

Masoneilan™ Model 20 and 2R Handwheel



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Handwheel Model 2R

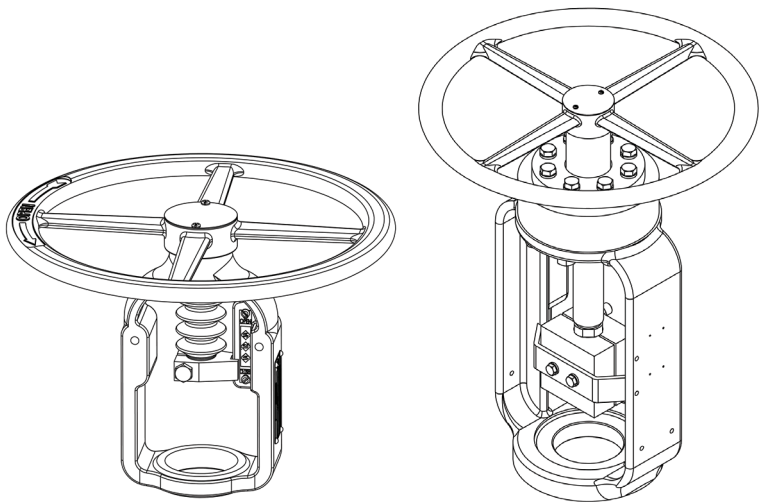
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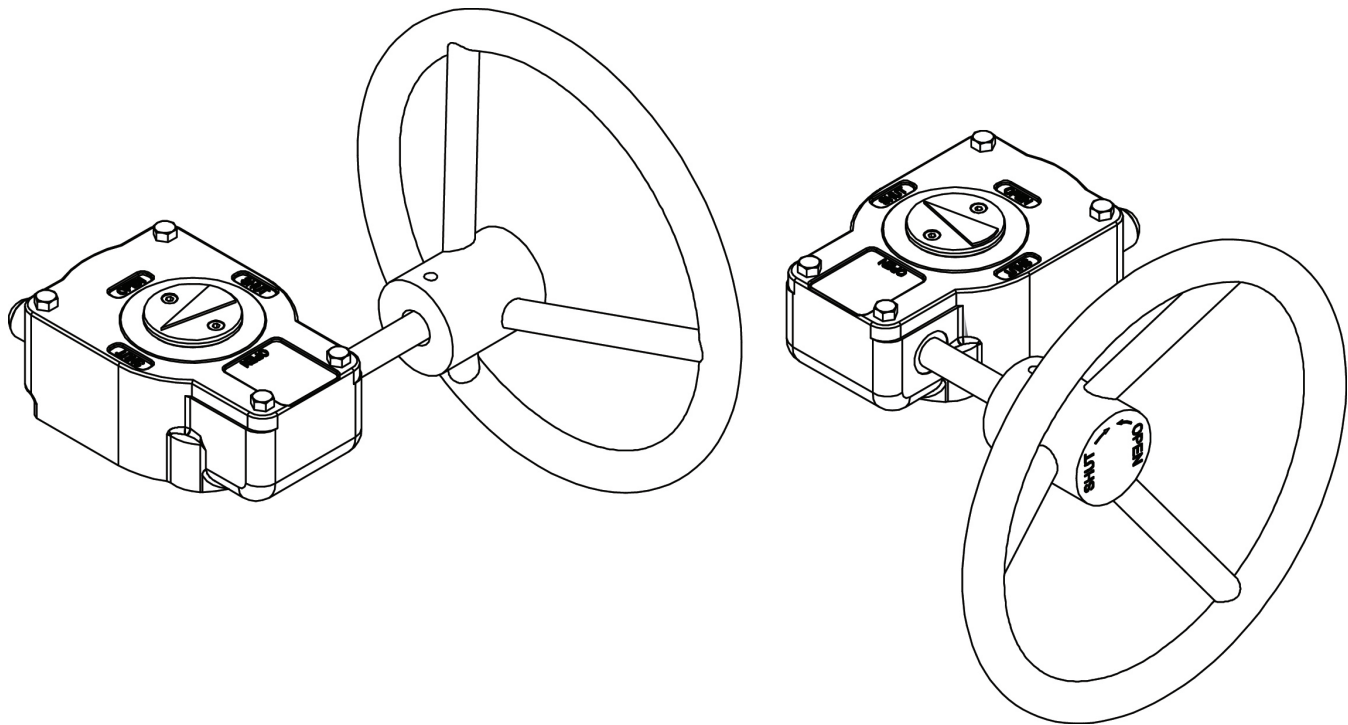
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Numbering System

1st	2nd
Handwheel Type	
20	Linear
2R	Rotary



Handwheel Model 20 (Linear)



Handwheel Model 2R (Rotary)

