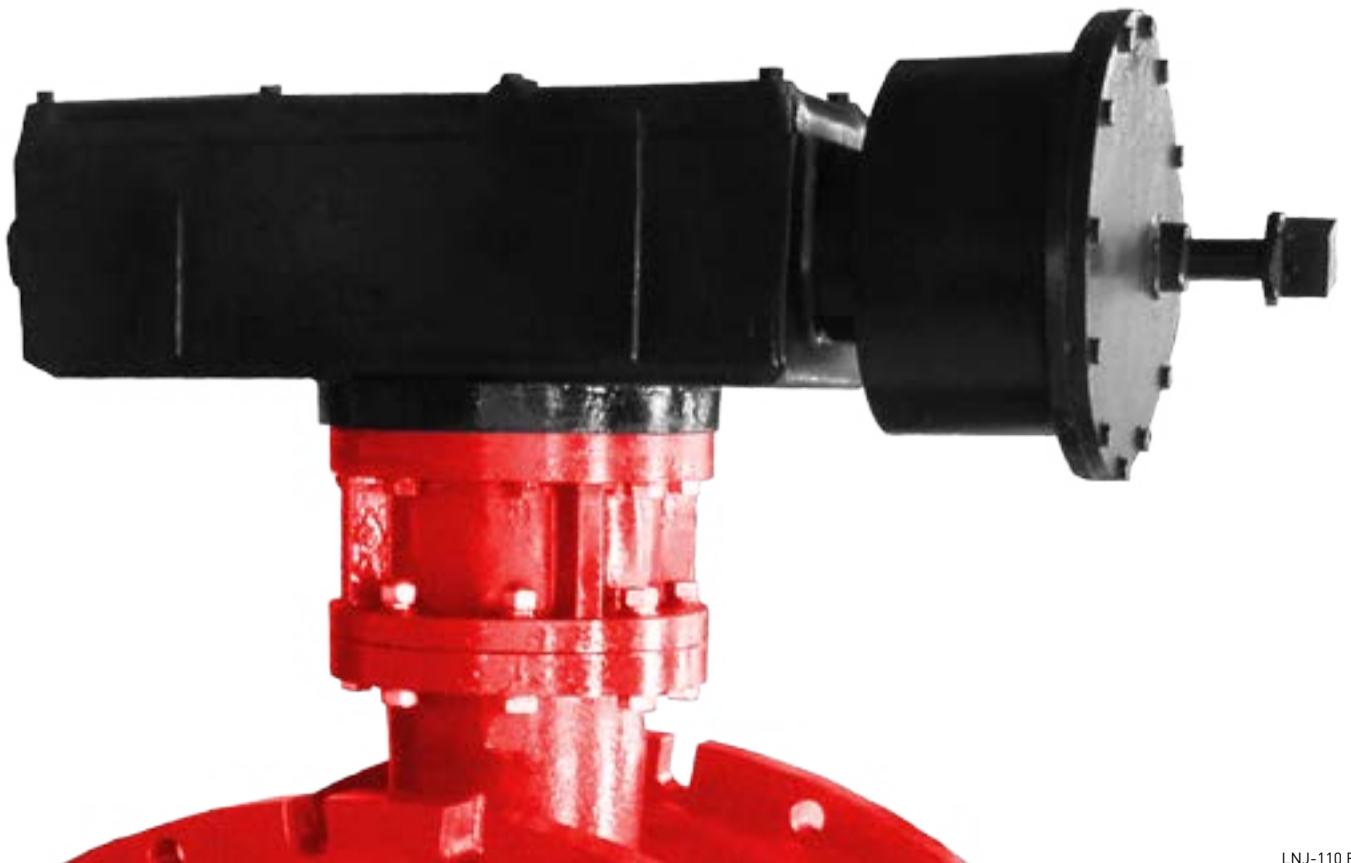




SERIES LNJ
Traveling Nut Gearboxes
to AWWA C504 and AWWA C507



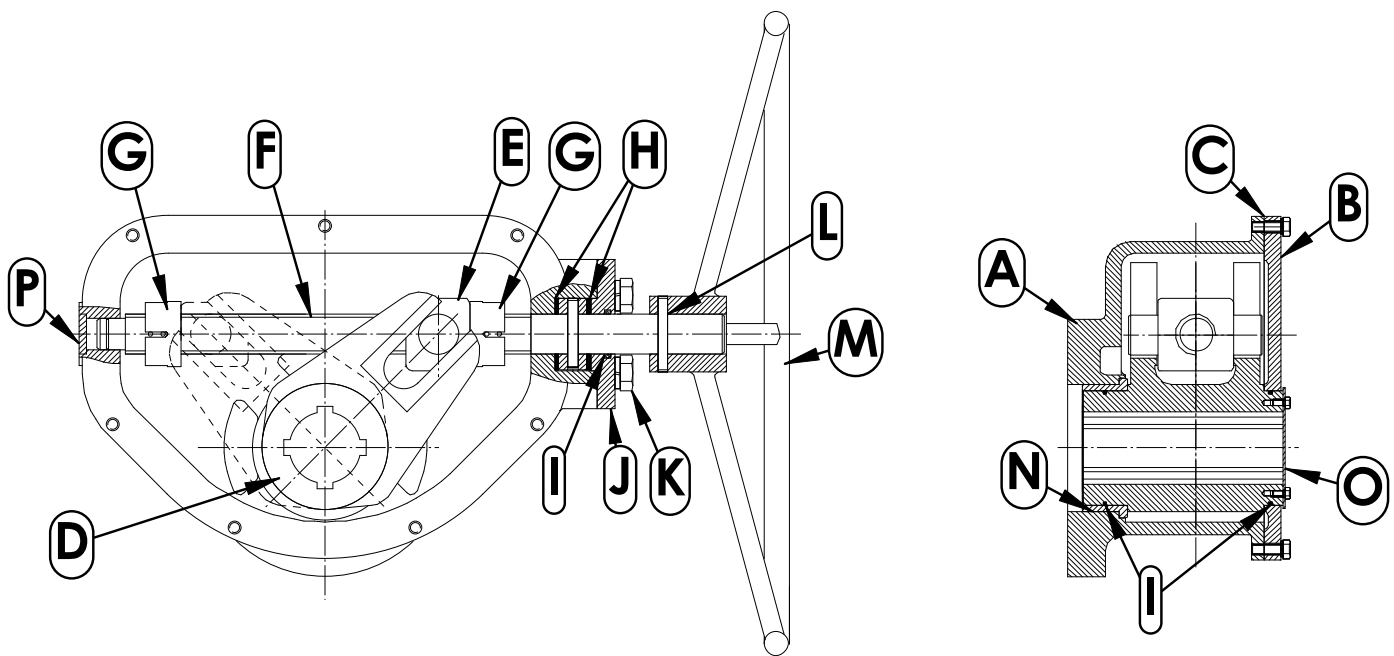


Overview

VSI Series LNJ traveling nut gearboxes are heavy duty screw and carriage type gear operators designed to exceed the AWWA C504 and C507 requirements for manual valve operation. They are available with a 2" nut operator for buried, submersible, or vault service, with handwheels for in plant service, and with chainwheels for hard to reach locations. Each actuator can be mounted in various positions for maximum convenience in installation and operation. When purchased with a valve, the Series LNJ actuator will come installed on the valve ready to install in the service line.

All Series LNJ gearboxes utilize standard Manufacturers Standardization Society of Valves and Fittings (MSS) or International Organization for Standardization (ISO) standardized mounting patterns. This allows the gearboxes to be installed on VSI or other's valves without any required brackets or adapters. The gearboxes simply slide on and bolt with standard bolts to the valve bonnet; no need to disassemble the gearbox.

Materials of Construction



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ITEM	DESCRIPTION	MATERIAL
A	BODY	CAST IRON
B	COVER	CAST IRON
C	GASKET	NBR
D	YOKE	DUCTILE IRON
