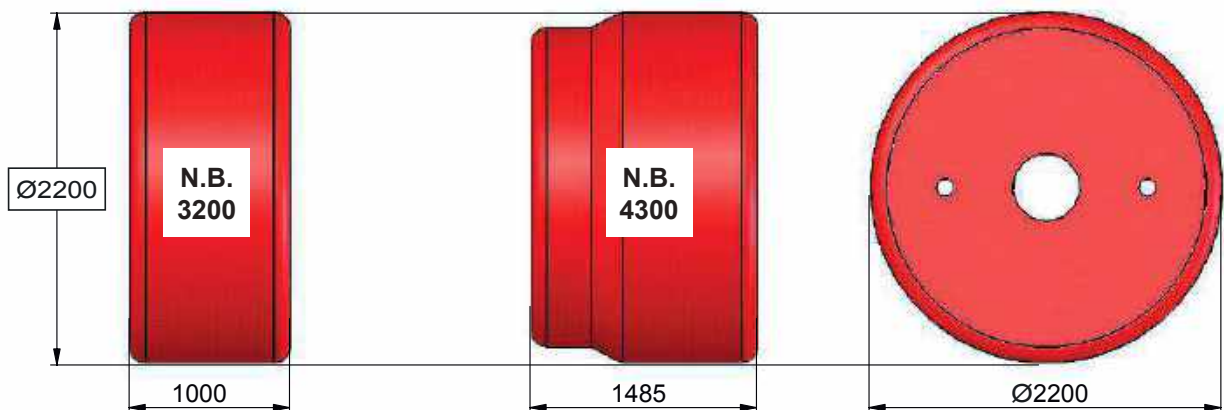
CONFIGURATION	PEM 22 SQ: FROM 4030 TO 22300 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	6000	2640	22260	2600	22300	2640	22260
	5000	2180	17960	2140	18000	2180	17960
	4000	1720	13560	1680	13600	1780	13560
	3000	1260	9160	1220	9200	1260	9160
	1500	730	4260	690	4300	730	4260
	1000	670	4030	630	4070	670	4030

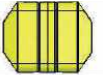
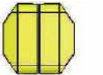
a) The weight and the buoyancy include the metallic part



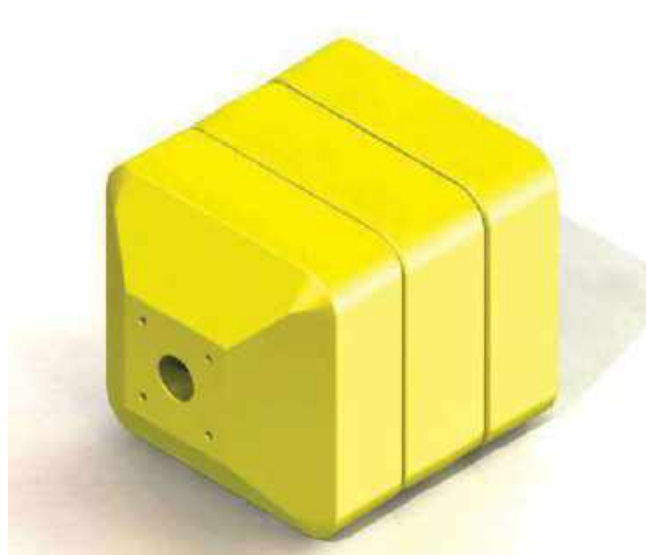
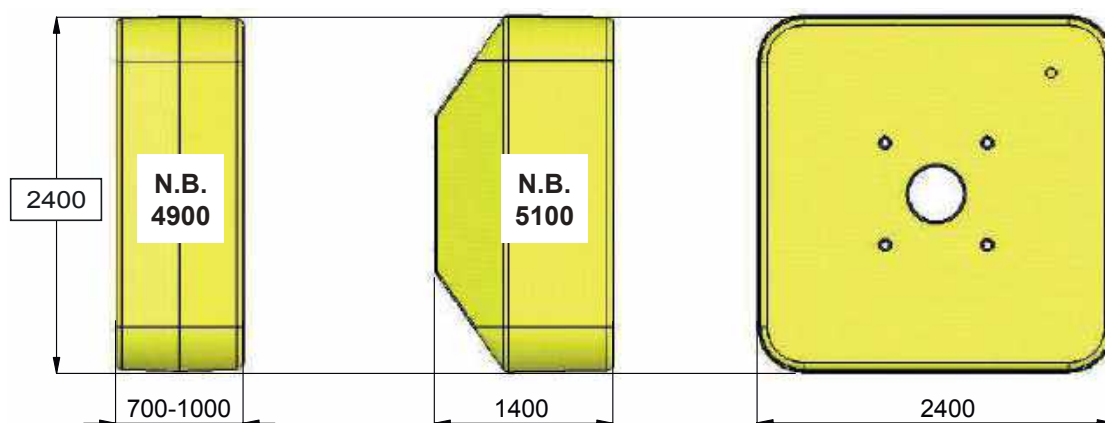
CONFIGURATION	PEM 22 CIL: FROM 2565 TO 12795 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	4970	4125	12695	4025	12795	4125	12695
	3970	2745	10485	2645	10585	2745	10485
	2970	1965	7675	1865	7775	1965	7675
	1485	1230	3590	1130	3690	1230	3590
	1000	1025	2565	925	2665	1025	2565

a) The weight and the buoyancy include the metallic part



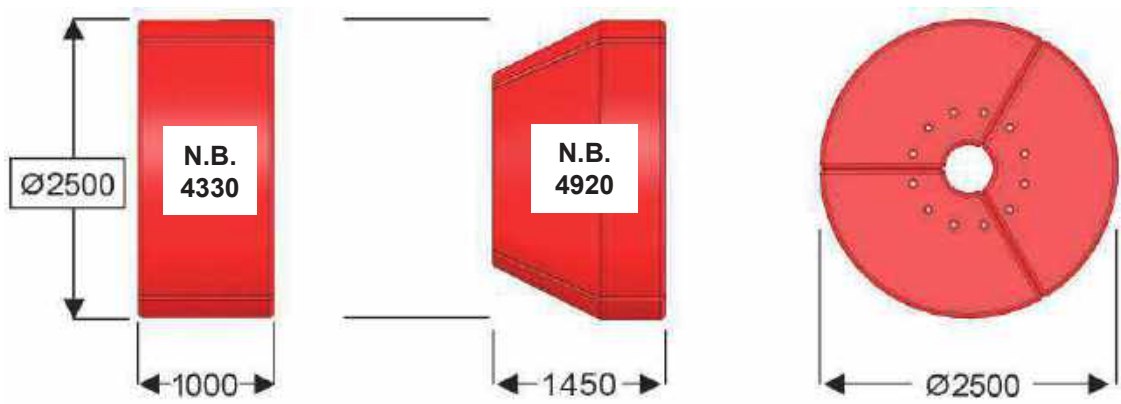
CONFIGURATION	PEM 24: FROM 2895 TO 16815 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	3800	2900	16715	2800	16815	2900	16715
	3500	2630	15940	2530	16040	2630	15940
	2800	2100	10020	2000	10120	2100	10020
	1400	1300	4760	1200	4860	1300	4760
	1000	1150	4350	1050	445	1150	4350
	700	925	2895	825	2995	925	2895