Handwheel Model 20

Size 12 and 18 with Stem Boot

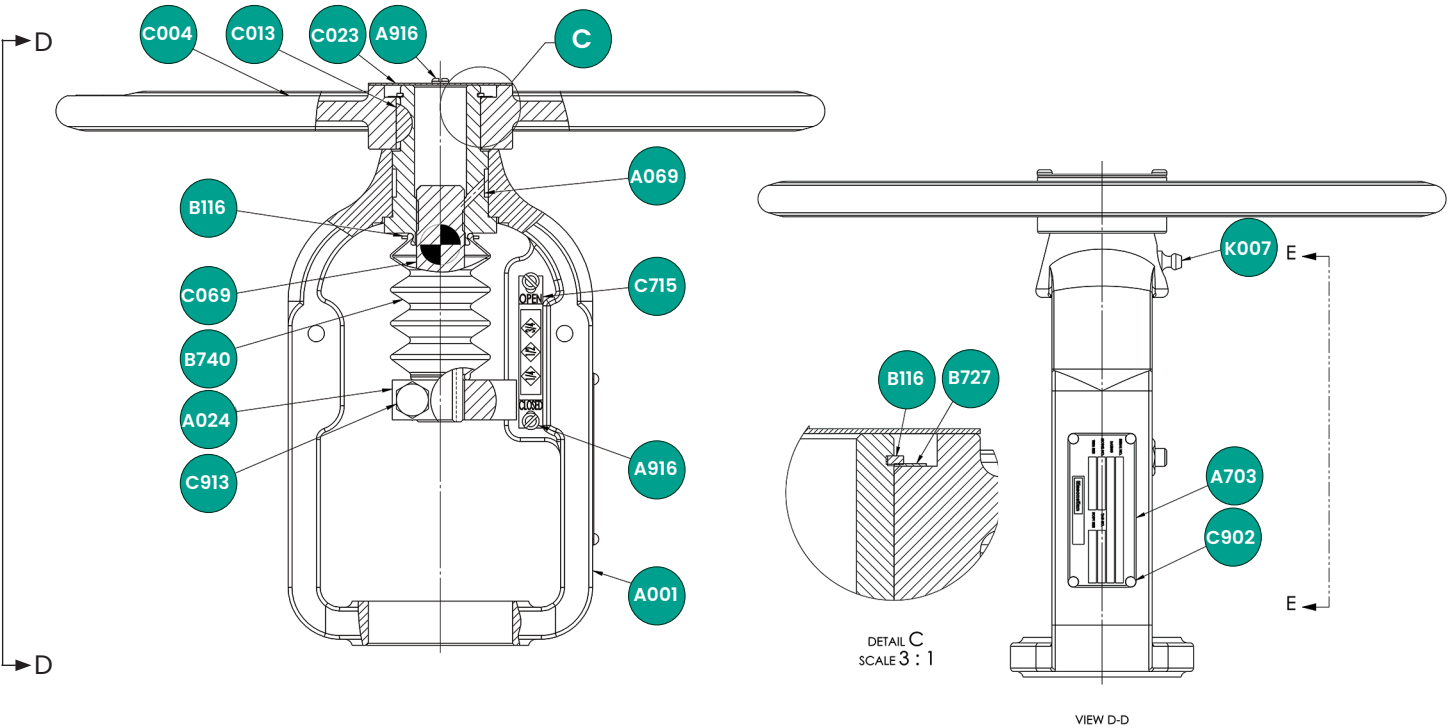


Figure 1

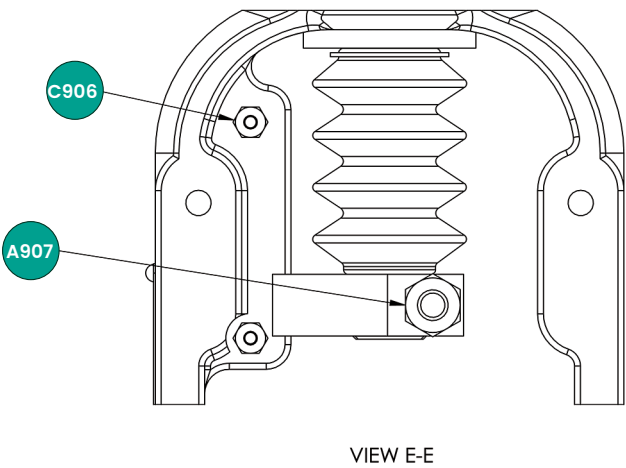


Figure 2

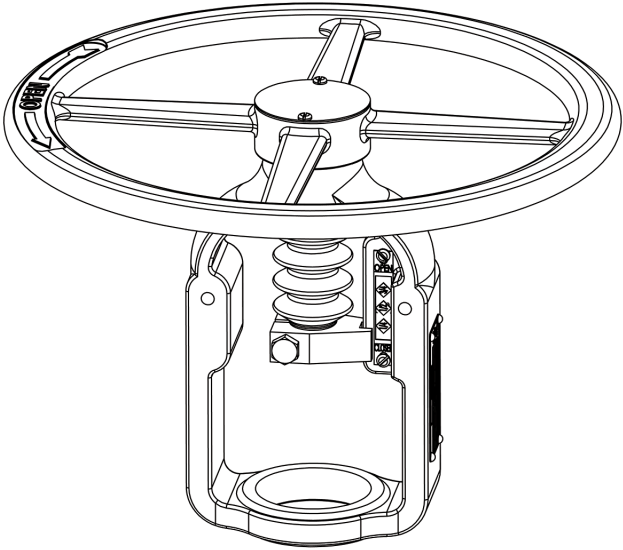


Figure 3

Handwheel Model 20

Size 12 and 18 with Travel Stop