E	CROSSHEAD	ALUMINUM BRONZE
F	SHAFT	ALLOY STEEL
G	STOP NUTS	ALLOY STEEL
H	THRUST BEARINGS	ALLOY STEEL

ITEM	DESCRIPTION	MATERIAL
I	O-RINGS	NBR
J	CAP	CAST IRON
K	EXTERIOR HARDWARE	SS304
L	PIN	ALLOY STEEL
M	OPERATOR	CAST IRON
N	YOKE BEARING	ALUMINUM BRONZE
O	INDICATOR	STEEL
P	CAP	STEEL



Sizing Guide

When possible the best course to size Series LNJ gearboxes is to select the range of gears with a standardized mounting pattern matching the valve it is to be mounted to. From these narrowed sizes, select the gearbox with the lowest rated max torque that will operate the valve in its expected highest torque scenario for the project.

Model	LNJ60	LNJ80	LNJ140	LNJ200
Mounting Patterns Available	FA07, FA10, FA12 F07, F10, F12	FA07, FA10, FA12 F07, F10, F12	FA12, FA16 F12, F16	FA12, FA16 F12, F16
Max Output Torque (Ftlbs)	442.5	1106	2655	4794
MA at End of Travel	3.5	4.6	8.2	11.7
MA at 50% Travel	1.7	2.3	4.1	5.8
Max Stem Diameter (in)	1.125	1.575	1.965	2.365
Basic Ratio	60:1	80:1	140:1	200:1
Turns to Open/Close	15	20	35	50
Weight (lbs)	32.0 (36.9-F/FA07)	43.0 (47.9-F/FA07)	110.2	154.3

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Waterworks Tested

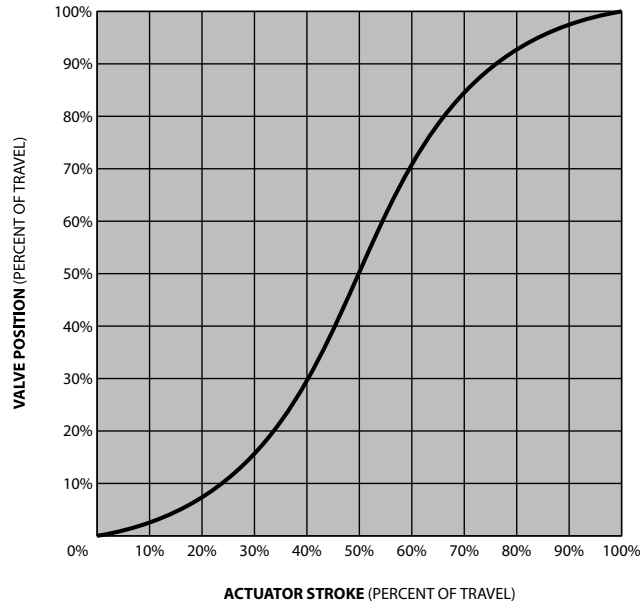
All Series LNJ traveling nut gearboxes are designed and tested to meet the stringent requirements of AWWA C504 and C507:

- ✓ Integral adjustable end of travel stop-limiting
- ✓ Design verification tested to 10,000 cycles
- ✓ Design verification tested to withstand a 300 ftlb input
- ✓ Self-locking design
- ✓ Meets maximum operating torque requirements when properly sized (refer to standard)

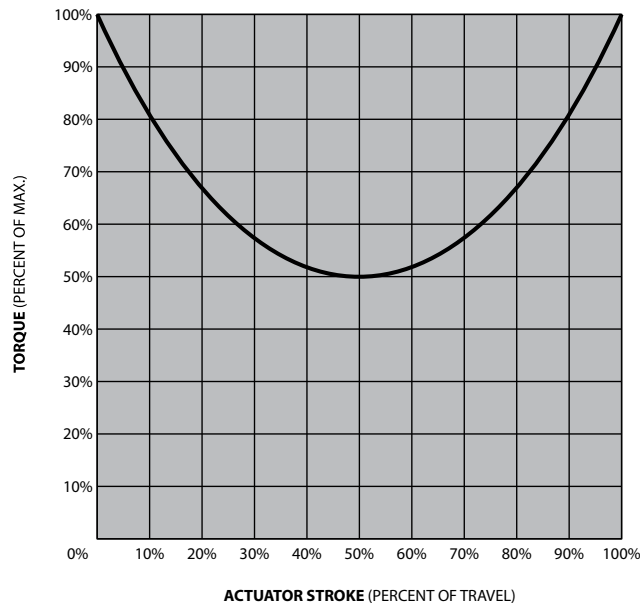


Actuator Characteristics

Traveling nut gearboxes is the ideal manual actuation option because of its characterized travel. The relationship of input and output are not linear, but rather matched to the characteristics of butterfly and ball valves where the best controllability is near the lower 30% of travel. The characteristic curve below illustrates the relationship between input and output positions of the Series LNJ Traveling Nut Gearboxes.