a) The weight and the buoyancy include the metallic part



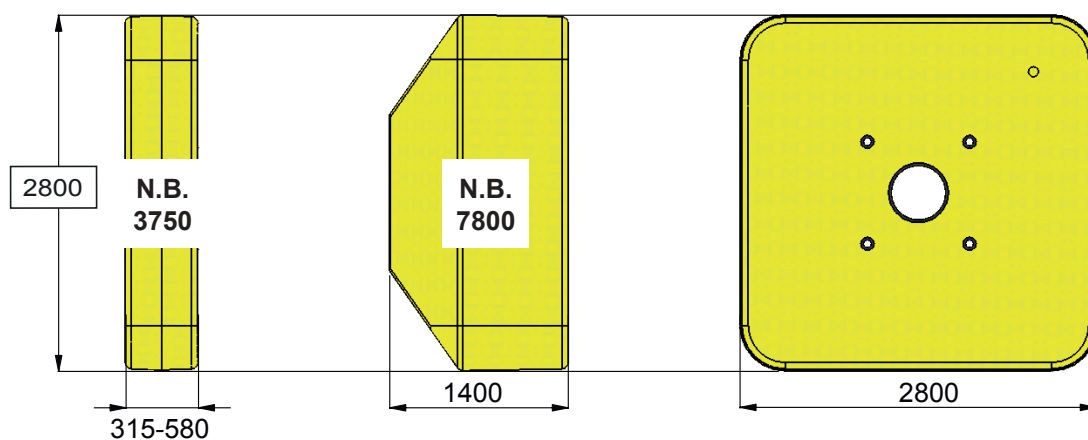
CONFIGURATION	PEM 25: FROM 4000 TO 29600 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	7900	6950	28900	6250	29600	6950	28900
	6900	6000	24900	5400	25500	6000	24900
	5900	5050	20900	4550	21400	5050	20900
	4900	4100	16900	3700	17300	4100	16900
	3900	3150	12900	2850	13200	3150	12900
	2900	2200	8900	2000	9100	2200	8900
	2450	2050	8450	1850	8650	2050	8450
	1450	1100	4450	1000	4550	1100	4450
	1000	950	4000	850	4100	950	4000

a) The weight and the buoyancy include the metallic part



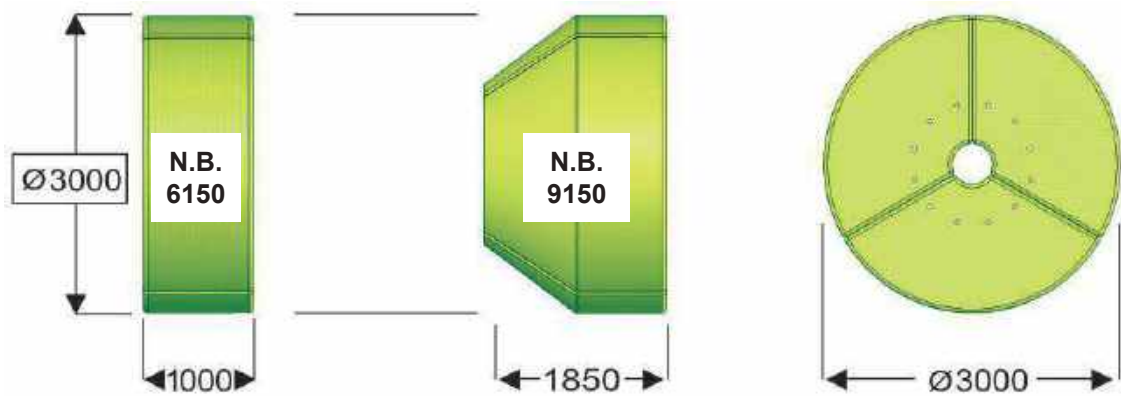
CONFIGURATION	PEM 28 SQ: FROM 1600 TO 19035 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	3380	2955	18935	2855	19035	2955	18935
	3115	2775	16725	2675	16825	2775	16725
	2800	2370	14770	2270	14870	2370	14770
	1400	1460	7110	1360	7210	1460	7110
	580	950	3250	850	3350	950	3350
	315	750	1600	650	1700	750	1600

a) The weight and the buoyancy include the metallic part



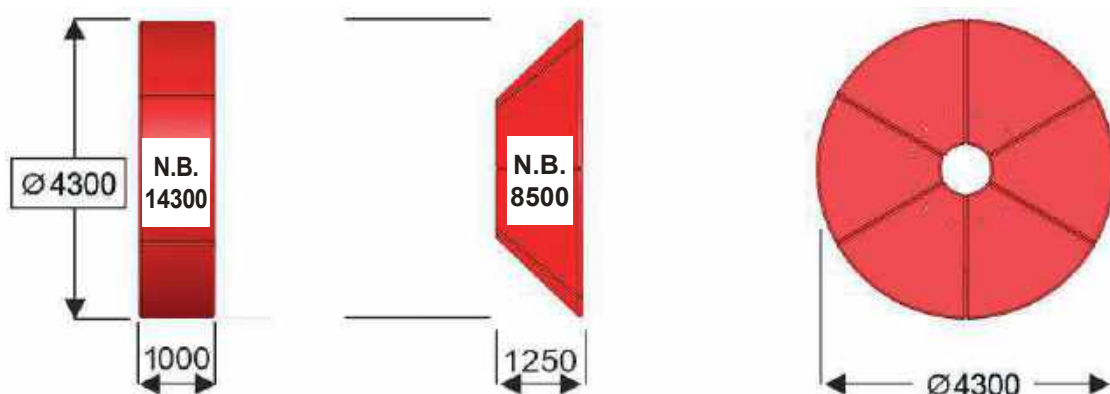
CONFIGURATION	PEM 30: FROM 5750 TO 48080 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	8700	6730	47930	6580	48080	6730	47930
	7700	5930	41830	5780	41980	5930	41830
	6700	5130	35730	4980	35880	5130	35730
	5700	4330	29630	4180	29780	4330	29630
	4700	3530	22360	3380	22510	3530	22360
	3700	2730	17430	2580	17580	2730	17430
	2850	2340	14640	2190	14790	2340	14640
	1850	1540	8500	1390	8650	1540	8500
	1000	1150	5750	1000	5900	1150	5750

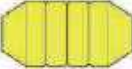
a) The weight and the buoyancy include the metallic part