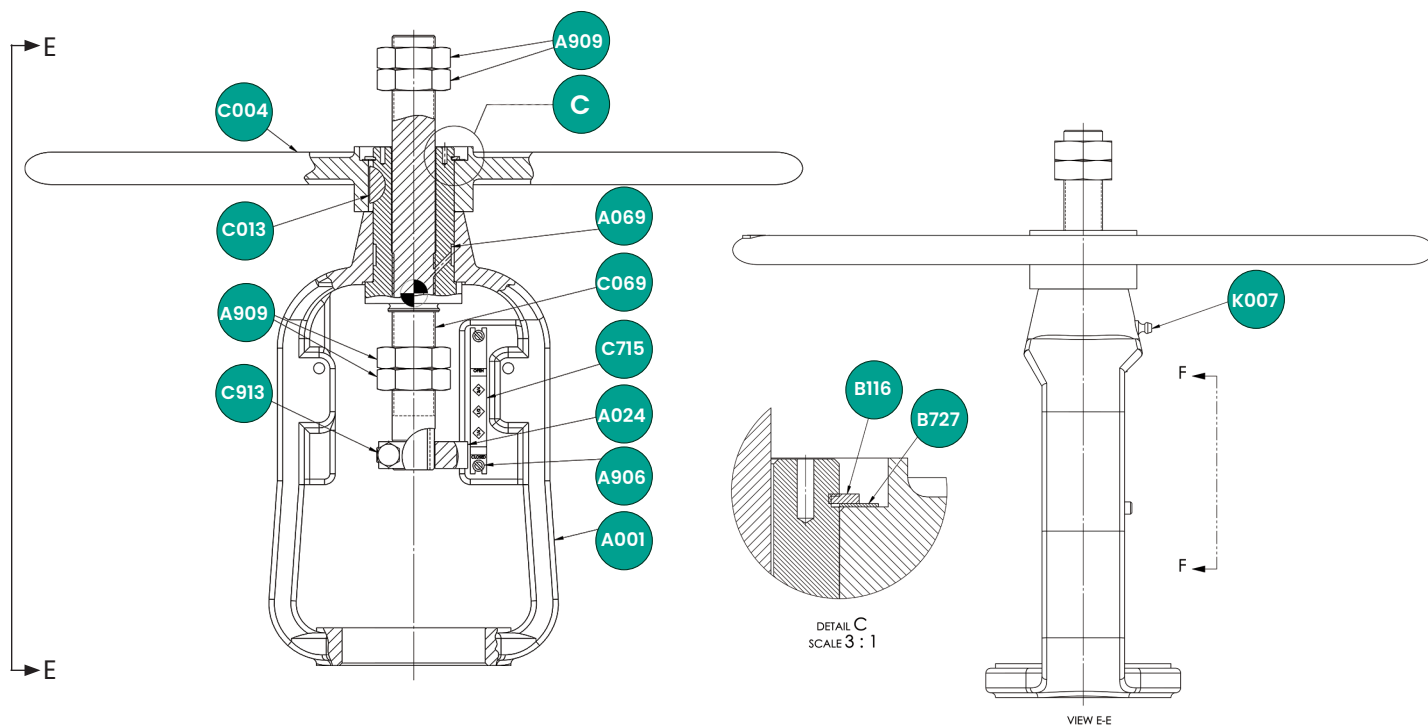


Figure 4

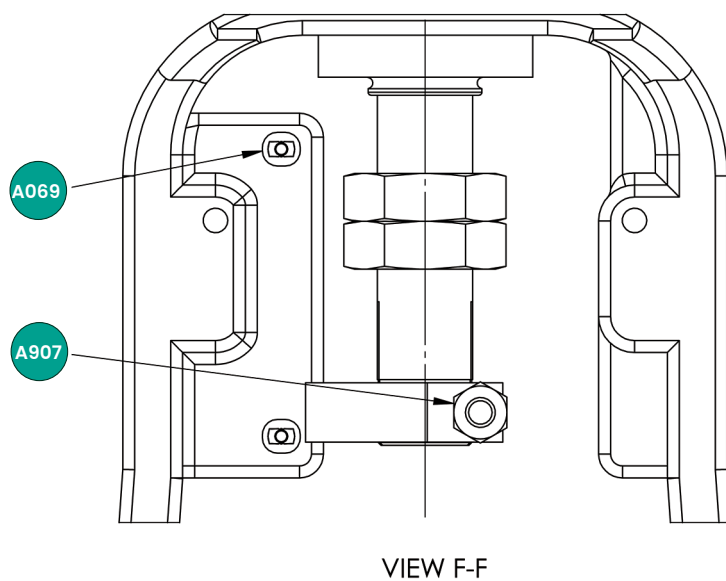


Figure 5

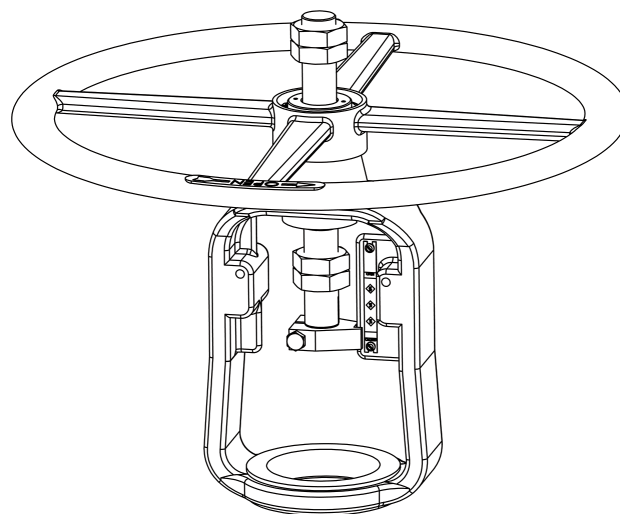
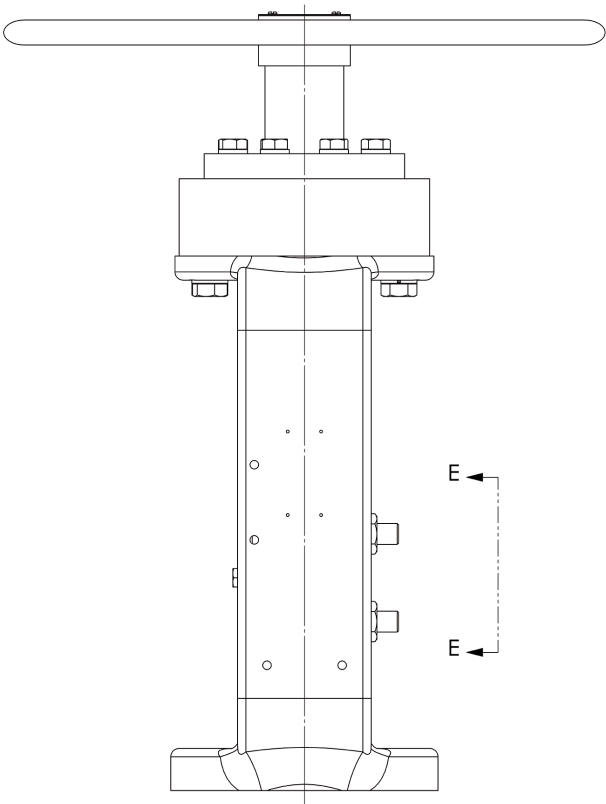
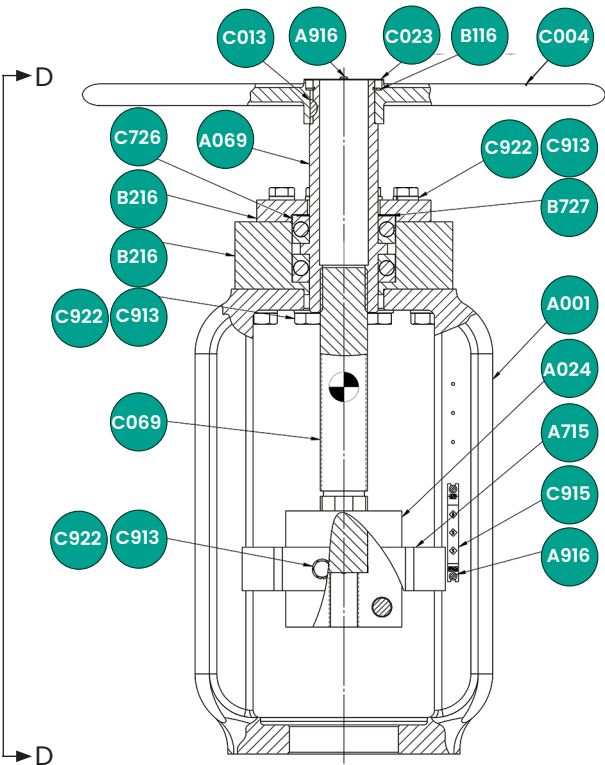


