

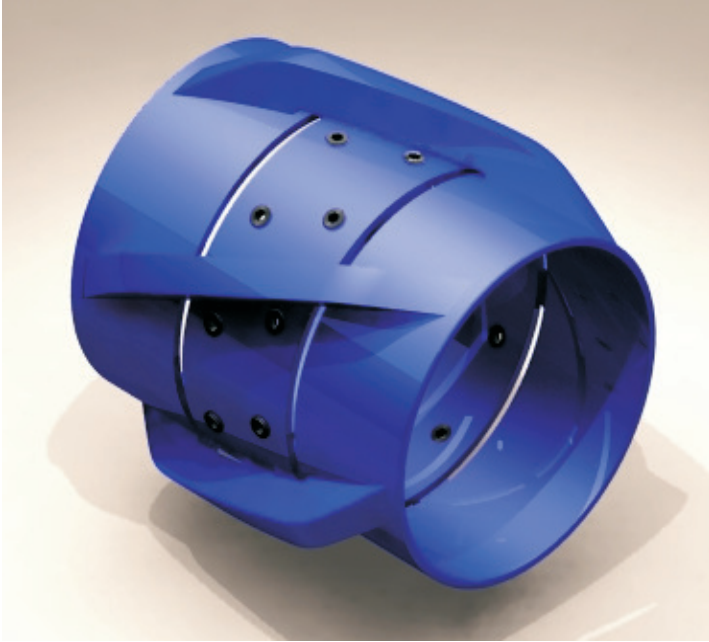


SPIDLE TURBECO

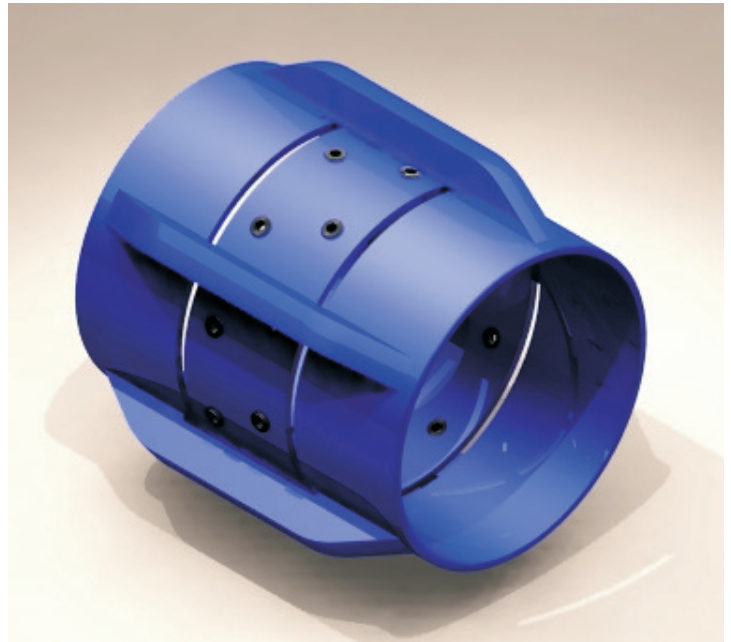
a Flotek company

TURBO-LOK

RIGID VANE TURBULATOR



Spiral Vane



Straight Vane

**U.S. PATENT
NO. 6,533,034 B1**

The *patented* **TURBO-LOK** turbulator is the first rigid vane centralizer that combines the advantages of a rotating centralizer with the holding strength of one fixed to the casing with set screws. The TURBO-LOK provides the benefits of both fixed and rotating turbulators without any of the drawbacks.

This unique rigid centralizer is fixed to the casing by use of an internal super duty stop collar. The rigid vaned cage is free to rotate around the internal collar. This allows the tool to rotate its way into the hole without imparting torque to the casing.

The sleek design of the TURBO-LOK with its high strength vanes produces superior stand-off, easy running and fluid diversion suitable for all applications. Proven effective in vertical, horizontal, side-track and screen applications around the world, the TURBO-LOK is a unique solution to casing placement concerns.

Features

- **Patented Technology**
- **Superior Holding Power**
- **Pulled not Pushed into the Well**
- **Rotating Body**

TURBO-LOK

PATENTED RIGID VANE TURBULATOR

STANDARD LENGTH IS 10" (OTHERS AVAILABLE)

CASING SIZE "	SLEEVE I.D. "	SLEEVE O.D. "	# OF VANES	# SET SCREWS	VANE TAPER	STANDARD VANE SIZES	
						MIN O.D.	MAX O.D.
2 7/8	3	3 3/8	4	16	30°	4 1/8	8 1/4
3 1/2	3 5/8	4	4	16	30°	4 3/4	9 1/2
4	4 1/8	4 1/2	5	20	30°	5 1/4	9 1/2
4 1/2	4 5/8	5	5	20	30°	5 3/4	9 1/2
5	5 1/8	5 1/2	5	20	30°	6 1/4	9 1/2
5 1/2	5 5/8	6	5	20	30°	6 3/4	10 1/2
6 5/8	6 3/4	7 1/8	5	20	30°	7 7/8	12
7	7 1/8	7 1/2	5	20	30°	8 1/4	12
7 5/8	7 3/4	8 1/4	5	20	30°	8 7/8	12
7 3/4	8	8 1/2	5	20	30°	9	12
8 5/8	8 3/4	9 1/4	5	20	30°	9 7/8	12 1/2
9 5/8	9 29/32	10 1/4	6	24	30°	10 7/8	14 1/4
10 3/4	11	11 1/2	6	24	30°	12	21
11 3/4	12	12 1/2	6	24	30°	13	21
13 3/8	13 5/8	14	6	24	30°	14 5/8	24

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
SLEEVE I.D. AND O.D. ARE DETERMINED BY THE VANE O.D. OF THE TURBULATOR

- **Vane O.D. is typically recommended to be either 1/4" under bit size or 1/8" under drift diameter.**
- **INVENTORY: Available in most casing and hole size combinations.**
- **Computerized spacing program available.**