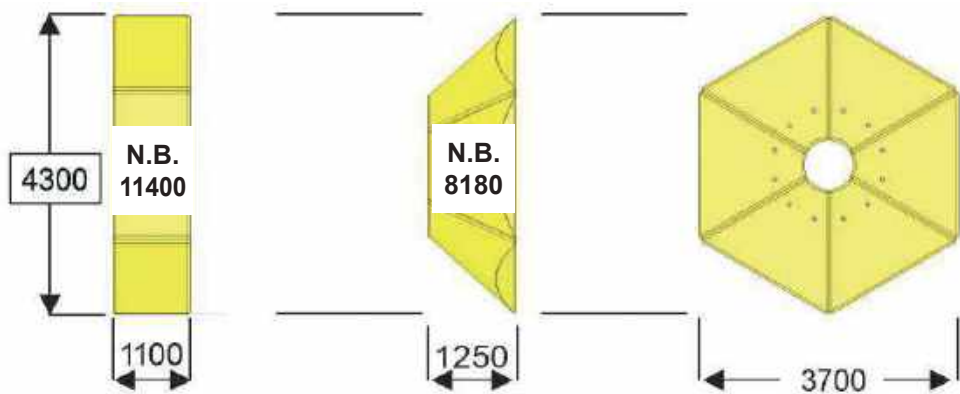
CONFIGURATION	PEM 43 CYLINDRICAL: FROM 6900 TO 44400 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	4700	7250	44300	7150	44400	7250	44300
	3600	5400	29800	5300	29900	5400	29800
	2500	3800	15300	3700	15400	3800	15300
	2350	4200	21300	4100	21400	4200	21300
	1250	2600	6900	2500	7000	2600	6900
	1100	3000	12800	2900	12900	3000	12800

a) The weight and the buoyancy include the metallic part



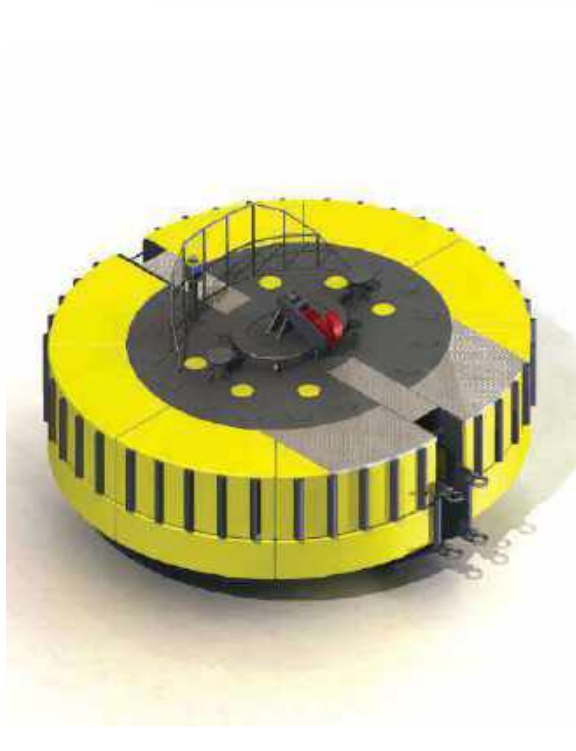
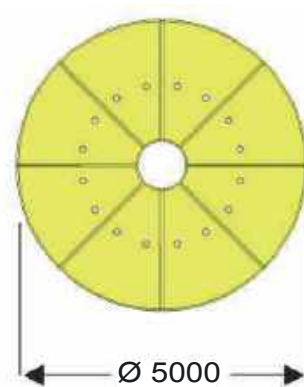
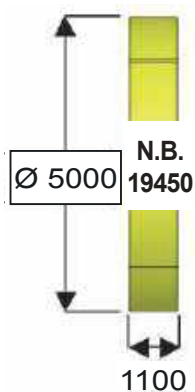
CONFIGURATION	PEM 43 SQ*: FROM 6400 TO 43900 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	4700	7200	43800	7100	43900	7200	43800
	3600	5350	29300	5250	29400	5350	29300
	2500	3750	14800	3650	14900	3750	14800
	2350	4150	20800	4050	20900	4150	20800
	1250	2550	6400	2450	6500	2550	6400
	1100	2950	12300	2850	12400	2950	12300

a) The weight and the buoyancy include the metallic part
* The shape of the modules is squared to avoid movements on the supply vessel deck



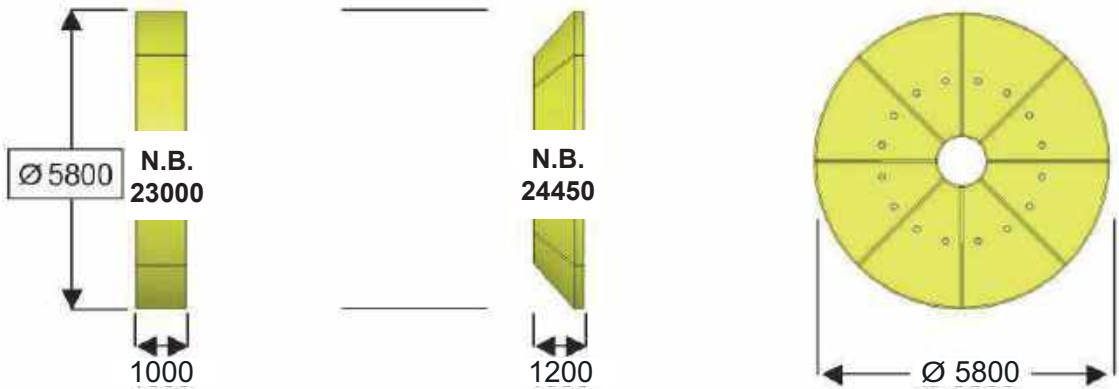
CONFIGURATION	PEM 50: FROM 13650 TO 85750 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	5500	9850	85650	9750	85750	9850	85650
	4400	7700	67050	7600	67150	7700	67050
	3300	7200	46800	7100	46900	7200	46800
	2200	4950	28350	4850	28450	4950	28350
	2200	5350	32050	5250	32150	5350	32050
	1100	3050	13650	2950	13750	3050	13650
	1100	3450	17300	3350	17400	3450	17300

a) The weight and the buoyancy include the metallic part



CONFIGURATION	PEM 58: FROM 21800 TO 113900 KG OF NETT BUOYANCY						
	L (mm)	PENDANT		PICK-UP		CHAIN THROUGH	
		WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)
	5400	14400	113800	14300	113900	14400	113800
	4400	11750	90850	11650	90950	11750	90850
	3400	9200	67850	9100	67950	9200	67850
	2400	6300	45200	6200	45300	6300	45200
	2200	6450	46300	6350	46400	6450	46300
	1200	3800	21950	3700	22050	3800	21950
	1000	3800	21800	3700	21900	3800	21800

a) The weight and the buoyancy include the metallic part



Catamaran buoys

The modular composition of the Resinex buoys permits the creation of huge floating platforms which guarantee an excellent stability in extreme sea conditions. They can be made in plastic or steel utilizing an exclusive mooring system designed and patented by the Resinex technical department: the Multi-lever System.



We designed the first models 30 years ago



TYPE	PEM 43 - PEM 50 CATAMARAN: FROM 12700 TO 30000 KG OF NETT BUOYANCY			
	DIMENSION (mm)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	FIGURE
PEM 43x1100	4300x1100	4500	12700	1
PEM 43x2200	4300x2200	8850	23700	2
PEM 50x1100	5000x1100	7500	14500	1
PEM 50x2200	5000x2200	13500	30000	2