Figure 6

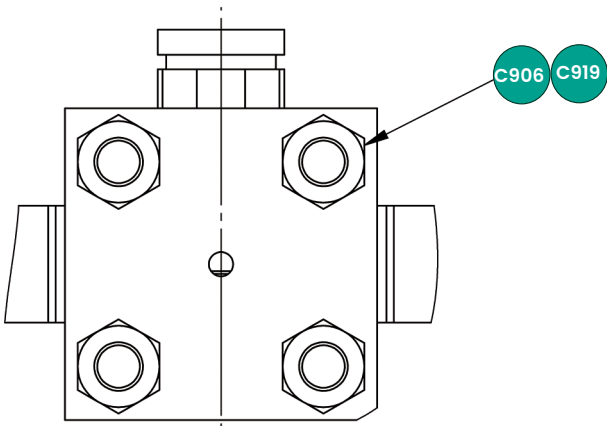
Handwheel Model 20

Size 18 with Stem Block



VIEW D-D

Figure 7



SECTION VIEW E-E

Figure 8

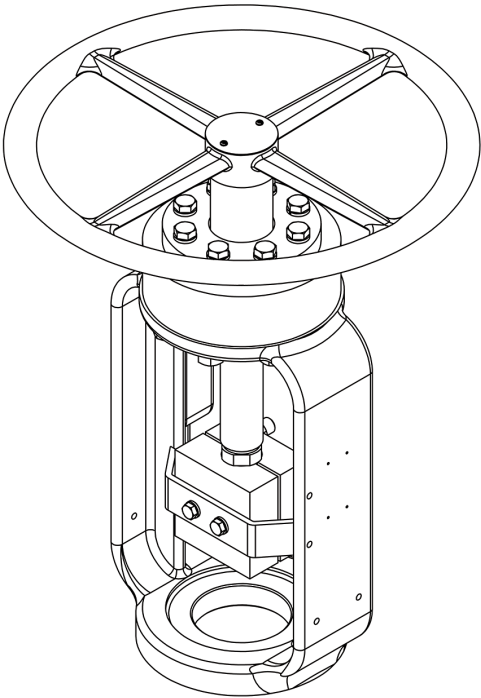


Figure 9

Handwheel Model 20

Materials of Construction

Ref. No	Temperature Range	-22°F (-30°C)	+449°F (+232°C)
	Description	Standard Material	
A001	YOKE	FERRITIC DUCTILE IRON	
A024	STEM LOCK	CARBON STEEL	
A069	JACK NUT	COPPER ALLOY	
A703	SERIAL PLATE	STAINLESS STEEL	
A715	TRAVEL INDICATOR	CARBON STEEL	
A904	NUT, HEX.JAM	CARBON STEEL	
A907	NUT, HEX. HEAVY	CARBON STEEL, ZINC PLATE	
A909	NUT, LOCK	CARBON STEEL	
A916	SCREW, SLOTTED PAN HEAD	CARBON STEEL	
B116	CIRCLIPS (EXTERNAL)	CARBON STEEL	
B216	BEARING PLATE	CARBON STEEL	
B727	SHIM	BRASS PLATE	
B740	STEEM BOOT	NEOPRENE RUBBER WITH GLASS FABRIC	
C004	HANDWHEEL	FERRITIC DUCTILE IRON	
C013	HANDWHEEL KEY	CARBON STEEL	
C023	COVER PLATE	CARBON STEEL	
C069	JACK SCREW	CARBON STEEL	
C715	TRAVEL INDICATOR	STAINLESS STEEL	
C726	BEARING, THRUST BALL	CARBON STEEL	
C902	DRIVE SCREW	STAINLESS STEEL	
C903	TAPPER PIN	STAINLESS STEEL	
C906	NUT, HEX	CARBON STEEL, ZINC PLATE	
C913	HEX. HEAD CAP SCREW	CARBON STEEL, ZINC PLATE	
C915	SCREW, HEX.SOCKET HEAD CAP	CARBON STEEL, ZINC PLATE	
C919	STUD	CARBON STEEL	
C922	WASHER, SPRING LOCK	AUSTENITIC STAINLESS STEEL	
K007	FITTING KIT	CARBON STEEL, ZINC PLATE	
M924	SCREW FILLISTER	CARBON STEEL, ZINC PLATE	

