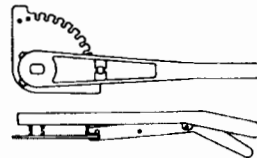
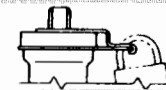
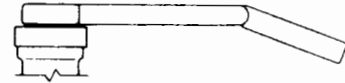
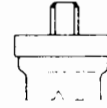


MANUAL ACTUATOR ASSEMBLIES FOR NORRIS VALVES

MANUAL HANDLE ASSEMBLIES FOR 2"-12" R & M 200, 285 SERIES

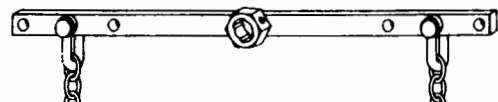
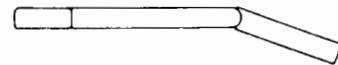
Note: Gear operators are recommended for 6" and larger valves where line velocity exceeds 5 fps.

Model	Description
1J	Standard on-off unitized detent topworks. A wrench may be used to operate the valve.
1S	5 position detent topworks. Locates position of valve disc every 22.5°
1JS	5 position topworks, 17-4 stainless steel locates position of valve disc every 22.5°
1A	Standard on-off handle with 1J detent topworks. Aluminum 2"-8", ductile iron 10"-12". Optional ductile iron handle for 2"-8".
1M	Standard on-off handle with 1S 22.5° detent topworks.
1AM	Standard Aluminum on-off handle with 1JS topworks.
1P	On-off detent topworks with padlocking device. (Padlock not included.)
1Q	Standard on-off topworks and handle with padlocking device. (Padlock not included.)
1E	Infinite position topworks with memory stop. "Position window" indicates valve disc position.
1N	Standard handle with 1E infinite position topworks.
1F	Squeeze trigger 10 position throttling handle.
1FM	Squeeze trigger 10 position throttling handle (Marine trim).



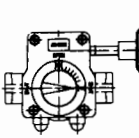

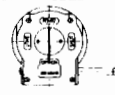
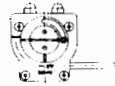
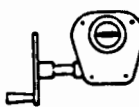
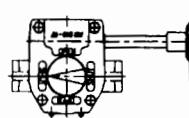

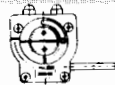

ACCESSORIES FOR 1J, 1P AND 1E TOPWORKS

Description	
1A	Handle only, aluminum
1A	Handle only, ductile iron
	AWWA Square Nut
1K	Wrench Adapter
	Overhead "T" Handle
	Chain for Overhead "T"
	Extension "T" Handle (up to 24" long)



MECHANICAL ACTUATOR ASSEMBLIES FOR NORRIS VALVES

GEAR ACTUATOR ASSEMBLIES FOR 2"-36" R & M SERIES

Model	Description	
2R	Standard weatherproof worm and gear actuator with cast aluminum case and cover. 2"-12"	
2RM	Weatherproof worm and gear actuator, stainless steel shaft, bronze sector gear, aluminum case epoxy coated for marine service. 2"-12"	
2RL	Weatherproof worm and actuator with locking device. (Padlock not included.) 2"-12"	
2RT	Weatherproof worm and gear actuator with target indicator for service where pipeline is not visible, not UL tagged. 2"-12"	
2R-Bal	Weatherproof gear actuator Aluminum case and cover with Balance/Memory Stop	
2K	Weatherproof worm and gear actuator Aluminum case and cover. (Special) 2"-5"	
2KM	Weatherproof worm and gear actuator Aluminum case and cover. Marine trim. (Special) 2"-5"	
2E	Weatherproof worm and gear actuator Aluminum bronze case and cover. Marine trim. (Special) 2"-12"	
2ES	Submerged/buried service gear actuator Aluminum bronze case and cover. (Special) No indicator. 2"-12"	
2T	Weatherproof worm and gear actuator with cast iron case and cover. 2"-36"	
2TM	Weatherproof worm and gear actuator, stainless steel shaft, bronze sector gear, cast iron case epoxy coated for marine service. 2"-36"	
2TL	Weatherproof worm and gear actuator with locking device. (Padlock not included.) 2"-36"	
2TS	Submergible worm and gear actuator for fresh or salt water. NO handwheel or indicator. 2"-36"	
2T-Bal	Weatherproof gear actuator cast iron case and cover with Balance/Memory Stop. 2"-36"	

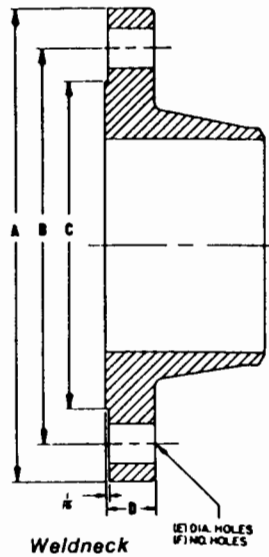
NOTE:

1. Additional accessories can be provided upon special request.
2. When chain wheel is desired in place of standard handwheel, "W" is added as suffix to gear descriptions, i.e., 2RW, 2TW.

ANSI 150 LB. FLANGE

ANSI 300 LB. FLANGE

Size	A	B	C	D	E	F	A	B	C	D	E	F
2	6.00	4.75	3.63	.75	.75	4	6.50	5.00	3.63	.875	.75	8
2.5	7.00	5.50	4.13	.88	.75	4	7.50	5.88	4.13	1.00	.88	8
3	7.50	6.00	5.00	.94	.75	4	8.25	6.63	5.00	1.13	.88	8
3.5	8.50	7.00	5.50	.94	.75	8	9.00	7.25	5.50	1.13	.88	8
4	9.00	7.50	6.19	.94	.75	8	10.00	7.88	6.19	1.25	.88	8
5	10.00	8.50	7.31	.94	.88	8	11.00	9.25	7.31	1.38	.88	8
6	11.00	9.50	8.50	1.00	.88	8	12.50	10.63	8.50	1.44	.88	12
8	13.50	11.75	10.63	1.13	.88	8	15.00	13.00	10.63	1.63	1.00	12
10	16.00	14.25	12.75	1.19	1.00	12	17.50	15.25	12.75	1.88	1.13	16
12	19.00	17.00	15.00	1.25	1.00	12	20.50	17.75	15.00	2.00	1.25	16
14	21.00	18.75	16.25	1.38	1.13	12	23.00	20.25	16.25	2.13	1.25	20
18	25.00	22.75	21.00	1.56	1.25	16	28.00	24.75	21.00	2.38	1.38	24
20	27.50	25.00	23.00	1.69	1.25	20	30.50	27.00	23.00	2.50	1.38	24
22	29.50	27.25	25.25	1.81	1.38	20	33.00	29.25	25.25	2.63	1.63	24
24	32.00	29.50	27.25	1.88	1.38	20	36.00	32.00	27.25	2.75	1.63	24
26	34.25	31.75	29.25	2.00	1.38	24	38.25	34.50	29.50	3.13	1.75	28
28	36.50	34.00	31.25	2.06	1.38	28	40.75	37.00	31.50	3.38	1.75	28
30	38.75	36.00	33.75	2.13	1.38	28	43.00	39.25	33.75	3.63	1.88	28
32	41.75	38.50	35.75	2.25	1.63	28	45.25	41.50	36.00	2.88	2.00	28



- A.) See Price List for capscrews required to bolt Norris Lug Body Valves to flanges.
- B.) See R200 Brochure for thru-bolts required to mount Norris Span Valves to flanges.



A DOVER COMPANY

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