DYNATORQUE
VALVE ACTUATORS AND ACCESSORIES

Miters & Spurs

Specifications: For Stand Alone Spur , Miter, and add–on Miter Gears

Definition

DynaTorque Spur and Miter Gears are suited for applications where maximum valve torque ratings have been accurately calculated. All units have been designed to withstand loads far in excess of their rated torques. Gear boxes in this category are totally enclosed, weatherproof and permanently lubricated. Units are suitable for use in all handwheel and chainwheel applications.

Model numbers that end in “A” are stand alone models that are not made to close couple to existing products. These models have input (handwheel shaft) and output shaft connections. Models that do not end in “A” are designed to close couple to DynaTorque quarter-turn worm gear and bevel gear products. These models have input (handwheel) shaft connections and use the input shaft from the primary operator for their output shaft connections. Models that do not end in “A” are offered as component parts that are assembled to primary operators.

Construction

Unit housings and covers are iron, gears are carbon steel and heat-treated carbon steel, shafts are carbon steel with yellow zinc coating, shaft seals are Buna-N rubber, housing to cover seals are styrene butadiene, bushings are oil impregnated copper nickel steel alloy, bearings are tapered roller and needle type.

Model	Unit Wgt. LBS.	Max. Output Torque Lb.-In.	Gear Ratio	Turns for 90 Deg.	Std. Output Shaft	Std. Mounting Pattern		Mech. Adv.
						Qty. & Size	Bolt Circle	
Miter Gears								
MT1	28	3000	1:1	1	NA	(4).406	1.250x2.250*	.9
MT1A	30	3000	1:1	1	1.000			.9
MT2	28	6000	2:1	2	NA			1.8
MT2A	30	6000	2:1	2	1.000			1.8
Spur Gears								
4:1	34	10000	4:1	4	NA	(4).406	1.250x2.250*	3.2
4:1A	36	10000	4:1	4	1.000	(4)1/2-13	2.00x2.750	3.2
6:1	34	12000	6:1	6	NA	(4).406	1.250x2.250*	4.8
6:1A	36	12000	6:1	6	1.000	(4)1/2-13	2.00x2.750	4.8

*Bolt patterns are offset to match standard spur and miter attachment patterns on faced operators. See product drawings.

Notes:

Formulas listed below will assist you in determining handwheels sizes and rim pull requirements based on your application.

To Find: Handwheel diameter for given output torque at a given rim effort.

Divide the output torque by the mechanical advantage and multiply the result by 2.
Then divide this result by the handwheel rim effort.

To Find: Rim effort for a given output torque with a given handwheel diameter.

Divide the output torque by the mechanical advantage and multiply the result by 2.
Then divide this result by the handwheel diameter.

Note: Handwheels are not included as part of the operator part list or price.

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