Handwheel Model 20

Selection Data

Size	Stroke (in.)	Max. Stroke (in.)	Stem diameter Connection		Series	Spud diameter		Travel Stop	Stem Boot	Yoke Height	
			mm	in.		mm	in.			mm	in.
12	0.75	1.5	12.7	0.5	B	57.1	2.25	No	Yes	196.9	7.75
	1.5										
	0.75										
	1.25										
	0.75							Yes	No		
18	1	2.5	15.88	0.625	C	84.1	3.31	No	Yes	266.7	10.5
	2										
	1		19.1	0.75				Yes	No		
	2										
	3	3	19.1	0.75	D	84.1	3.31	No	No	304.8	12
	1.5	6	25.4	1	D	95.3	3.75	No	No	406.5	16
	2.5										
	0.75	3	25.4	1	D	84.1	3.31	No	No	304.8	12
	3	6	25.4	1	D	95.3	3.75	No	No	406.5	16
	3.75										
	6										
	1										
	2										

Handwheel Model 20

Selection Data – Stem Projection Details

Size	Stroke (in.)	Series	Stem Connection Type	Stem Projection (A)		Stem Projection (B)	
				mm	in.	mm	in.
12	0.75, 1.5	B	Stem boot	88.6	3.49	-	-
	1.25			87.8	3.46	-	-
	0.75		Travel stop	89.5	3.52	-	-
18	1, 2	C	Stem boot	115.1	4.53	-	-
	1, 2		Travel stop	115.1	4.53	-	-
	3	D	Stem block	130.2	5.13	159.7	6.29
	1.5, 2.5			111	4.37	158.6	6.24
	0.75			131.6	5.18	155.4	6.12
	3, 3.75			122.7	4.83	170.3	6.70
	1, 2, 6			111	4.37	158.6	6.24

Note: Above stem projection given in open condition only.

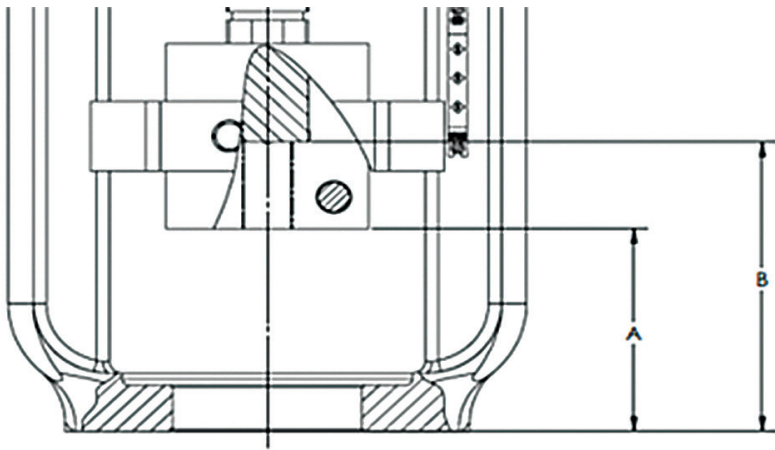


Figure 10 – Model 20 Stem Projection Details

Handwheel Model 20

Dimensions

Handwheel 20 Types	Spud Diameter		A		B	
	mm	in.	mm	in.	mm	in.
12 with Stem boot/Stem block	57.1	2.25	304.8	12	196.9	7.75
18 with Stem boot	84.1	3.31	457.2	18	266.7	10.5
18 with Stem block	84.1	3.31	457.2	18	304.8	12
18 with Stem block	95.3	3.75	457.2	18	406.5	16
18 with Travel stop	84.1	3.31	457.2	18	266.7	10.5

