

Ufloat System

Modularised Subsea Buoyancy System

Doc. No.: IN-UDE-180-DS-080, Rev. 01

The **Ufloat System** is a versatile modularized deep-water subsea buoyancy system. It includes a number of buoy units that individually, or when combined as assemblies or when interconnected provides buoyancy ranging from 10 kg to 1000 kg or more. The buoys design and features allow it to be configured for a range of applications, geometries, attachment arrangement, buoyancy distribution, and recovery options.

Ufloat Type A3,
(28kg Buoyancy)Ufloat Type B4,
(58kg Buoyancy)Ufloat Type C3,
(83kg Buoyancy)

Construction

- Water depth rating is 2500m.
- High buoyancy to dry weight ratio ≈ 1.25 .
- Includes nine standard units (9.2 kg - 92 kg buoyancy) & nine standard combined assemblies (82.8 kg - 230 kg buoyancy). See datasheet [page 2](#).
- Buoy parts and subassemblies are standardised, and a buoy unit can be quickly be rearranged from one type to another type.
- Includes a number of webbing loops for combining buoys and /or attaching buoys to subsea equipment.
- Any contained water is drained immediately after retrieval through the splash zone.
- Individual buoy units are semi flexible / bendable.

Application & Features

- Temporary subsea buoyancy used in conjunction with subsea operation. Typically, that is installation / deployment of flowlines, umbilical's, jumpers, tie-in spools, structures, modules, running tools and other.
- Rental buoyancy is available from stock, and will be re-arranged as required to suit specific requirements.
- Using the integrated webbing loops, the standard buoy units and/ or assemblies can be interconnected to a range of buoy geometries and buoyancy including elongated or blanket types.
- Ustrap subsea rigging equipment for subsea buoy attachment and subsequent ROV release is available.
- Buoy recovery and / or deployment arrangement using Ubag subsea weight can be provided, including ROV hooks and other.
- Local submerged subsea guidewire arrangement including buoys, guide wire and guide wire anchor for use in deeper water can and has been provided.
- Subsea Installation Tool arrangement that includes buoyancy, balancing weight, ROV hooks and other for deployment / retrieval of subsea tools, control modules, small structures and other can, and has been provided.

Ufloat, connected-
Types A1, A2 & A3
(55kg Buoyancy)Ufloat, connected - Types B2 & B3
(92kg Buoyancy)

Contacts

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STANDARD BUOY UNIT

STANDARD COMBINED BUOY ASSEMBLIES

A

B

C

D

E

A1

BUOYANCY = 9.2 KG
(L=0.45m; W=0.54m; H=0.30m)
(Dry weight 8 kg)



P/N 10180
ASSY. NO
9-1001
9-1002...

N/A

N/A

N/A

N/A

A2

BUOYANCY = 18.4 KG
(L=0.80m; W=0.54m; H=0.30m)
(Dry weight 15 kg)



P/N 10181
ASSY. NO
18-1001
18-1002...

B2

BUOYANCY = 36.8 KG
(L=0.80m; W=0.85m; H=0.30m)
(Dry weight 30kg)



P/N 10188
ASSY. NO
37-2001
37-2002...

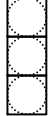
N/A

N/A

N/A

A3

BUOYANCY = 27.6 KG
(L=1.10m; W=0.54m; H=0.30m)
(Dry weight 23 kg)



P/N 10182
ASSY. NO
28-1001
28-1002...

B3

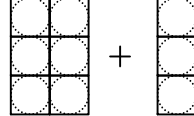
BUOYANCY = 55.2 KG
(L=1.10m; W=0.85m; H=0.30m)
(Dry weight 47 kg)



P/N 10185
ASSY. NO
55-2001
55-2002...

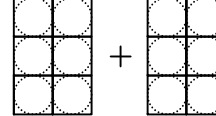
C3 (=A3 + B3; NOTE 1&7)

BUOYANCY = 82.8 KG
(L=1.10m; W=0.85m; H=0.55m)



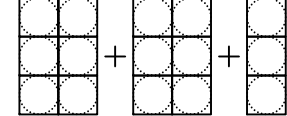
D3 (=2xB3; NOTE 1&7))

BUOYANCY = 110.4 KG
(L=1.10m; W=0.85m; H=0.60m)



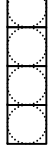
E3 (=A3 + 2xB3; NOTE 1&7)

BUOYANCY = 138.0 KG
(L=1.10m; W=0.85m; H=0.85m)



A4

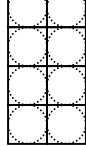
BUOYANCY = 36.8 KG
(L=1.4m; W=0.54m; H=0.30m)
(Dry weight 30 kg)



P/N 10183
ASSY. NO
37-1001
37-1002...

B4

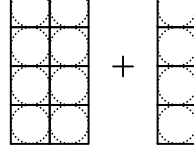
BUOYANCY = 73.6 KG
(L=1.40m; W=0.85m; H=0.30m)
(Dry weight 58 kg)



P/N 10186
ASSY. NO
74-2001
74-2002...

