



PL-WSMSA



**MADE
IN UKRAINE**

Whipstock system PL-WSMSA «ANTHEUS»

The whipstock ensures precise deflection of the milling tools from the wellbore axis when drilling a window in the casing or in the open hole without support on the bottom hole. It is supplied with the milling cutters, allowing all operations to be carried out in one run-in and run-out operation. Possibility of removing the deflector wedge using a fishing hook or catch socket.

Application:

Whipstock is essential for directional drilling when the well needs to access multiple formations or avoid obstructions.

The set of equipment includes:

- **Whipstock with mechanical anchor PL-WSMSA or with hydraulic anchor PL-WSHA (without face support)**

The Whipstock ensures that the milling tools are precisely offset from the borehole axis.

- **Starting-Window Mill PL-LM**

Designed for cutting a "window" in the casing and drilling a sidetrack.

- **The Watermelon Mill (bottom) PL-BM**

Designed to expand the walls in the cut-out "window".

- **The Watermelon Mill (Top) PL-TM**

It is designed for wall expansion and calibration in the cut-out "window".

(*-diameter is selected for the appropriate wall thickness of the casing to be milled and in accordance with the diameter of the bit for further drilling)

FEATURES:

- **Efficiency:** The equipment enables efficient cutting through the casing in wells, which ensures fast completion.
- **Precision:** Thanks to precise milling parameters, the window is cut with the correct profile for the rock-breaking tool.
- **Flexibility:** The equipment can be selected according to different geological and technical conditions of the well, as the milling parameters can be changed according to the customer's needs.
- **Safety:** The instructions and restrictions established for the use of the set are aimed at ensuring the safety of the operator and preventing possible accidents.

Parameters	Casing size, in / (mm)				
	5 1/2" (139,7)	5 3/4" (146,05)	6 5/8" (168,3)	7" (177,8)	9 5/8" (244,5)
Length (no more), mm	4800	4800	5000	5000	6000
Dia. of the Whipstock, mm	110	116	135	140	200
Dia. of the Window Mill, mm	108-112	115-120	138-142	148-152	190-205
Length of the Window Mill, mm	690	700	415	420	550
Expander Dia., mm	110-120	124-128	143-148	152-159	212-220
Dia. of the installation Anchor Unit, mm	108	118	137	154	180
Load for Shearing the Mill Pin, kN	80-150	80-150	80-150	80-150	140-200
Load to activate the Anchor Unit, kN	50-70				100-120



*Given these advantages, the use of the set can be beneficial for well drilling and servicing companies.