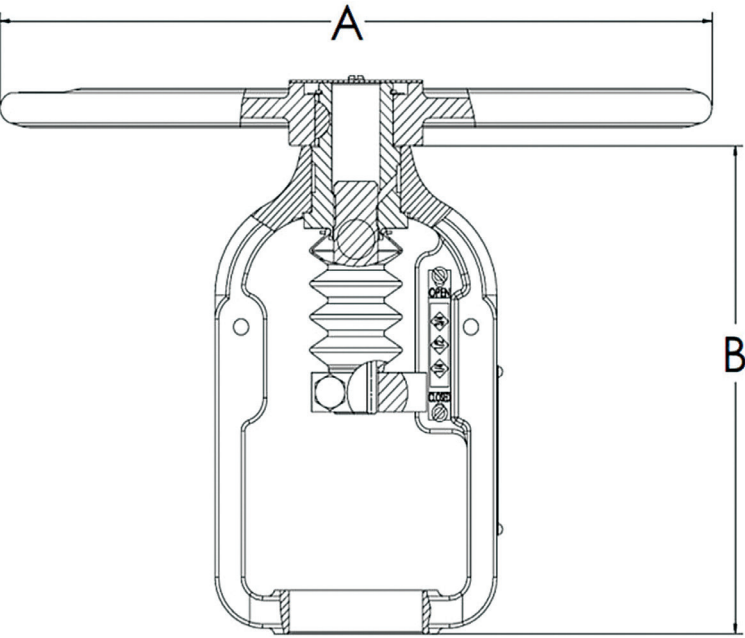


Figure 11 – Handwheel Model 20
Size 12 with stem boot

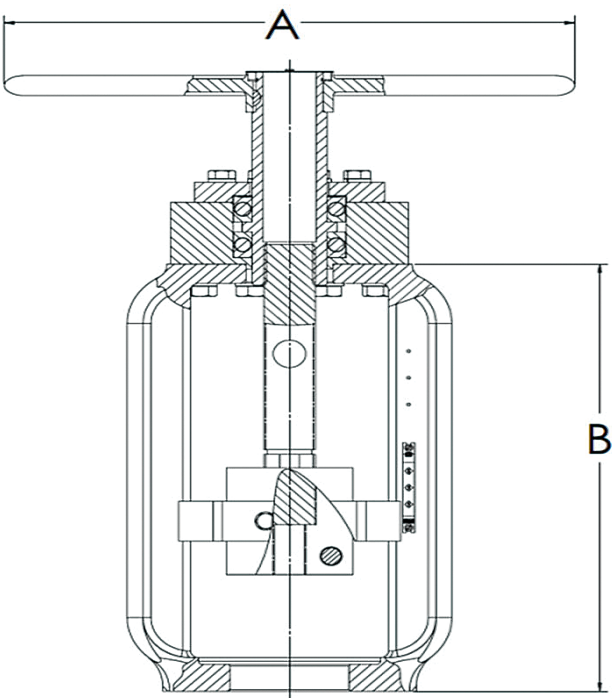


Figure 12 – Handwheel Model 20
Size 18 with stem block

Handwheel Model 20

Thrust Details

Size	Stroke (in.)	Max. Stroke	Stem Diameter Connection		Series	Spud Diameter		Max Output Thrust		Thrust Output (lb/in-lb) Opposing	Thrust Output (lb/in-lb) Favoring
			mm	in.		mm	in.	lbs.	N.		
12	0.75	1.5	12.7	0.5	B	57.1	2.25	3000	13345	6.7	8.6
	1.5										
	0.75										
	1.25										
	0.75										
18	1	2.5	15.88	0.625	C	84.1	3.31	6000	26689	4.7	5.7
	2										
	1	2.5	19.1	0.75	C	84.1	3.31	6000	26689	4.7	5.7
	2										
	3	3	19.1	0.75	D	84.1	3.31	12000	53379	7.3	12.9
	1.5	6	25.4	1	D	95.3	3.75	20000	88964	-	-
	2.5										
	0.75	3	25.4	1	D	84.1	3.31	12000	53379	7.3	12.9
	3	6	25.4	1	D	95.3	3.75	20000	88964	-	-
	3.75										
	6										
	1										
	2										

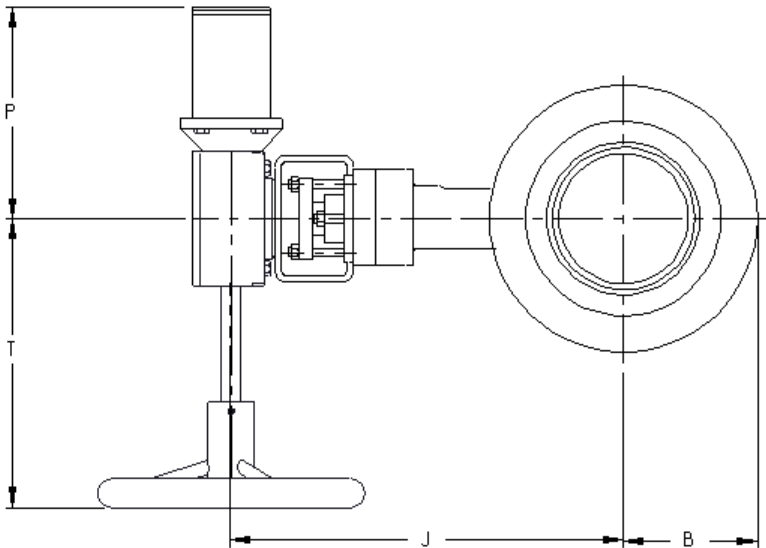
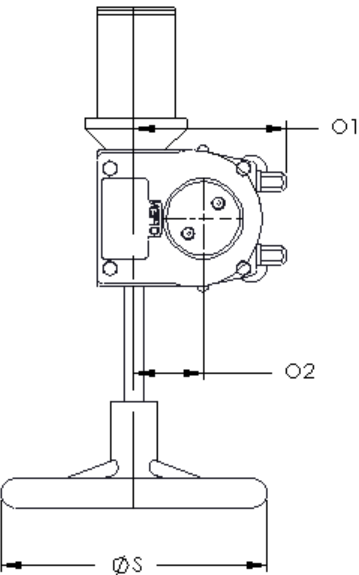
Weights

Size	Travel Stop	Stem Boot	Yoke Height		Weight (approx.) (kg)
			mm	in.	
12	No	Yes	196.9	7.75	6
	Yes	No			
18	No	Yes	266.7	10.5	14
	Yes	No			
	No	No	304.8	12	37
			406.5	16	54

Handwheel Model 2R

Dimensions

Actuator Model with Handwheel	O1		O2		øS		P		T	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
AB150 with 200 HW	100	3.93	42.5	1.67	200	7.87	40	1.57	157.5	6.2
AB210 with 200 HW	106	4.17	52	2.04	200	7.87	306	12.04	217	8.54
AB215 with 200 HW	106	4.17	52	2.04	200	7.87	307	12.08	217	8.54
AB550 with 300 HW	156.5	6.16	71	2.79	300	11.81	332	13.07	282	11.1
AB550 with 400 HW	156.5	6.16	71	2.79	400	15.75	332	13.07	282	11.1
IW 46 with 500 HW	211	8.3	102	4.02	500	19.69	286	11.26	376	14.8
AB1250 with 900 HW	214.5	8.44	104.5	4.11	900	35.43	358	14.09	356	14.02