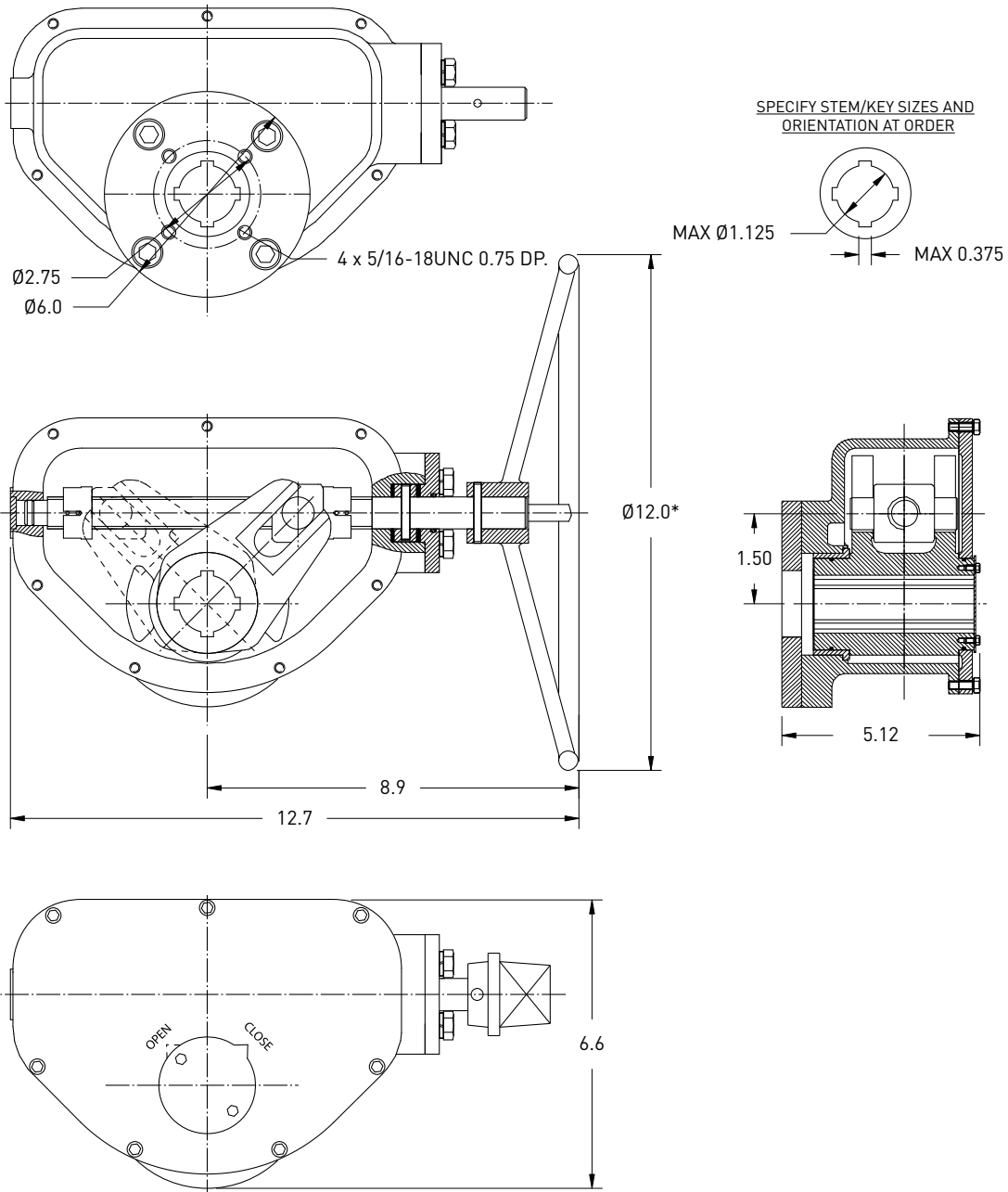


Because of the characterized travel of the Series LNJ gearbox, torque profiles are matched well to butterfly and ball valve operation. For a constant input force, the output force is equal to its maximum near the full open and closed position that correlates where the valve run torque would combine with valve seating torque to create the highest needed torque.