a) The weight and the buoyancy include the metallic part

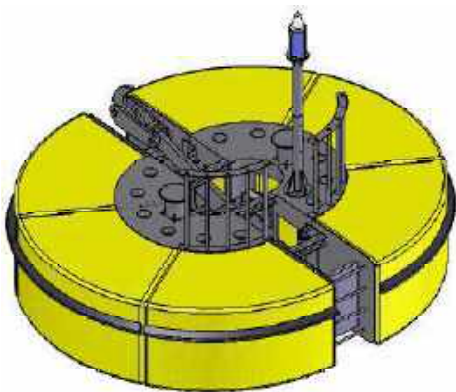


Figure 1

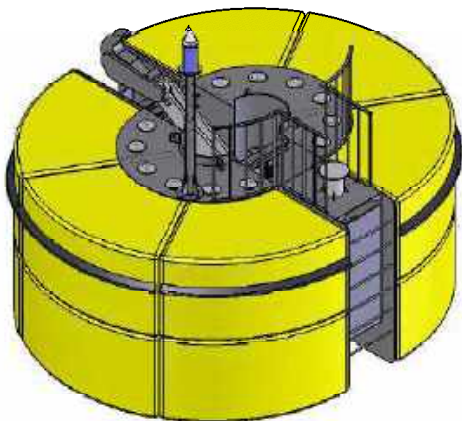
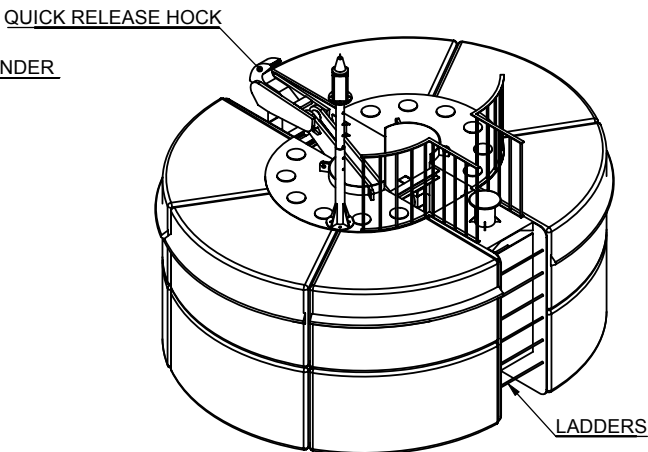
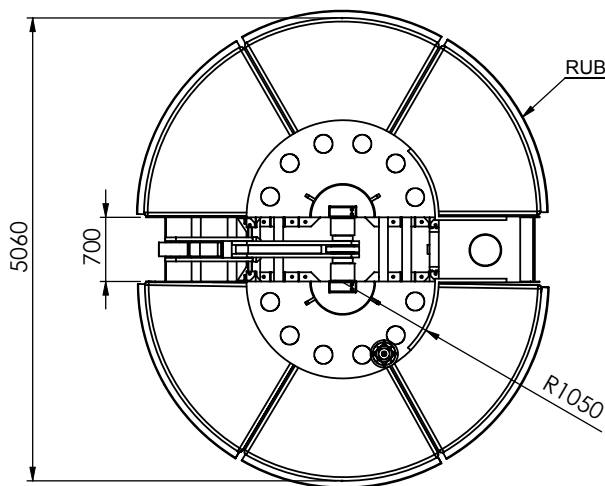
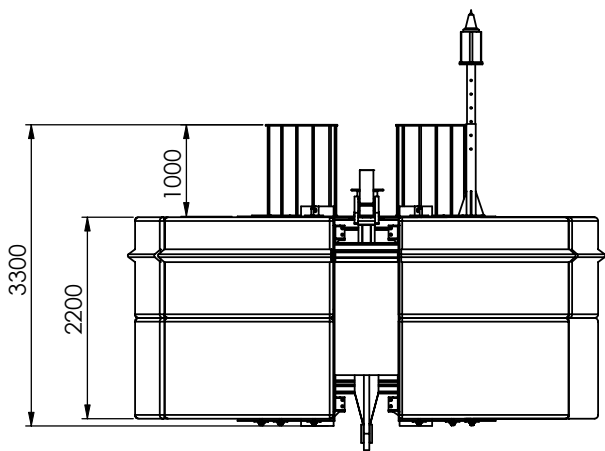
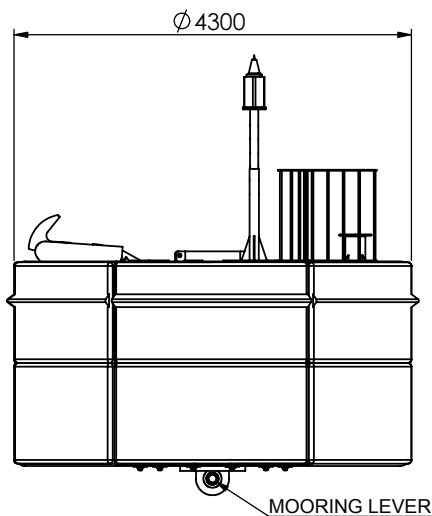


Figure 2



TYPE	PEM 58 CATAMARAN: FROM 35200 TO 58000 KG OF NETT BUOYANCY			
	DIMENSION (mm)	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	FIGURE
PEM 58X2000	5800x2000	16300	35200	1
PEM 58X2000 ST ^{b)}	5800x2000	20000	33500	-
PEM 58X3000	5800x3000	20000	58000	2

a) The weight and the buoyancy include the metallic part
b) The buoy body is in steel

