



DT
(Iron)

Specifications For Quarter-Turn Iron Manual Worm Gear Operators: Series DT

Definition

DYNATORQUE™ Commercial Grade Operators are suited for application where maximum valve torque ratings have been accurately calculated. All units have been designed to withstand loads far in excess of their rated torques. Operators in this category are totally enclosed, weatherproof and permanently lubricated. Units are suitable for use in all handwheel and chainwheel applications with the exception of the DT3 and DT7 (These actuators are not recommended for use with handwheels over 18" in diameter and are not recommended for use with any of our chainwheel options.)

Construction

Unit housings and covers are iron, with the exception of the DT1 which is cast steel, worms are heat-treated carbon steel, worm wheels are cast ductile iron, input shafts are carbon steel with yellow zinc coating, shaft and worm seals are Buna-N rubber, housing to cover seals are styrene butadiene, bushings are oil impregnated copper nickel steel alloy.

Model	Unit Wgt. LBS.	Max. Output Torque Lb.-In.	Gear Ratio	Turns for 90 Deg.	Std. Output Bore	Std. Key Size Sq.	Std. Mounting Pattern		Mech. Adv.	HDW Size Inches	Approx Rim Pull Lbs.
							Qty. & Size	Bolt Circle			
DT3	7	4,500	30:1	7.5	1.000	.250	(4)3/8-16	3.250	8.10	14	80
DT7	15	10,000	48:1	12	1.750	.375	(4)1/2-13	5.000	12.96	18	86
DT8	19	8,000	30:1	7.5	1.750	.375	(4)1/2-13	5.000	8.10	24	82
DT12	26	16,000	57:1	14.25	2.000	.375	(4)1/2-13	4.921	13.68	30	78
DT21	34	26,000	60:1	15	2.500	.500	(4)5-8-11	5.512	22.00	30	77
DT36	78	36,000	53:1	13.25	3.250	.750	(4)3-4-10	6.496	19.00	36	105
DT40	78	40,000	79:1	19.75	3.250	.750	(4)3/4-10	6.496	27.6	36	80
DT50*	105	50,000	212:1	53	3.250	.750	(4)3/4-10	6.496	60.80	20	80
DT54*	108	63,000	318:1	79.5	3.250	.750	(4)3/4-10	6.496	91.20	18	77
DT60	111	60,000	60:1	15	3.250	.750	(8)3/4-10	10.250	15.60	36	213
DT90*	145	90,000	240:1	60	3.250	.750	(8)3/4-10	10.250	49.92	36	100
DT140*	148	140,000	360:1	90	3.250	.750	(8)3/4-10	10.250	78.00	36	104
DT220*	402	220,000	600:1	150	6.250	1.5 x1	(8)1 1/8-7	14.016	150	36	81
DT300*	460	300,000	1200:1	300	6.250	1.5 x1	(8)1 1/8-7	14.016	264	30	76

*Indicates units with spur assist.

Notes:

1. Handwheels listed are recommended sizes to produce full rated torque with the rim effort listed. The formulas listed below will assist you in determining alternate handwheels sizes and rim pull requirements based on your application. Hand wheels are not included as part of the operator part list or price.

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.

2. Bore, keyways, and mounting patterns listed are for DYNATORQUE standards. Please consult factory for special bore treatments, costs, and deliveries.

3. Standard mounting patterns on the DT3 through the DT54 are (4) tapped holes straddling centerline at 45 degrees. Standard mounting patterns on the DT60 through the DT300 are (8) tapped holes straddling at 22.5 degrees.

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