



THE BRUCE ANCHOR MARK 2

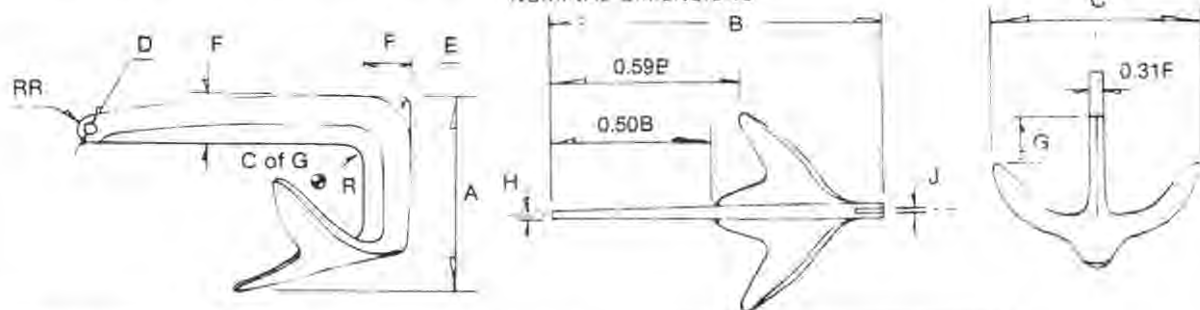
ANCHOR OPERATION

The Bruce anchor self-orientates to an upright attitude because of the action of the curved side extensions of the single fluke while engaging the sea bed soil. It rolls upright, irrespective of initial drop attitude, within two shank lengths after engaging the sea bed. This rolling action occurs at zero cable angle at the anchor shackle (long scope), or at any cable angle up to 30° (ultra short scope), whereupon complete burial proceeds in the usual manner.

The anchor has **ABSOLUTE ROLL STABILITY**, for the first time in the history of anchor design, due to the presence of stabilizing forces produced by the curved shape of the fluke while interacting with the sea bed soil: any disturbance of the anchor from the upright attitude causes a differential imbalance of these stabilizing forces which acts in opposition to the disturbance. **FULL VEERING CAPABILITY** through 360° is obtained as a consequence of the absolute roll stability: the anchor banks in the sea bed without breaking out and maintains its hold while veering. **HIGH HOLDING POWER** is obtained by the highly efficient fluke and shank design which combines maximum fluke area, optimum shank to fluke separation, minimum shank penetration resistance, and optimum fluke angle. **LOW BREAKOUT FORCE** is obtained due to the short

broad single fluke giving rise to small shear moments in the sea bed soil when the anchor is rotating upwards during weighing. Breakout force for the Bruce anchor is generally between 20 and 50 per cent of the prior holding pull compared with between 50 and 100 per cent for other anchors. **ULTRA SHORT SCOPE CAPABILITY** is obtained due to the centre of area of the fluke being located much nearer to the fore point of the fluke than is possible in other designs of anchors. The Bruce anchor will bury into the sea bed with the cable at an angle of up to 30° at the anchor shackle compared with a maximum of between 10° and 15° for other anchors. **HIGH ROCK HOOKING CAPABILITY** is furnished by the three points of the fluke which enable the anchor to nip as well as the Common or Fisherman type anchor on rocky beds. The advantage of **NO MOVING PARTS** to clog or jam arises from the one-piece construction of heat-treated cast steel which gives the Bruce anchor strength in excess of any other patent anchor of similar weight. Finally, **EASE OF STOWAGE** and handling arises due to the anchor being both **STOCKLESS** (by virtue of its inherent absolute roll stability rendering a stock unnecessary) and very compact for a given weight and performance.

NOMINAL DIMENSIONS



Nominal weight kg	A m	B m	C m	D dia mm	E dia mm	F mm	G mm	H mm	J mm	R mm	RR mm
600	1.13	2.02	1.37	46	34	298	289	56	40	171	61
1000	1.34	2.40	1.63	54	46	353	342	64	53	201	72
2000	1.69	3.03	2.05	66	54	444	431	84	61	256	91
3000	1.93	3.46	2.35	75	50	508	493	92	70	292	105
6500	2.53	4.53	3.07	100	75	666	646	125	92	380	137
9000	2.79	5.00	3.38	117	75	734	712	140	92	419	151

Note: Existing bolster bars readily accommodate the Bruce anchor if their diameter is greater than 1.03 times dimension G. Geometrical data can be supplied on request to assist in the design of bolster bars for new vessels or conversions.

Other Sizes Geometrically to Scale

In the interest of continuous product improvement rights are reserved to change specifications and recommendations without notice.