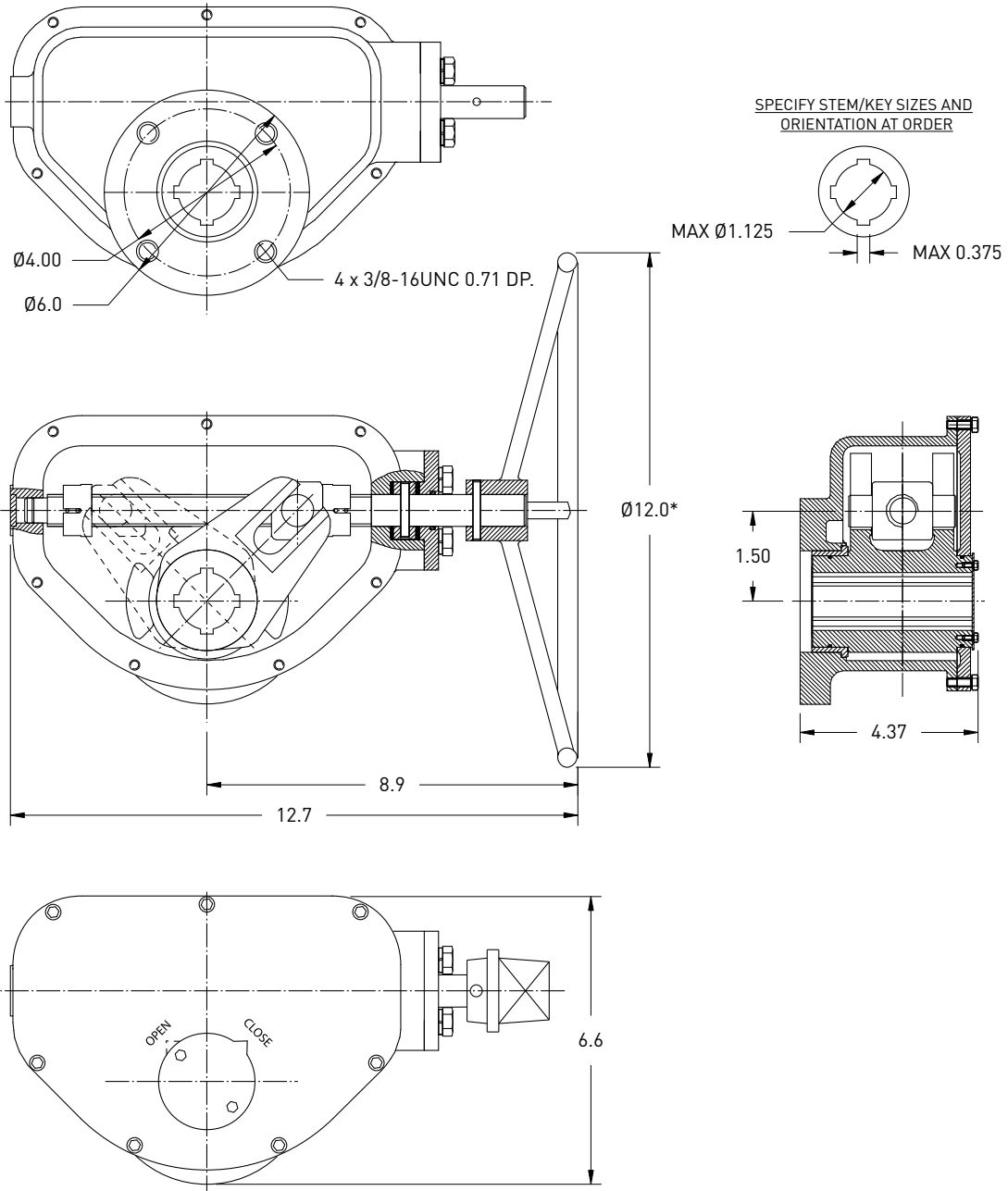


Model LNJ60 - FA07 Base





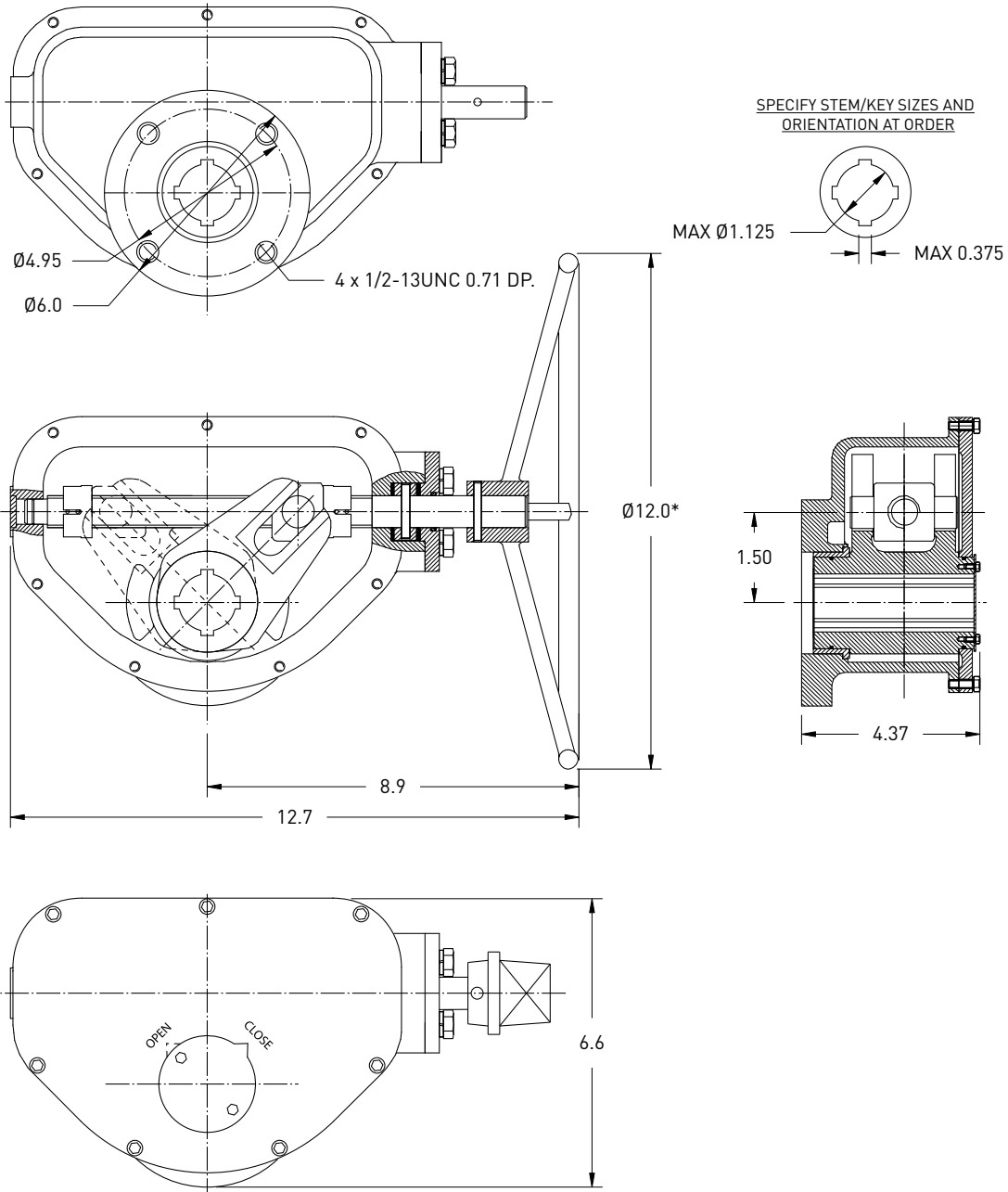
