



TRACK WRENCH®

RDF Joint Simulators / Run Down Fixtures

Joint Simulators (also referred to as Rundown Fixtures or Adapters) are required for accurate torque measurement for power-driven torque controlled tools (electric, hydraulic or pneumatic). They are not necessary or useful when measuring torque on manually-operated torque tools (screw-drivers, wrenches, etc.). They simulate the conditions found when using the tool in real-world conditions, allowing the speed of the power tool motor to ramp-up to normal operating speeds resulting in a more accurate and repeatable measurement of the torque. Joints are defined by the degrees of rotation or the increase in torque per degree of rotation. A soft joint ensures that a tool has more time to operate and typically produces more repeatable test results, contrarily the hard joint provides less time for the tool to operate and generally produces more variation.

Per ISO 5393;

HARD Joint, which is 30 degrees or less of rotation from "snug" to final.

MEDIUM Joint, which is generally 180 - 400 degrees of rotation from "snug" to final.

SOFT Joint, which is typically 720 degrees or more of rotation from "snug" to final.

They are typically fabricated from machined steel with the appropriate drive size as needed. Internally it is comprised of a series of Belleville washers, designed to compress as the bolt tightens. By varying the arrangement of these washers, various joint rates can be simulated soft, medium and hard. Unless otherwise, specified, Joint Simulators are configured to simulate a medium joint. The joint rates can be adjusted by the user by changing the orientation of the Belleville washers upside down.



Model	Range	Drive Size	Bolt Head Size	Thread Size
RDIOA-50	0,35Nm	1/4" Male Sq	3/16" Female Hex	1/4"-20
RDIOA-100	0,7Nm	1/4" Male Sq	3/16" Female Hex	1/4"-21
RDIOA-200	1,4Nm	1/4" Male Sq	3/16" Female Hex	1/4"-22
RDIA-10	1,13Nm	1/4" Male Sq	3/16" Female Hex	1/4"-23
RDIA-25	2,82Nm	1/4" Male Sq	3/16" Female Hex	1/4"-24
RDIA-50	5,64Nm	1/4" Male Sq	3/16" Female Hex	1/4"-25
RDIA-100	11,29Nm	1/4" Male Sq	3/16" Female Hex	1/4"-26
RDIA-150	16,9Nm	1/4" Male Sq	3/16" Female Hex	1/4"-27
RDIA-250	28,2Nm	3/8" Male Sq	5/16" Female Hex	3/8"-16
RDIA-500	56,49Nm	3/8" Male Sq	5/16" Female Hex	3/8"-17
RDIA-750	84,73Nm	3/8" Male Sq	5/16" Female Hex	3/8"-18
RDIA-1000	112,98Nm	3/8" Male Sq	5/16" Female Hex	3/8"-19
RDFA-50	67,79Nm	1/2" Male Sq	5/16" Female Hex	3/8"-20
RDFA-100	135,58Nm	1/2" Male Sq	1-1/8" Male Hex	3/4"-10
RDFA-150	203,37Nm	1/2" Male Sq	1-1/8" Male Hex	3/4"-10
RDFA-250	338,95Nm	1/2" Male Sq	1-1/8" Male Hex	3/4"-10
RDFA-500	667,90Nm	3/4" Male Sq	1-1/2" Male Hex	1"- 8
RDFA-600	813,49Nm	3/4" Male Sq	1-1/2" Male Hex	1"- 8
RDFA-750	1016,86Nm	3/4" Male Sq	1-1/2" Male Hex	1"- 8
RDFA-1000	1355,81Nm	1" Male Sq	1-1/2" Male Hex	1"-8
RDFA-2000	2711,63Nm	1-1/2" Male Sq	3/4", 1" or 1-1/2" Female Sq	NA
RDFA-2500	3389,54Nm	1-1/2" Male Sq	3/4", 1" or 1-1/2" Female Sq	NA
RDFA-3000	4067,45Nm	1-1/2" Male Sq	3/4", 1" or 1-1/2" Female Sq	NA
RDFA-5000	6779,08Nm	1-1/2" Male Sq	3/4", 1" or 1-1/2" Female Sq	NA