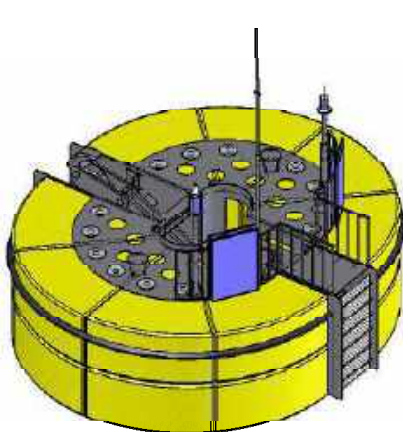


Figure 1

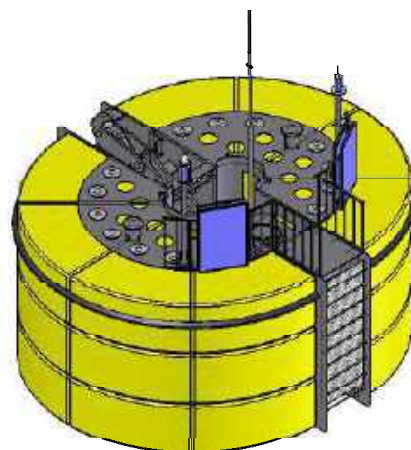
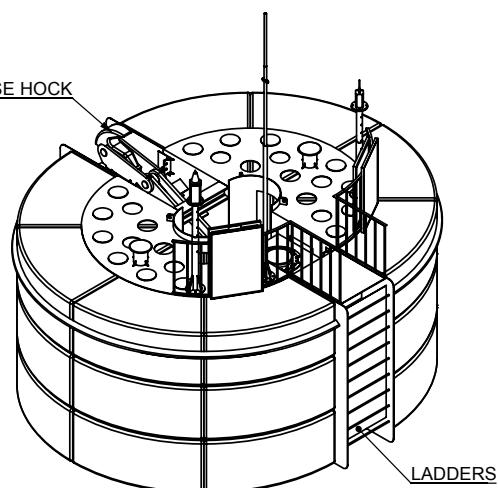
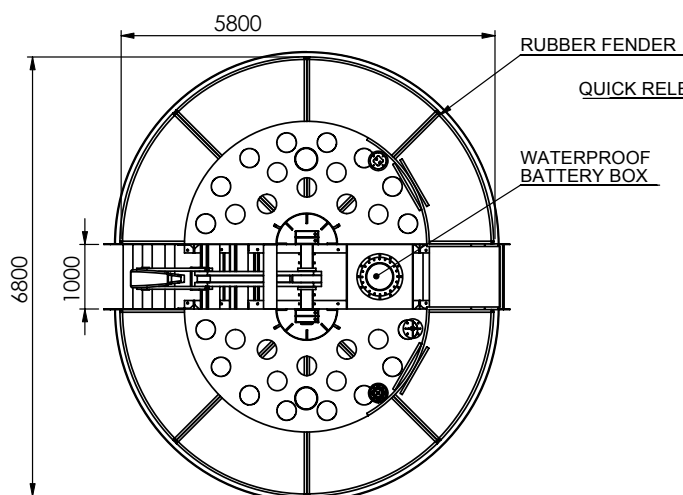
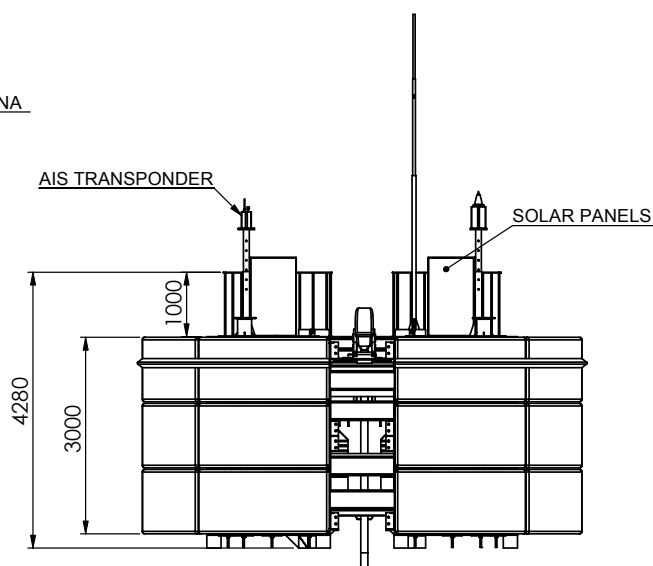
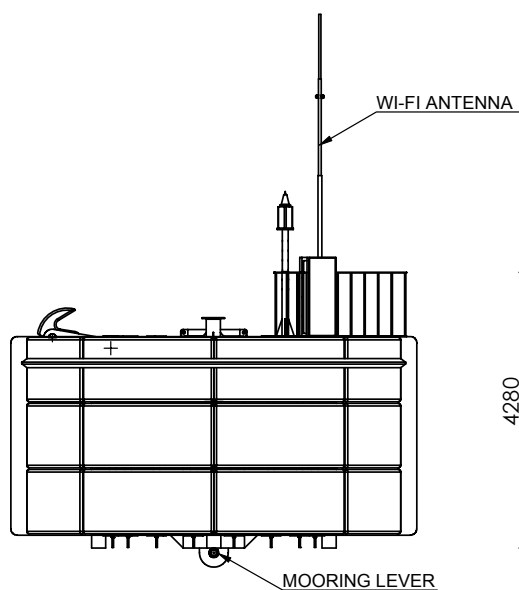


Figure 2



■ Deepwater

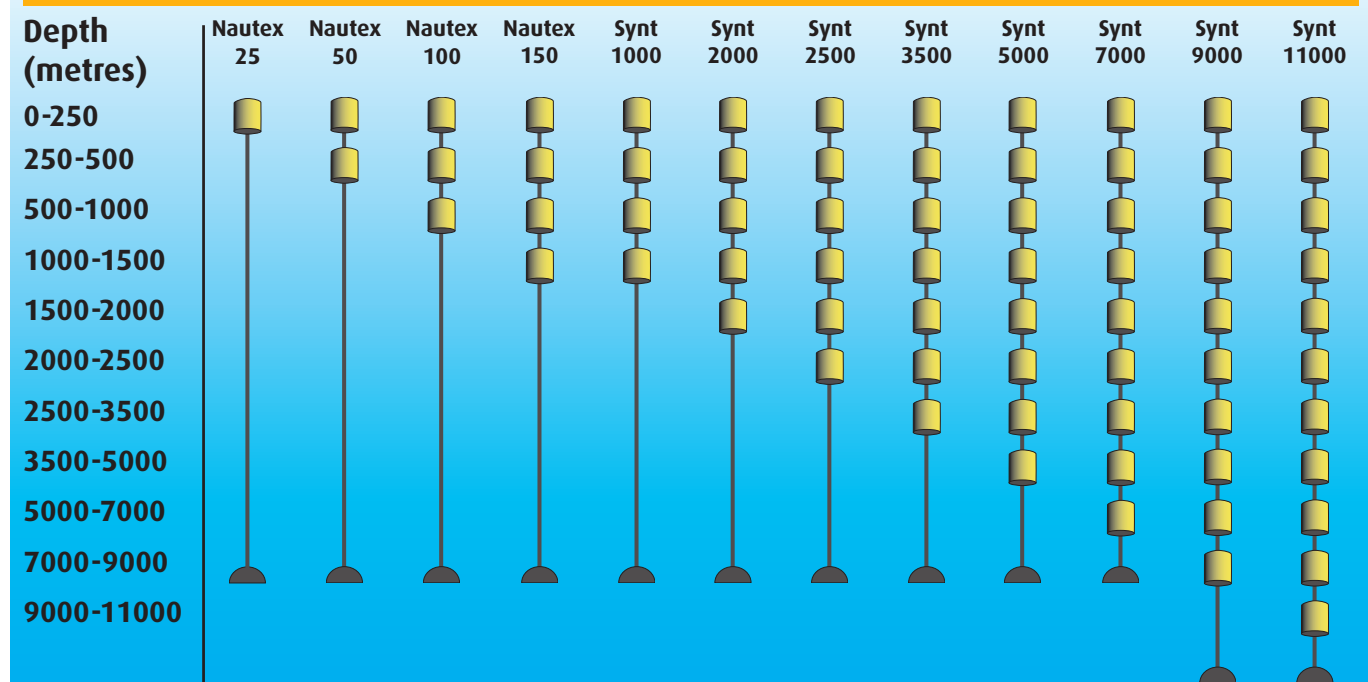
The continuous development of new technology allows Resinex to utilize the most up-to-date materials and components and thanks to diverse density, buoys are able to function to a depth of 11 thousands metres.

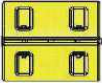
With the innovative Nautex and Synt fillings, the ratio between pressure resistance and specific weight can arrive to a high level with a subsequent marked containment of price.

