

Whipstock System with Hydraulic Anchor "NEXUS™" PL-WSHSA

Whipstock with a hydraulic anchor is a system designed for efficient and reliable window milling and sidetracking operations. The hydraulic anchor is set by applying internal pressure, which activates and locks the mechanism inside the casing or formation. The hydraulic anchor ensures proper orientation and allows window milling to be performed in a single run. As a result, rig time is reduced, non-productive time is minimized, and significant cost savings are achieved through lower operational expenses.

The equipment is used for:

- creating a milling window in casing strings or open hole sections;
- deflecting the drill string in a predetermined direction;
- ensuring a controlled kickoff of a new wellbore;
- executing lateral sidetrack initiation;
- bypassing damaged or problematic intervals to eliminate stuck.

Equipment set includes:

- Whipstock with hydraulic anchor
- Window Mill
- Watermelon Mill (Bottom)
- Watermelon Mill (Top) (wedge inclination angle 2°)

Design Advantages

- reliable fixation due to hydraulic activation
- no requirement for mechanical weight setting on bottom;
- suitable for vertical, deviated, and horizontal wells;
- controlled activation at a predetermined pressure;
- reduced risk of whipstock rotation or displacement during milling operations.

Casing Size OD (in)	Wedge Section OD (in)	Anchor Section OD (in)	Window Mill OD (in)	Watermelon Mill OD (in)
5 ½	4 ⅓	4 ⅓	4 ¼ - 4 ⅞	4 ¼ - 4 ⅞
5 ¾	4 ⅔	4 ⅔	4 ⅔ - 4 ⅞	4 ⅔ - 4 ⅞
6 ⅝	5 ⅝ ₁₆	5 ⅝ ₁₆	5 ½ - 5 ¾	5 ½ - 5 ¾
7	5 ⅝ ₁₆	5 ⅝ ₁₆	5 ¾ - 6 ⅛	5 ¾ - 6 ⅛
9 ⅝	7 ⅞	7 ⅞	7 ½ - 8 ½	7 ½ - 8 ½
13 ⅜	11 ½	11 ½	11 ⅝-12 ¼	11 ⅝-12 ¼
13 ⅝	11 ½	11 ½	11 ⅝-12 ¼	11 ⅝-12 ¼



Operation

- Tool is run into the well as part of the drill string assembly.
- At the target depth interval, drilling fluid pressure is applied.
- Hydraulic pressure activates the piston mechanism.
- Anchor slips expand and securely lock the anchor unit inside the casing.
- Once fixation is confirmed, window milling operations are performed.
- The drilling assembly slides along the inclined wedge surface, providing controlled wellbore deviation and sidetrack initiation.