Model LNJ60 - FA10 Base



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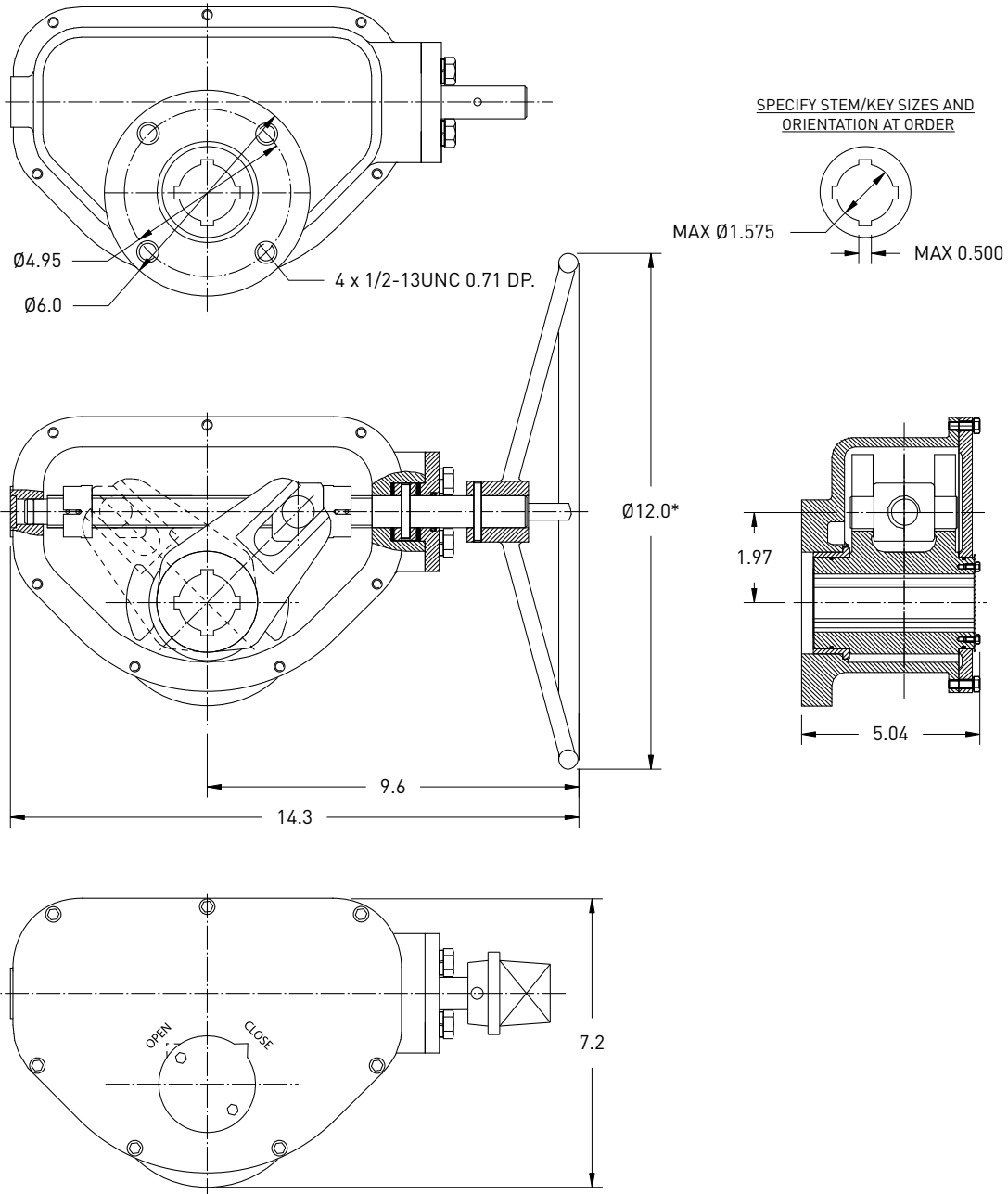


