

## NWT Wash Tool

---

The NWT Wash Tool is a cup type tool designed to selectively acidize pre-determined intervals. Specially designed cup, a retrievable blanking bar and a large built-in annular by-pass make the NWT easy to run and retrieve. A special spacer assembly is available adding a third cup on each end for applications where acid breaking back-out of perforations is a problem.

A drag assembly run with the NWT provides drag for opening and closing of a By-Pass Valve used to spot acid to the NWT. A straight pull closed, set down to open unloader can be used if NWT is run on coil tubing. A collar locator may be run to ensure proper positioning over perforations. In low fluid wells, a Fluid control valve may be run to control fluid. Consult NOV applications engineer for proper accessories used with NWT.

### Features

- Double cup above and below for positive sealing
- Adjustable spacing available
- Used with jointed or coil tubing

### Benefits

- Ability to treat single perforation or zone perforations
- Ability to treat multiple zones without stopping to spot acid
- No rotation required to set and unset the NWT making it ideal for use with coil tubing

### Applications

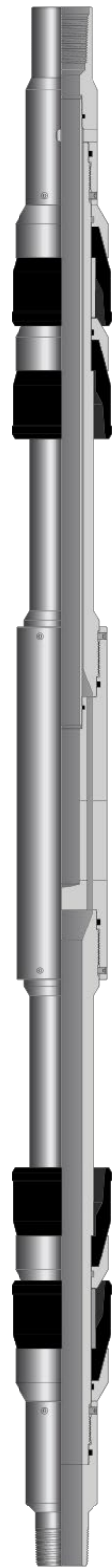
- Selective acidizing

### Operation

From the top to bottom the tool assembly is usually made up with a by-pass valve, fluid control valve, NWT and a collar locator. The assembly is run in the well bore below the perforations, the by-pass closed, and the NWT tested in black casing. After testing, the NWT is positioned over the first set of perforations, the by-pass opened, and acid spotted to the tool. Once the acid is spotted to the tool, the by-pass is closed, and the required amount of acid is pumped into the perforations.

After treating the first zone the NWT is moved to the next set of perforations and the required amount of acid is pumped. No water spacer is required between zones reducing pump time.

After acidizing is completed the tool may be moved above the perforations and well swabbed back to recover spent acid.



# NWT Wash Tool

## Technical Data

CASING				PACKER			
SIZE in. (mm)	WEIGHT lb/kg	Min. in.(mm)	Max in.(mm)	Thimble O.D. In.(mm)	Max. I.D. In. (mm)	Connection	Product Number
4.500 114,30	9.5 - 11.6 14,14 - 17,26	4.000 101,60	4.090 103,89	3.771 95,78	1.250 31,75	2.375" EU 8 RD	10-135-0450
5.000 127,00	18.0 26,78	4.195 106,55	4.376 111,15	4.000 101,60	1.250 31,75	2.375" EU 8 RD	10-135-0500
	13.0 - 15.0 19,34 - 22,32	4.408 111,96	4.492 114,10	4.125 104,78	1.250 31,75	2.375" EU 8 RD	10-135-0510
5.500 139,70	20.0 - 23.0 29,76 - 34,22	4.670 118,62	4.778 121,36	4.500 114,30	1.750 44,45	2.375" EU 8 RD	10-135-0550
	15.5 - 17.0 23,06 - 25,30	4.892 124,26	4.950 125,73	4.625 117,48	1.750 44,45	2.375" EU 8 RD	10-135-0560
	13.0 - 14.0 19,34 - 20,83	5.012 127,30	5.044 128,12	4.781 121,44	1.750 44,45	2.375" EU 8 RD	10-135-0570
6.625 168,28	24.0 - 28.0 35,71 - 41,66	5.791 147,09	5.921 150,39	5.500 139,70	1.750 44,45	2.375" EU 8 RD	10-135-0650
	20.0 29,76	5.973 151,71	6.142 156,01	5.658 143,71	1.750 44,45	2.375" EU 8 RD	10-135-0660
7.000 177,80	32.0 - 35.0 47,62 - 52,08	6.004 152,50	6.094 154,79	5.780 146,81	2.250 57,15	2.875" EU 8 RD	10-135-0700
	26.0 - 29.0 38,69 - 43,15	6.184 157,07	6.276 159,41	5.940 150,88	2.250 57,15	2.875" EU 8 RD	10-135-0710
	17.0 - 23.0 25,30 - 34,22	6.366 161,70	6.538 166,07	6.210 157,73	2.250 57,15	2.875" EU 8 RD	10-135-0720
9.625 244,48	40.0 - 47.0 59,52 - 69,94	8.681 220,50	8.835 224,41	8.295 210,69	2.250 57,15	2.875" EU 8 RD	10-135-0950
	32.3 - 36.0 48,06 - 553,57	8.921 226,59	9.001 228,63	8.500 215,90	2.250 57,15	2.875" EU 8 RD	10-135-0960