

Sucker Rods Circumferential Displacement

Tenaris recommends making-up connections following the recommended API practice of circumferential displacements. Values of displacement depend on the pin diameter, the rod application, the steel Grade and if it's new or used.

CONVENTIONAL PUMPING APPLICATIONS RECOMMENDED CIRCUMFERENTIAL DISPLACEMENT MAKE-UP

GRADES	API GRADES (*)		HIGH STRENGTH GRADES (**)	
PIN DIAMETER	CROSS [MM]		CROSS [MM]	
	NEW SUCKER ROD	USED SUCKER ROD	NEW SUCKER ROD	USED SUCKER ROD
5/8"	6.3 / 7.1	4.8 / 6.3	8.40 / 9.90	7.90 / 8.70
3/4"	7.1 / 8.7	5.6 / 6.7	10.30 / 11.90	9.10 / 10.5
7/8"	8.7 / 9.5	7.1 / 9.1	11.50 / 13.00	11.10 / 12.30
1"	11.1 / 12.7	9.5 / 11.1	14.70 / 17.00	14.30 / 15.90
1 1/8"	14.3 / 16.7	12.7 / 15.1	17.80 / 20.60	17.00 / 19.90

(*) API Grades C & K should always be run using circumferential displacement values for used API rods, even if they are new rods.

(**) Special displacement values are used for Grade Plus rods (not detailed in this chart).

For PCP applications, recommended make-up should be done controlling torque. In order to prevent incremental make-up during operation, values should be the same as the running torque. As there are limitations in the field to control the make-up torque, the standard way of making-up rods for PCP applications is following the circumferential displacement method with the following values:

PROGRESSIVE CAVITY PUMPING APPLICATIONS USED CIRCUMFERENTIAL DISPLACEMENT MAKE-UP

GRADES	ALL GRADES	
PIN DIAMETER	CROSS [MM]	
	NEW SUCKER ROD	USED SUCKER ROD
5/8"	8.40 / 9.90	7.90 / 8.70
3/4"	10.30 / 11.90	9.10 / 10.5
7/8"	11.50 / 13.00	11.10 / 12.30
1"	14.70 / 17.00	14.30 / 15.90
1 1/8"	17.80 / 20.60	17.00 / 19.90