Model LNJ60 - FA12 Base





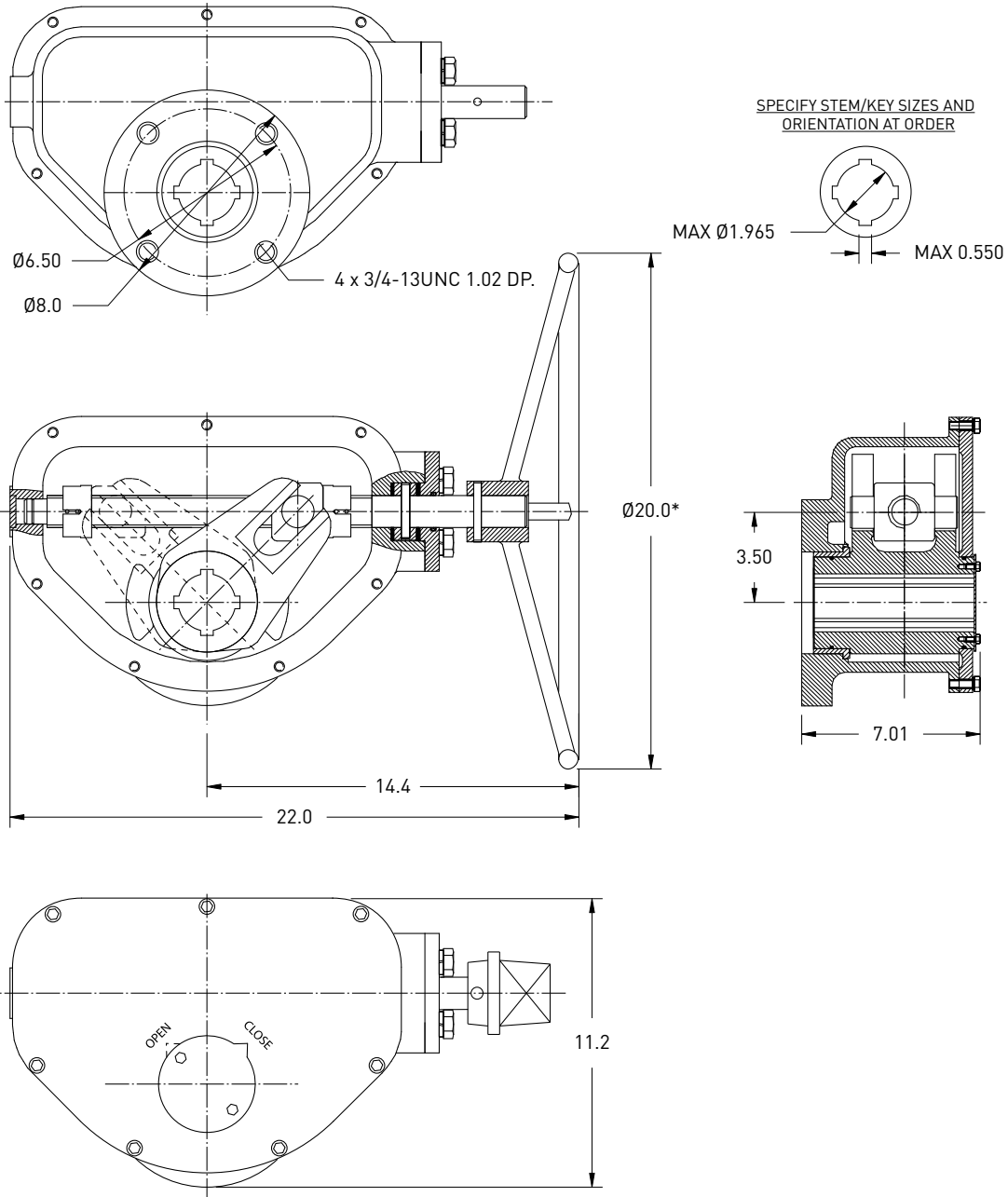
Model LNJ80 - FA12 Base



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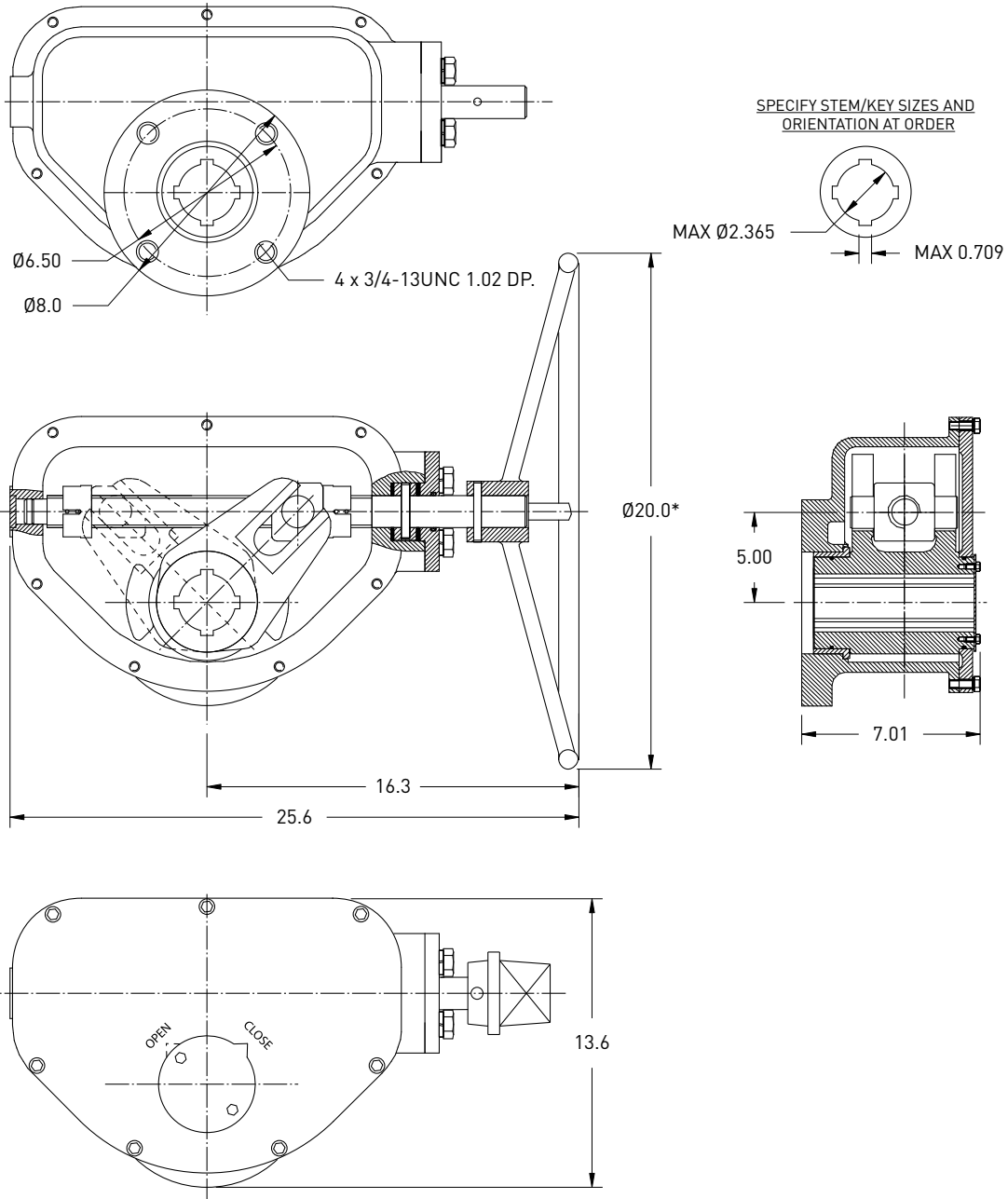