Handwheel Model 2R

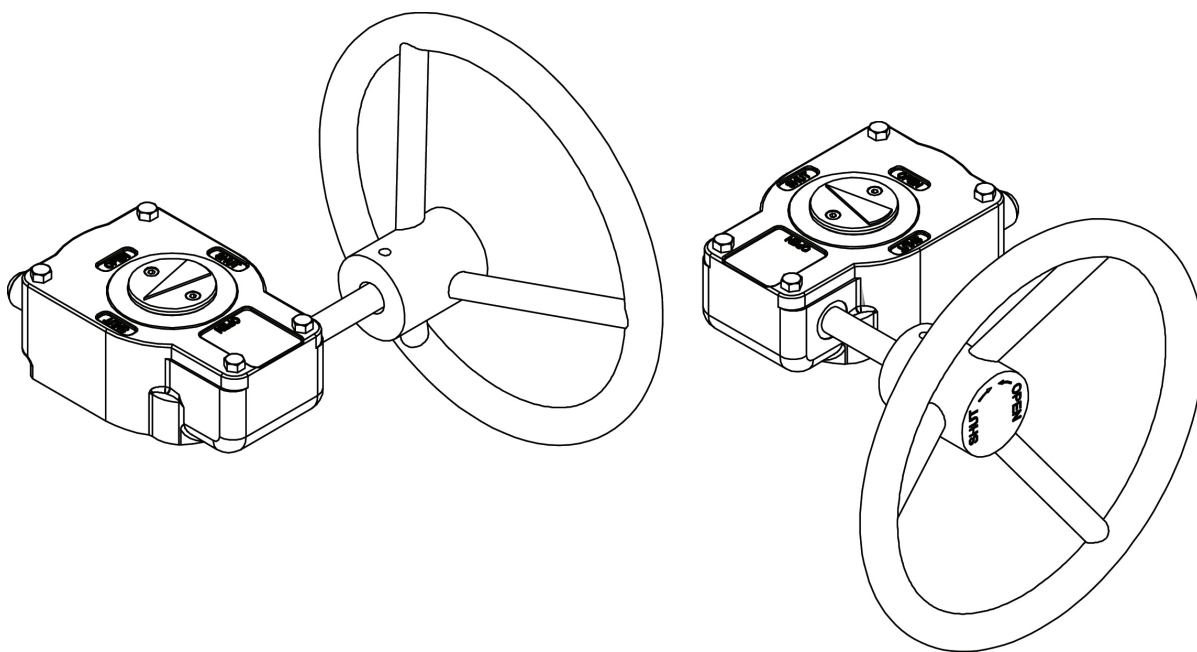
Dimensions

Valve Size		Actuator Model	J	
mm	in.		mm	in.
3	80	AB150	226.9	8.9
3	80	AB210	229.0	9.0
4	100		251.2	9.9
4	100	AB215	251.2	9.9
6	150		290.7	11.4
8	200		328.8	12.9
10	250		400.2	15.8
6	150	AB550	302.6	11.9
8	200		340.7	13.4
10	250		412.1	16.2
12	300		447.0	17.6
14	350	AB1250	552.6	21.8
16	400		657.6	25.9
12	300	IW46	456.5	18
14	350		554.6	21.8
16	400		659.6	26

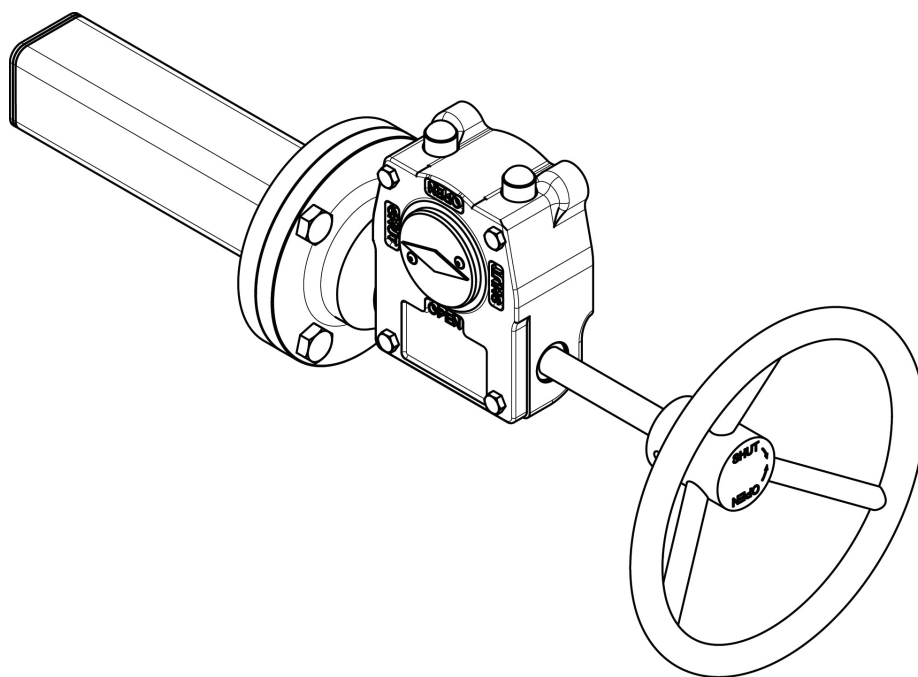
Weights

Model	kg	lb
AB150 40:1	3.5	7.7
AB210 37:1	10	22.0
AB215 37:1	10	22.0
AB550 34:1	15	33.1
IW 46 92:1	38.5	84.9
AB1250 55:1	27	59.5