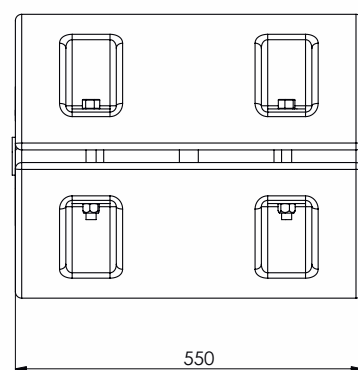
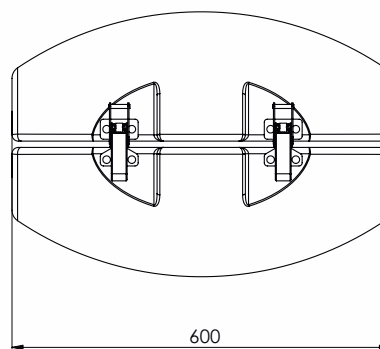
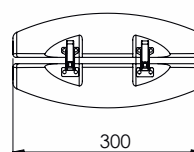
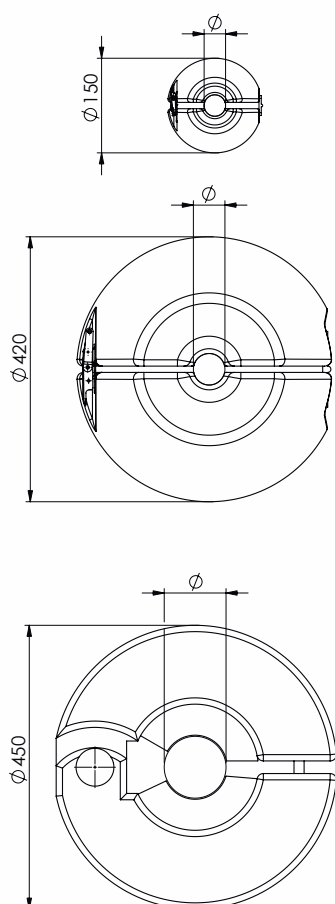
The tests carried out in the big pressure tanks at the Resinex Marine Research Centre in Adro vouch the final result.



FROM ZERO TO 11000 METRES, RESINEX TECHNOLOGY FOR HIGH DEPTHS



TYPE	CABLE FLOAT: FROM 1,7 TO 50 KG OF NETT BUOYANCY DEPTH/METERS				
	Øe (mm)	ØI (mm)	L (mm)	0-50	50-100
				N.B./kg	
	450	65-175	550	50	38
	420	20-105	600	45	35
	150	15-60	300	2,1	1,7

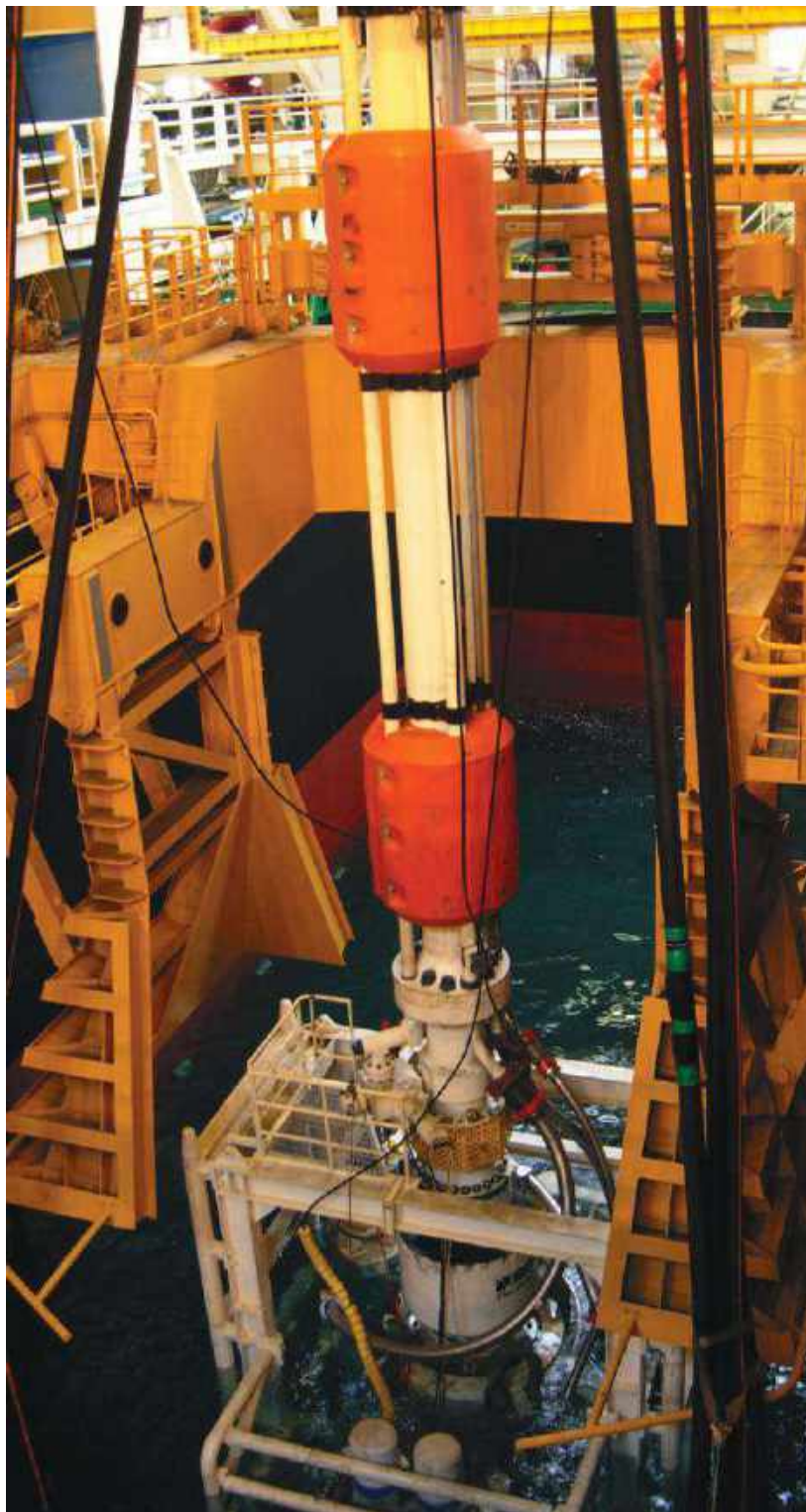


Riser Floats

Resinex produces a full range of Riser Floats and protective Shims to be used during drilling operations. Following the experience of many different projects supplied around the world, the range of Buoyancy Modules used during installation or for permanent use is very wide. Buoyancy elements are always supplied with high performance steel clamps. This type of floats is normally installed between 1000 and 4000 metres water depth.

TYPE	RISER FLOATS: FROM 130 TO 2400 LITRES OF VOLUME				
		Øe (mm)	ØI (mm)	L (mm)	VOLUME (LITRES)
 		1450	560-565	1800	2370
 		1464	500-550	2000	2130
 		1450	250-350	1100	1630
 		1404	500-550	2210	1290
 		950	50-100	2200	1230
 		1500	500-650	750	1090
 		1100	200-300	1200	1020
 		1000	200-250	1200	830
 		1000	200-300	1100	700
 		1000	100-200	1000	700
 		550	100-200	650	130







MODULAR PIPE DEPLOYMENT (TIE-IN) FLOATS				
TYPE	W x H x L (mm)	DEPTH [m]		
		0 - 50	50 - 100	100 - 200
		NET BUOYANCY [kg]		
	1200x1200x1200	905	865	775
	1200x1200x2400	1935	1855	1675
	1200x1200x3600	2965	2845	2575
	1200x1200x4800	4000	3840	3480
	1100x1150x1350	1060	940	880
	1100x1150x2700	2220	2100	2040
	1100x1150x4050	3320	3190	3120
	1100x1150x5400	4520	4360	4260
Note: The net buoyancy is in function of the foam density.				