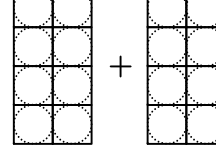
C4 (=A4 + B4; NOTE 1&7)

BUOYANCY = 110.4 KG
(L=1.40m; W=0.85m; H=0.55m)



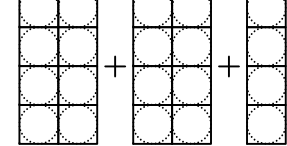
D4 (=2xB4; NOTE 1&7)

BUOYANCY = 147.2 KG
(L=1.40m; W=0.85m; H=0.60m)



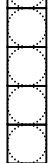
E4 (=A4 + 2xB4; NOTE 1&7)

BUOYANCY = 184.0 KG
(L=1.40m; W=0.85m; H=0.85m)



A5

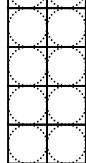
BUOYANCY = 46.0 KG
(L=1.70m; W=0.54m; H=0.30m)
(Dry weight 37 kg)



P/N 10184
ASSY. NO
46-1001
46-1002...

B5

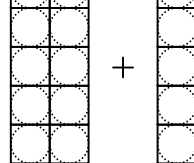
BUOYANCY = 92.0 KG
(L=1.70m; W=0.85m; H=0.30m)
(Dry weight 73 kg)



P/N 10187
ASSY. NO
92-2001
92-2002...

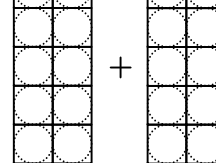
C5 (=A5 + B5; NOTE 1&7)

BUOYANCY = 138.0 KG
(L=1.70m; W=0.85m; H=0.55m)



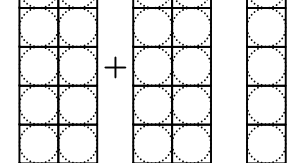
D5 (=2xB5; NOTE 1&7)

BUOYANCY = 184.0 KG
(L=1.70m; W=0.85m; H=0.60m)



E5 (=A5 + 2xB5; NOTE 1&7)

BUOYANCY = 230.0 KG
(L=1.70m; W=0.85m; H=0.85m)



DO NOT SCALE IF IN DOUBT ASK

NOTES:

1. BUOY ASSEMBLIES ARE DELIVERED CONNECTED AND COMBINED TOGETHER AS ILLUSTRATED (I.E. CONNECTED IN PARALLEL) USING USTRAP WEBBING SYSTEM COMPONENTS..
2. STANDARD BUOY ASSEMBLIES (SINGLE OR COMBINED) CAN BE FURTHER COMBINED OR CONNECTED TOGETHER AS FOLLOWS:
 - IN PARALLEL AS LARGE DIAMETER CYLINDER.
 - IN SERIES AS SMALL DIAMETER / LONG CYLINDERS
 - MAT / BLANKET (IN PARALLEL / SERIES)
3. 2500M WORKING DEPTH.
4. OTHER BUOY / UPLIFT / GEOMETRY COMBINATION WILL BE ARRANGED ON REQUEST.
5. COMBINED BUOY ASSEMBLIES WILL BE GIVEN AN UNIQUE ASSY. NO WHEN THEY ARE COMBINED.
6. ANY 'FINE' ADJUSTMENT OF BUOYANCY IS PERFORMED USING STEEL / LEAD WEIGHTS.
7. DRY WEIGHT = SUM OF STANDARD BUOY UNIT WEIGHTS.
8. USTRAP WEBBING SYSTEM COMPONENTS ARE USED FOR CONNECTION TO SUBSEA EQUIPMENT AND FOR RELEASE / RECOVERY.

4	15.03.17	RE-ISSUED FOR INFORMATION	HAS	
3	16.11.16	RE-ISSUED FOR INFORMATION	HAS	
2	15.06.16	RE-ISSUED FOR INFORMATION	HAS	
1	13.06.16	ISSUED FOR INFORMATION	HAS	
Rev	Date	Revision	Rev By	Chk'd App Engr. Project

Name of client

Underwater Design & Equipment Company
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Udeco Engineering		Udeco Approval	
Draughtsman	Checker	Originator/Engineer	Lead Engineer / Project Manager
HASKELAND			
Date	Date	Date	Date
13.06.16			

UNLESS OTHERWISE SPECIFIED:
(MKS UNLESS ANNOT ER OFFERT)
Dim. Tol.: ± 3mm, ± 1'
Broken Edges: (Kantler er bruttet) (R alt 45) 0.1 - 0.5
Thread Tol: (Gjenge Tol) Ra µm: Tolerancing: ISO 8015
Gy/Øh (NS 1874-ISO 9651) Ra µm: Tolerance Setting: NS-ISO 8015

Sheet Size A1 Drawing Scale 1:15 Page 1 OF 1

Project UFLOAT-SUBSEA BUOYANCY SYSTEM

Title UFLOAT MODULARISED SUBSEA BUOYANCY SYSTEM, STANDARD BUOYS AND BUOY COMBINATIONS

Drawing No. IN-UDE-710-DR-200 Rev. 4

BUOY TYPES

	1	2	3	4	5	6	7	8	9	10		
A	STANDARD BUOY UNIT			STANDARD COMBINED BUOY ASSEMBLIES							DO NOT SCALE IF IN DOUBT ASK	
B	A		B		C		D		E			
C	A1		B2		C3		D3		E3			
D	A2		B3		C4		D4		E4			
E	A3		B4		C5		D5		E5			
F	A4		B5									
G	A5											
H												