



IRBIS
Group



ProfTrade

**Horizontal and Multilateral Wells
Drilling Department**

Window Milling Whipstock Kit

Designed:

For one trip window milling in cased or open hole.

140mm, 146mm, 168mm, 178mm, 245mm kits are available for cased hole window milling; 83mm, 124mm, 143mm kits are available for open hole sidetrack drilling; However it is possible to adjust diameters of the kit due to the customer requests in short period of time;

Advantages:

- Enables to start a sidetrack drilling without cement plugs and any mechanical anchoring in hole with zenith angles up to 100°;
- Average window milling durations vary from 4 to 16 hours depending on steel types, casing thickness and zenith angle in milling interval;
- Window Mill could be repaired and reused depending on its wear;

Drill Pipes
Bypass valve

HWDP

Filter

Flexible pipe

Window Mill

Whipstock

Hydraulic
Anchor



Technical features of mass-produced whipstocks

Technical Features		КОГУ-83	КОГУ-124	КОГУ-140	КОГУ-146	КОГУ-168	КОГУ-178	КОГУ-245
Casing diameters, mm		Open hole	Open hole	140	146	168	178	245
Whipstock Ankle, grad.		Whipstock length, mm						
	2,5	1685	2650	2720	2720	3140	3140	5070
	3,0	-	-	2195	2195	-	-	-
Hydraulic Anchor length, mm		2232	3000	2300	3000	3100	3100	3500
Anchor Diameter, mm		73	106	116	120	135	137	210
Mill Diameter, mm		76-80	121-124	115-122	123-129	143-148	152-157	216-224



We can produce whipstocks of other standard sizes of upon customer requests in short terms!

Additional Remedial Services

Our experienced field engineers provide high quality services in whipstock orienting and window milling operations. We managed about 1000 successful operations over the past 5 years.

Main costumers for our Remedial services are "Rosneft", "Gazprom", "Bashneft", "Slavneft", "SSK Drilling company", "SGK-Drilling" and "Katoil Drilling".

We also can provide recommendations and all necessary certifications upon the costumer request.



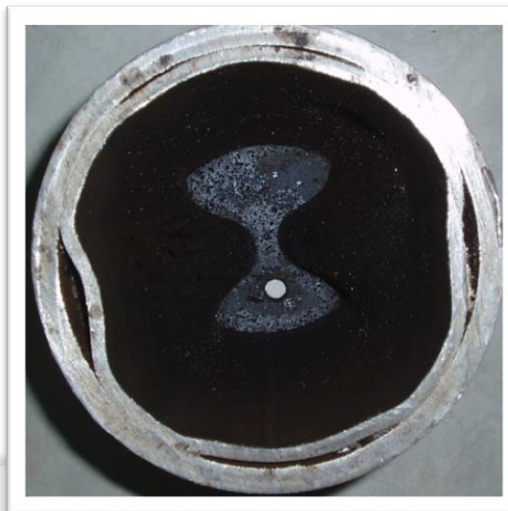
Whipstock with hydraulic system



Milling components



Anchoring in casing



Mills



Production plant in Ufa city

Horizontal and Multilateral Wells
Drilling Department



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