Model LNJ140 - FA16 Base





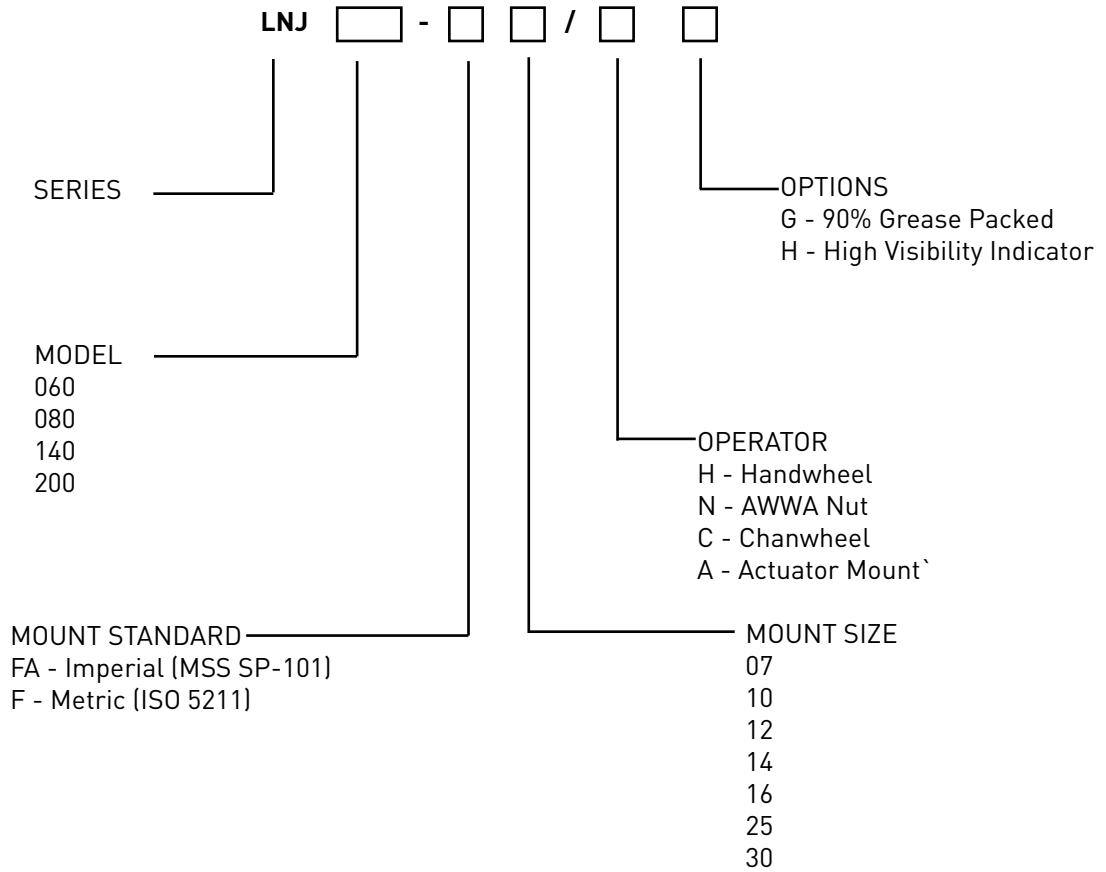
Model LNJ200 - FA16 Base



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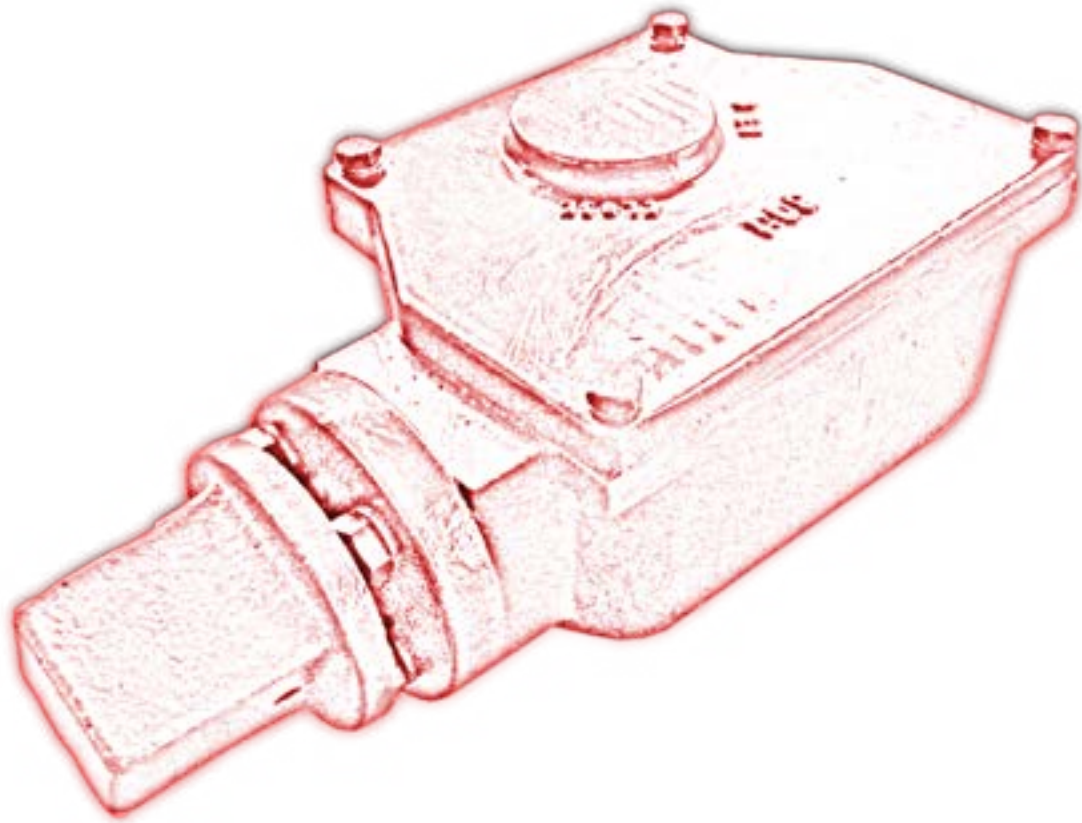
PART NUMBER MATRIX



EXAMPLE:

LNJ080-FA12/N-G

Size 80 traveling nut actuator with an imperial FA12 base, 2" nut operator, and grease packed for submerged service. [Stem and key size must also be specified at order]



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