

## DESCRIPTION

The DREW DRIP-TEC Continuous-Drip Sampler is a convenient and reliable sampling unit designed to obtain a representative sample of fuel throughout the ship's entire bunkering period. The DREW DRIP-TEC sampler has received a Certificate of Design Assessment from the American Bureau of Shipping and complies with IMO MARPOL 73/78 Annex VI for continuous-drip sampling of all grades of fuel.

Marine fuels, when bunkered, are often non-homogeneous due to stratification in the fuel supplier's tanks as a result of varying densities of blended fuels. In addition, fuel deliveries to the ship may have been pumped from multiple tanks on the bunker barge, each containing a different fuel. Fuel samples obtained at any moment during the bunkering period, simply by opening a valve in the fuel fill line, can often result in a non-representative sample. That sample may provide misleading information even though the laboratory analysis is accurate.

To overcome this problem, Drew Marine designed an in-line fuel drip sampler that continuously draws small amounts of fuel as it flows past the unit in the bunker line. Fuel drawn from the DREW DRIP-TEC sampler during the entire bunkering period will contain a portion from every fuel strata of each tank pumped from the supplier's barge, more closely representing the fuel delivered to the ship's tanks.

## APPLICATION & USE

The Chemical Engineers Handbook defines "sampling" as "The process of obtaining a small amount of material which shall be as nearly representative as possible of the whole mass of material being considered."

When considering a common 2,000-ton fuel delivery, the typical one-liter sample drawn for laboratory analysis equals one-half part per million (0.5 ppm) of the total volume of fuel



DREW DRIP-TEC Continuous-Drip Sampler  
(CUBITAINER receptacle order separately)



### FEATURES

- Self-centering and automatic adjustment with all fuel manifold flange types (ANSI, DIN, JIS)
- Durable, design and build
- Available in many pipe sizes
- Cost effective continuous-drip sampler
- No moving parts
- Easy between-flange installation Standard CUBITAINER receptacle thread

### BENEFITS

- Maximized gasket surface sealing ensures no leakage due to misaligned mounting
- Withstands marine environment conditions
- Exact fit to vessel's bunker manifold
- Low investment for accurate fuel sampling
- Minimal maintenance and repair costs
- No hot work or drilling required
- Simplifies fuel sampling procedures for compliance



Contact your Drew Marine representative for more information

delivered. Therefore, the sampling method should be as accurate as possible for the type of fuel being delivered.

When using the DREW DRIP-TEC™ sampler, sampling is carried out by continuous drip during the entire bunkering period. A valve on the sampler is used to adjust the drip rate into either the 5- or 10-liter CUBITAINER receptacle connected to the sampler. A new CUBITAINER should be used for each bunkering and each different grade of fuel to prevent contaminating the primary sample with old fuel.

Once bunkering and sampling are completed, the CUBITAINER is capped, and the primary sample is prepared by shaking before being poured into individual sample bottles. When filling the sample bottles, alternately pour small amounts into each bottle until filled, using three or four passes to fill each bottle.

Drew Marine recommends preparing a minimum of four individual fuel samples from the primary sample:

1. MARPOL retained sample
2. Vessel retained sample
3. Supplier sample
4. Laboratory sample

The MARPOL and vessel retained samples should be stored in a Fuel Sample Retention Cabinet. The supplier sample should be offered to the supplier representative, The laboratory sample should be dispatched to the onshore testing laboratory to determine the overall fuel quality for the bunker delivery.

## CONSUMABLES.

Description	PCN
Fuel Sample Bottle Kit (40 bottles)	1AA9829
5L CUBITAINER Kit, 12 pcs	1AA9830
10L CUBITAINER Kit, 12 pcs	1AA9831
Valve Assembly (Spare)	1AB6264

### Optional

Fuel Sample Retention Cabinet (empty) 1AA7636

Consult your Drew Marine representative for your vessel's specific applications.

## ORDERING INFORMATION

SIZE (WT.)	FLANGE STANDARD	PCN
80 mm (4.0 kg)	DN 80 PN10 PN16	1AA7988
	ANSI 3" 150LB	1AA7988
	JIS 80 5K	1AA7988
	JIS 80 10K	1AA7988
100 mm (5.5 kg)	DN 100 PN6	1AB6181
	DN 100 PN10 PN16	1AA7904
	ANSI 4" 150LB	1AA7905
	JIS 100 5K	1AA7906
125 mm (7.0 kg)	JIS 100 10K	1AA7907
	DN 125 PN6	1AB6182
	DN 125 PN10 PN16	1AA7908
	ANSI 5" 150LB	1AA7909
150 mm (8.5 kg)	JIS 125 5k	1AA7910
	jis 125 10k	1AA7911
	DN 150 PN6	1AB6183
	DN 150 PN10 PN16	1AA7912
200 mm (9.0 kg)	ANSI 6" 150LB	1AA7913
	JIS 150 5K	1AA7914
	JIS 150 10K	1AA7915
	DN 200 PN6	1AB6184
250 mm (11.5 kg)	DN 200 PN10	1AA7916
	DN 200 PN16	1AA7917
	ANSI 8" 150LB	1AA7918
	JIS 200 5K	1AA7919
300 mm (13.5kg)	JIS 200 10K	1AA7920
	DN 250 PN6	1AB6185
	DN 250 PN10	1AA7921
	DN 250 PN16	1AA7922
350 mm (18.0 kg)	ANSI 10" 150LB	1AA7923
	JIS 250 5K	1AA7924
	JIS 250 10K	1AA7925
	DN 300 PN6	1AB6186
300 mm (13.5kg)	DN 300 PN10	1AA7926
	DN 300 PN16	1AA7927
	ANSI 12" 150LB	1AA7928
	JIS 300 5K	1AA7929
350 mm (18.0 kg)	JIS 300 10K	1AA7930
	DN 350 PN6	1AB6187
	DN 350 PN16	1AB4753
	ANSI 14" 150LB	1AB4754
JIS 350 10K	1AB4755	



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