Best range Tie-in floats (Tie-in)



SINGLE MODULE PIPE DEPLOYMENT (TIE-IN) FLOATS

TYPE	W x H x L (mm)	DEPTH [m]		
		0 - 50	50 - 100	100 - 200
		NET BUOYANCY [kg]		
 	1100x1150x1150	1075	1025	950
 	1100x1150x1350	1325	1250	1150
 	1100x1150x1950	1875	1775	1625
 	1100x1150x2150	2000	1900	1750
 	1100x1150x2450	2300	2175	2000
 	1100x1300x1150	1250	1175	1100
 	1100x1300x1350	1475	1400	1275
 	1100x1300x1950	2125	2000	1850
 	1100x1300x2150	2300	2175	2000
 	1100x1300x2450	2650	2500	2325
 	1400x1270x2200	3150	2950	2700

Elastomer buoys

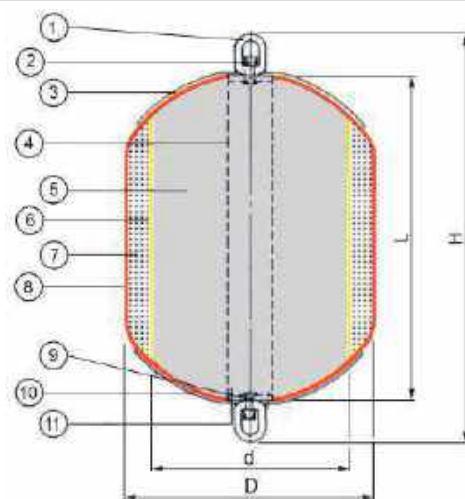


When it is necessary to protect boats and marine installations in normal and difficult mooring phases, Resinex buoys can be made in polyethylene foam and covered with polyurethane elastomer to increase resilience. The ever wide range encompasses all the market requirements also thanks to the chain through, pick-up and pendant mooring systems.



S 12 BUOYS: MATERIALS, RANGE AND PERFORMANCES - FROM 800 TO 2900 KG NETT BUOYANCY

1. Swivel eye nut
2. Locking nut
3. Top cover cap
4. Central pipe $\varnothing$ 273 x 8
5. Polyurethane foam core
6. Linear polyethylene shell
7. Closed cell expanded PE
8. Polyurethane cover
9. Swivel shaft
10. Bottom cover cap
11. Set screw - nut - locknut



TYPE N°	WEIGHT ^{a)} (kg)	N.B. ^{a)} (kg)	$\varnothing^b$ (mm)	$\varnothing^c$ (mm)	L (mm)	H (mm)
S 12/800	650	800	1200	1450	1240	1790
S 12/1400	750	1400	1200	1520	1640	2190
S 12/1800	850	1800	1200	1450	2040	2590
S 12/2200	900	2200	1200	1580	2040	2590
S 12/2900	1100	2900	1200	1450	2840	3390

a) The weight and the buoyancy include the metallic part

b) Diameter of the internal linear polyethylene core or of the steel cage

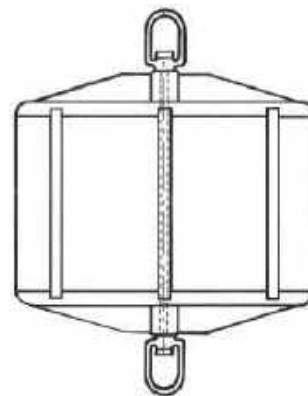
c) External diameter

TYPE 3080: FROM 3500 TO 13000 OF NETT BUOYANCY

TIPO	H ^{a)} (mm)	h ^{a)} (mm)	Ø (mm)	N.B. ^{b)} (kg)	WEIGHT ^{b)} (kg)	WORKING LOAD (kg)
3080/A	2500	1400	2100	3500	1200	15000
3080/B	2700	1600	2400	5000	1400	15000
3080/C	3300	2200	2400	8000	1900	15000
3080/D	3800	2700	2400	10000	2300	15000
3080/E	4600	3500	2400	13000	2800	15000

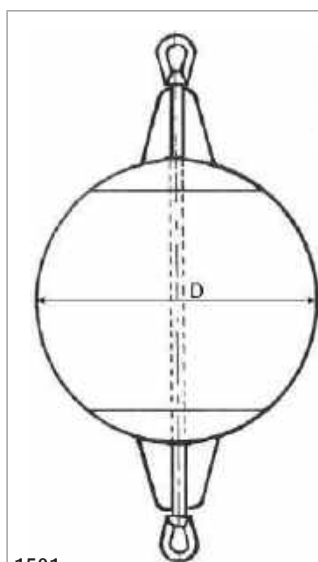
a) H: total height; h: buoy body height

b) The weight and the buoyancy include the metallic part

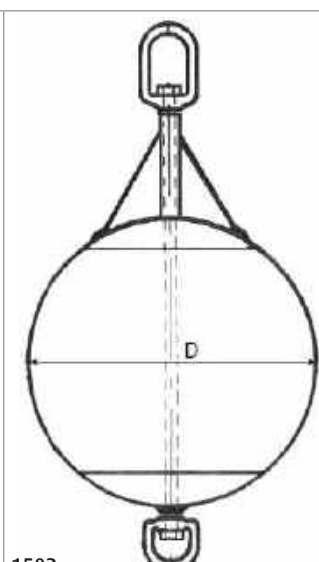

TYPE 1500: 700 KG OF NETT BUOYANCY

TYPE	TOTAL HEIGHT (mm)	Ø (mm)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)	WORKING LOAD (kg)
1500	1700	1200	700	200	7000
1501	2200	1210	700	220	7000
1502	2300	1210	700	230	15000
1503	1800	1200	700	200	15000

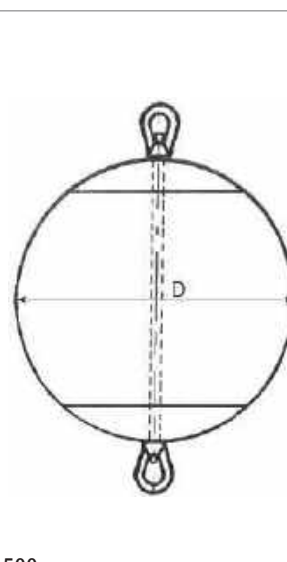
a) The weight and the buoyancy include the metallic part



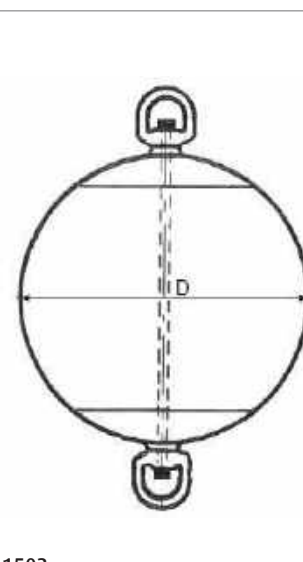
1501



1502



1500



1503

CHAIN THROUGH ELASTOMER BUOYS TYPE CTR: FROM 1750 TO 3900 KG OF NETT BUOYANCY

TYPE	Ø (MM)	L (MM)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)
CTR 3900	1750	2300	3900	1350
CTR 3500	1500	3000	3500	1100
CTR 2700	1500	2130	2700	1000
CTR 2250	1400	2130	2250	940
CTR 2000	1350	2000	2000	850
CTR 1750	1300	1900	1750	510



a) The weight and the buoyancy include the metallic part


PENDANT ELASTOMER BUOYS TYPE PDR: FROM 2500 TO 10000 KG OF NETT BUOYANCY

TYPE	BODY HEIGHT (MM)	BODY WIDTH (MM)	BODY BREADTH (kg)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)
PDR 10000	2700	2100	2100	10000	2000
PDR 7000	2100	2000	2000	7000	1050
PDR 6000	2200	2200	1550	6000	1300
PDR 4000	1700	1700	1400	4000	890
PDR 3000	1600	1600	1300	3000	765
PDR 2500	1500	1500	1200	2500	450