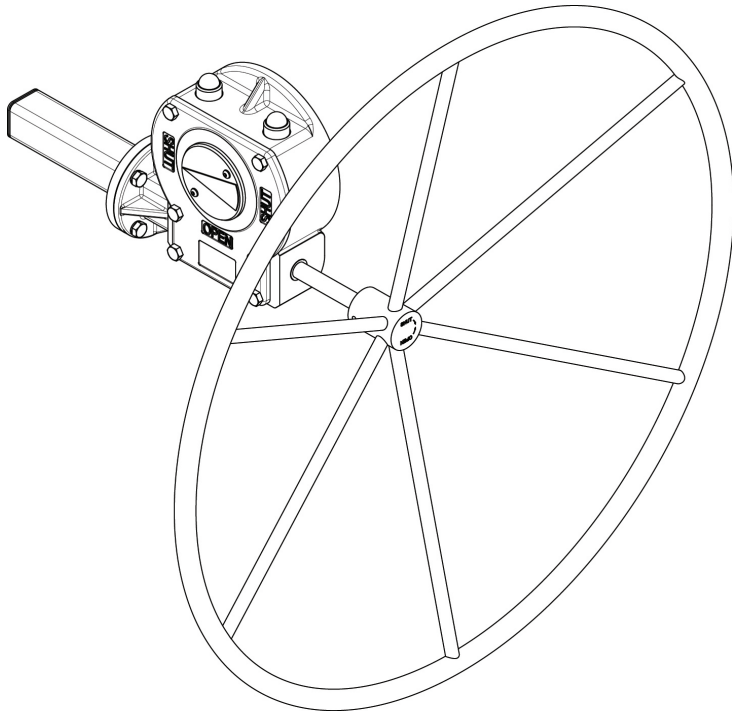
2R Handwheel - Model AB150



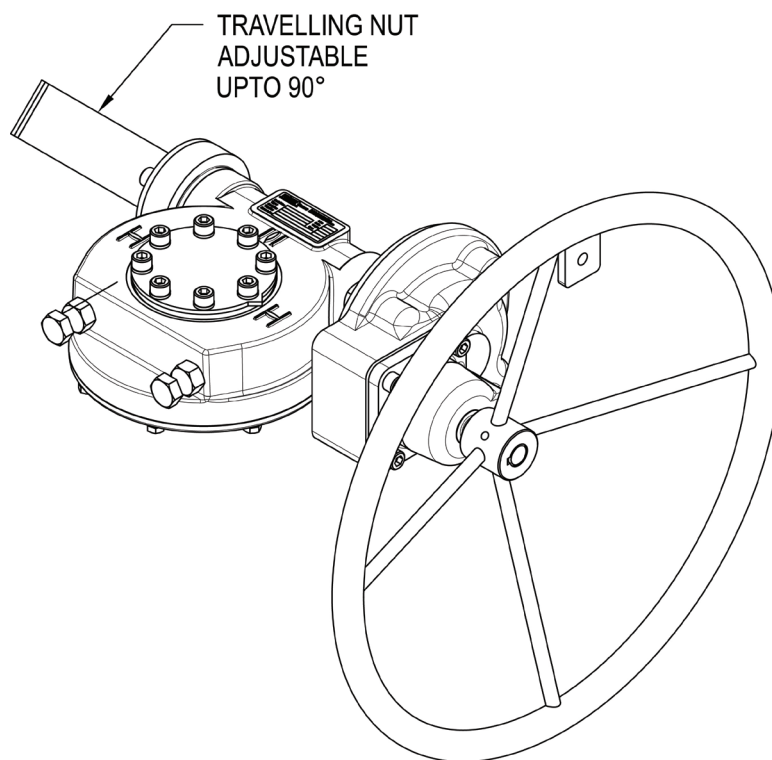
2R Handwheel - Model AB210, AB215, AB550



2R Handwheel - Model AB1250

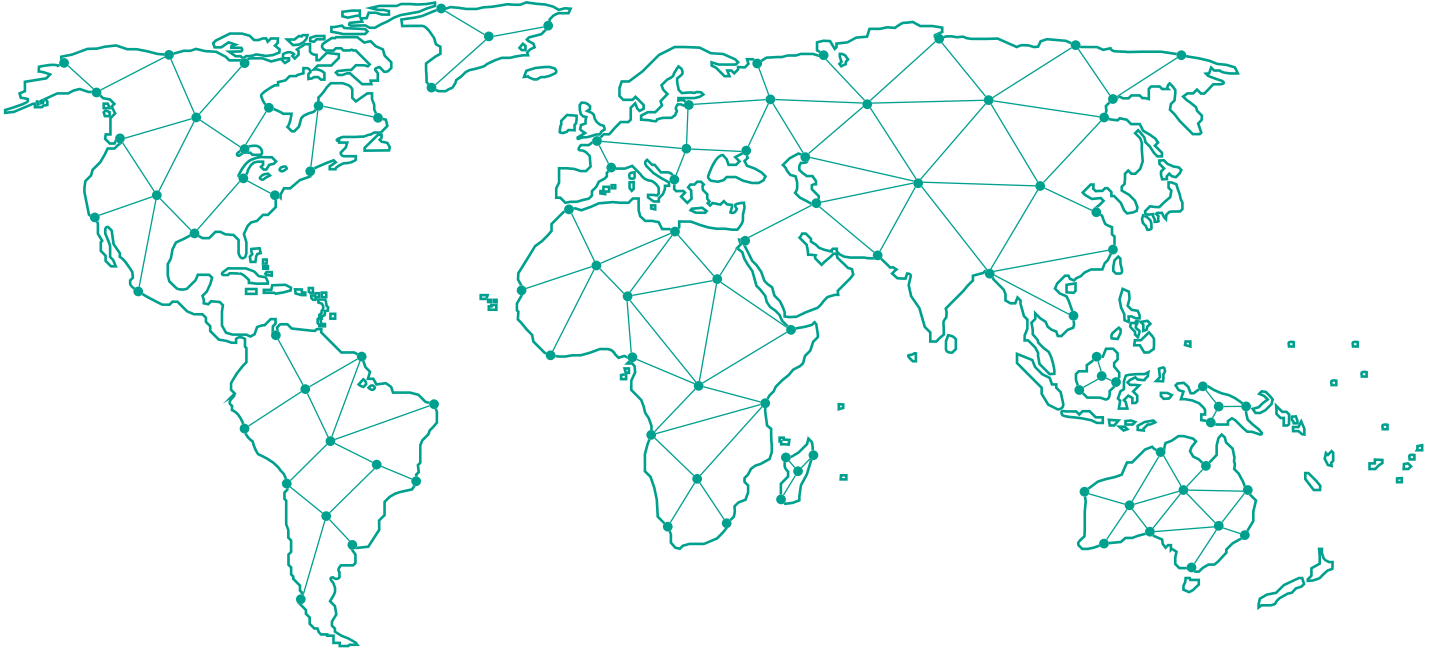


2R Handwheel - Model IW46



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