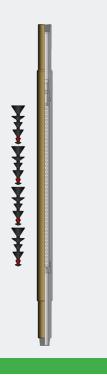


MULTICATCH™ Dart Catcher System

Features and Benefits

- Proprietary ball seat design provides a pressure spike at the surface when darts land in the tool to show exact displacement location for more reliable cement operations
- 4.7 in² flow area for full forward and reverse flow capabilities even with all darts caught
- Indication pressure can be changed by utilizing different dart noses for increased operational flexibility
- Proprietary dart design thoroughly wipes multiple IDs of the cementing string and maintains separation of wellbore fluids to reduce costly pipe cleaning and cement contamination
- Secondary bypass mechanism ensures full cement and mud displacement for increased reliability in the event an obstruction prevents dart from entering the catcher
- Optional Universal Cement Sub can be set up for down-jet or up-jet configuration to optimize cement placement at the end of the work string



Use in the following applications:

Deepwater and ultra-deepwater

Shelf

Land

The Frank's International MULTICATCH™ Dart Catcher System provides enhanced cement displacement, cost-effective pipe cleaning, and efficient operations by allowing wiper darts or wiper balls to be caught and retrieved during inner-string cementing and balanced plug operations. The MULTICATCH™ Dart Catcher has the capacity to catch up to eight darts, nerf or polyurethane wiper balls, or a combination of both, the largest in the industry. The MULTICATCH™ Dart Catcher System eliminates the need for dart drill-out and reduces overall cement drill-out time while allowing full forward and reverse flow capabilities when all darts are caught.

When used in combination with the BLACKHAWK® suite of cement heads and swivels, the Multicatch dart catcher system provides the operator with a complete package solution to ensure the exact location of downhole fluids during inner-string cement jobs, cementing squeezes, and balanced cement plugs for temporary and permanent well abandonment or sidetrack operations. Additionally, the MULTICATCH™ Dart Catcher System can be run in conjunction with the Universal Cement Sub with four different jetting configurations to accommodate multiple wellbore conditions and provide efficient cement placement.

Multiple Dart Catcher

Maximum Tensile Yield	Maximum Working Pressure	Maximum Torque Through Tool	Overall Length	Maximum Tool OD	Indication Pressure	Secondary Release Pressure	Minimum Flow Area	Connections	Max Flow Rate with/without Darts Loaded
1,167,000 lbs* (SF 1.1)	10,000 psi	30,700 ft-lb*	160 in (4 Darts), 235 in (8 Darts)	7.00 in. (NC-50)	500 psi (Blue Nose), 1,500 psi (Gold Nose), 2,500 psi (Red Nose)	5,000 psi	4.7 in²	4-1/2" IF (NC-50) Box x Pin, 6.625" OD, 3.25" ID, 120 ksi yield, 25,600-30,700 ft-lbs Make-up Torque	Unlimited flow up to 20 BPM Up to 30 BPM for 12 hrs

^{*}Max Tensile Yield and Torque through tool does not include end connection ratings

Universal Cement Sub

Maximum Torque	Overall	Maximum	Connections	Side Port	Bottom Port
Through Tool	Length	Tool OD		Flow Area	Flow Area
30,700 ft-lb	49 in.	6.75 in.	4-1/2 in IF (NC- 50) Box x Pin, 6.625 in OD	8.59 sq. in.	2.41 sq. in.

MULTICATCH™ Indicator Dart

Dart Maximum Rigid OD	
	_
2.50 in.	

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For more information call 1-800-833-7265