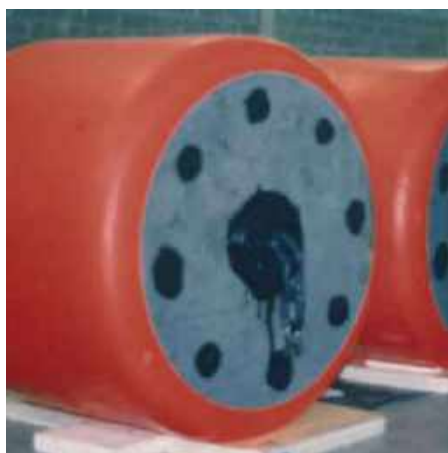


a) The weight and the buoyancy include the metallic part

PICK-UP ELASTOMER BUOYS TYPE PKR: FROM 90 TO 4500 KG OF NETT BUOYANCY

TYPE	Ø (MM)	L (MM)	N.B. ^{a)} (kg)	WEIGHT ^{a)} (kg)
PKR 4500	1800	2000	4500	815
PKR 4300	1800	2000	4300	750
PKR 3250	1550	2000	3250	480
PKR 3000	1500	2000	3000	570
PKR 2750	1500	2000	2750	540
PKR 2600	1400	2000	2600	550
PKR 2500	1380	2000	2500	500
PKR 2300	1350	1800	2300	310
PKR 2100	1250	2000	2100	330
PKR 1900	1350	1600	1900	440
PKR 1800	1350	1500	1800	380
PKR 1050	1300	1000	1050	265
PKR 700	1000	1200	700	135
PKR 230	650	920	230	73
PKR 200	650	800	200	55
PKR 130	500	800	130	27
PKR 90	450	700	90	21

a) The weight and the buoyancy include the metallic part



From Left to Right. The different types of moorings applied on Resinex Elastomer Buoys: chain through, pick-up (swivel type) and pendant (crucifix type).

Quality control and tests

Deep waters are not a friendly environment. Being aware of this, Resinex produces deep water floats, monitoring every step of the manufacturing plan. Starting from rotomoulding polyethylene thickness, passing through the quality control of AISI 316 or Titanium metallic part Resinex Quality Assurance Department finally arrives at the strict controls of Nautex (Glassfoam) compounds or Syntactic foam filling.

Resinex, with its products, has always anticipated market needs and invested hefty sums in research thereby always keeping one step ahead of the competition: an example of this is the set of six autoclaves installed in the Adro Marine Research Centre.

There is an autoclave which is able to run pressure resistance tests up to 850 bars, the equivalent of 8500 metres depth under sea level (underneath).

No other similar autoclave exists in continental Europe.

Among the other autoclaves available for Resinex laboratory technicians, there is a giant of 2.1 metres in diameter by 3.5 metres in height which can simulate pressure conditions of up to depths of 500 metres.

In this way our company is once again the vanguard in quality and safety

in its floats, offering an always more advanced service to the customer.

Quality Management of materials and production process is certified by Lloyd's Register Quality Assurance norm ISO 9001:2000.

Exhaustive laboratory tests are carried out on samples taken during the work process. But before being consigned, the floats that come off the production line in Torbiato (Brescia) are first passed through to the nearby Adro Resinex Marine Research Centre which is equipped with the most up-to-date and sophisticated analysis systems. Besides weight and dimension, traction resistance is tested, both of pressure and floatability (net buoyancy) and the data are fed into a computerized system which gives a report of all the characteristics of the piece in question. This is a type of Identity Card which represents an extra guarantee of Resinex quality.

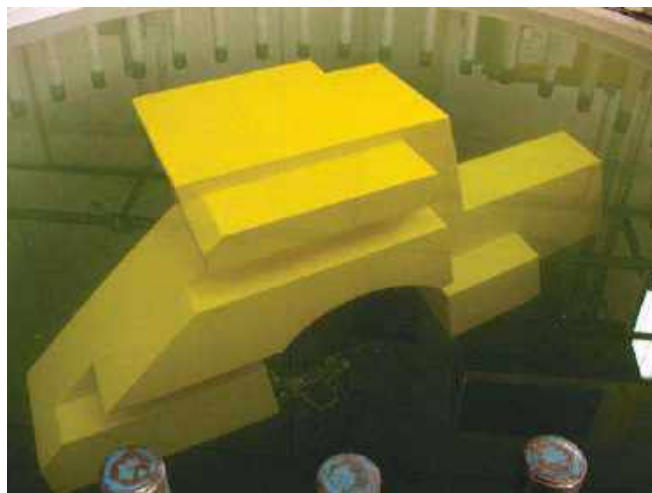
- 1 *Traction strength test on hinged floats.*
- 2 *Weight procedures at electronic scales.*
- 3 *High pressure tests in the Adro Resinex Marine Research Centre.*



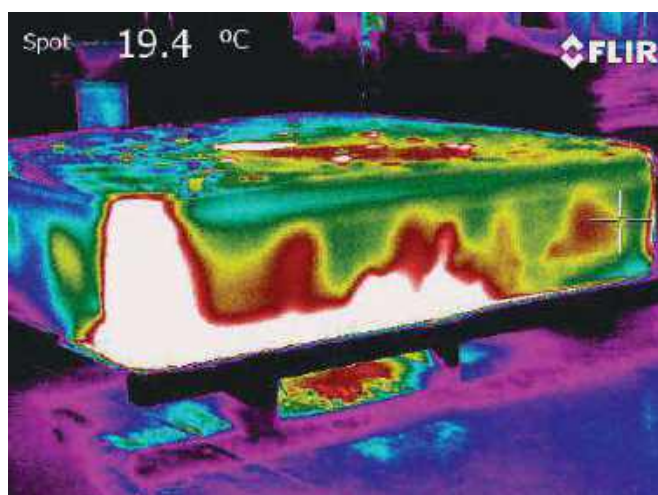
» Hydrostatic Pressure Test in 6 pressure tanks till 850 bars



» Buoyancy Test



» Infra-red analysis of synt foam filling



» Fastening Removal Test on Pipe Floats



» Structural Pressure Test on the buoy body



» Impact Test on the buoy body



» Tension Test on float assembly

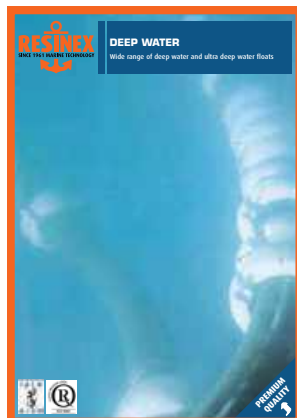
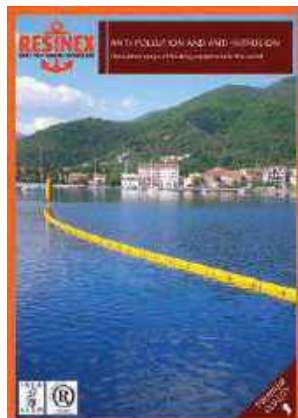


» Proof Load Test on steel parts



» Crash Test on buoyancy elements





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