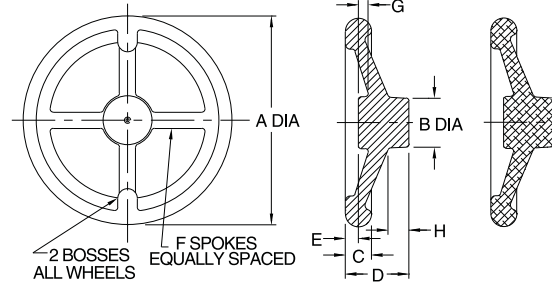


HAND WHEELS

CAST IRON PER ASTM-A48 CLASS 30 OR 319 ALUMINUM ALLOY



**Angled-Spoke
Rounded Design
Cast Iron or Aluminum**



**Cast Iron Aluminum
HWAFF HWAFA**

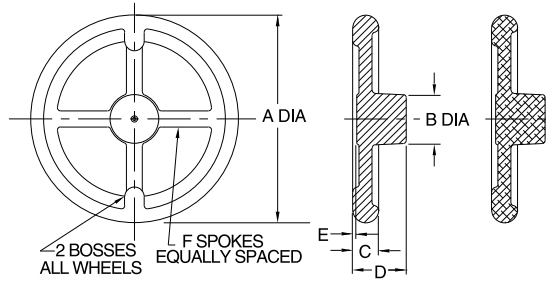
Utility-grade Hand Wheels that can be easily customized for any application. See page 109 for factory modifications available. Wide range of sizes from 4 to 12" in diameter. Choose either cast iron for maximum strength, or aluminum for light weight.

ANGLED SPOKES

PART NO. CAST IRON	PART NO. ALUMINUM	A DIA	B DIA	C	D	E	F	G	H	J DIA	HANDLE			
											SIZE	SOLID	REVOLVING	
CL-4-HWAF	CL-4-HWAFA	4	1-1/4	5/8	1-11/16	1/8	4	9/32	3/4	11/16	SIZE 2	SEE PAGE 120	SEE PAGES 121-123	
CL-5-HWAF	CL-5-HWAFA	5	1-1/2	3/4	1-7/8	3/8		5/16		1				
CL-6-HWAF	CL-6-HWAFA	6	1-5/8	1	2	13/32		3/8	13/16	1				SIZE 4
CL-8-HWAF	CL-8-HWAFA	8	1-7/8		2-7/16	1/2			1-3/8					
CL-10-HWAF	CL-10-HWAFA	10	2-1/4	1	3-1/32	11/16	8	7/16	1-1/16	1-3/4	SIZE 5			
CL-12-HWAF	CL-12-HWAFA	12	1		4-3/32	1-1/16		1-3/4	2-1/2					



**Straight-Spoke
Rounded Design
Cast Iron or Aluminum**



**Cast Iron Aluminum
HWSF HWSFA**

Same as the Hand Wheels shown above, except with straight spokes for a flatter profile.

STRAIGHT SPOKES

PART NO. CAST IRON	PART NO. ALUMINUM	A DIA	B DIA	C	D	E	F	J DIA	HANDLE		
									SIZE	SOLID	REVOLVING
CL-4-HWSF	CL-4-HWSFA	4	1-1/4	5/8	1-11/16	1/8	4	11/16	SIZE 2	SEE PAGE 120	SEE PAGES 121-123
CL-5-HWSF	CL-5-HWSFA	5	1-1/2	3/4	1-13/16	1/8		1			
CL-6-HWSF	CL-6-HWSFA	6	1-5/8	1	2-1/16	5/32		1	SIZE 4		
CL-8-HWSF	CL-8-HWSFA	8	1-7/8		2-1/2			1-3/8			
CL-10-HWSF	CL-10-HWSFA	10	2-1/4	1	3-1/4	1/8	8	1-3/4	SIZE 5		
CL-12-HWSF	CL-12-HWSFA	12	3		3-1/4	2-1/2					

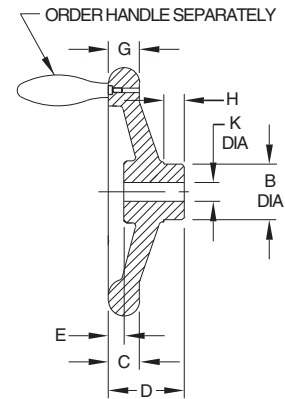
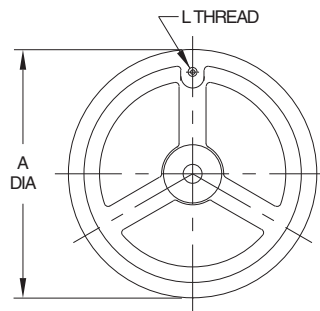
HAND WHEELS

CAST IRON, CHROME PLATED

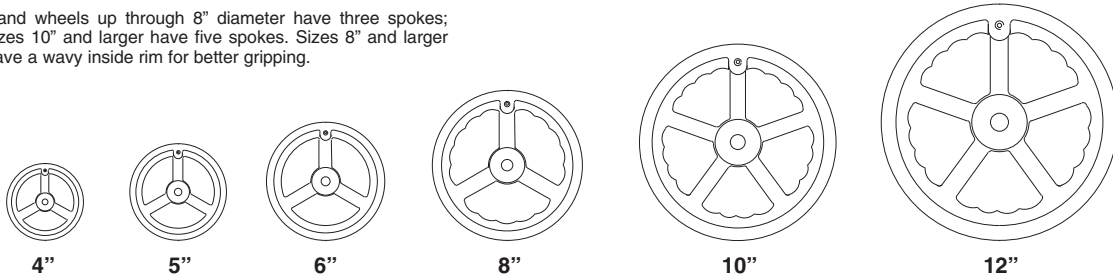


**Angled-Spoke Rounded Design
Cast Iron
Chrome Plated with Polished Rim**

High-quality, modern-design Hand Wheel. Beautiful chrome-plated finish with a polished rim. Hand Wheel is bored to the standard shaft diameter for its size, and is also tapped for a standard Solid or Revolving Handle. Order handle separately. See table below for matching rounded-design handle (stainless steel), or pages 88-91 for additional styles. To use without a handle, see table below to order a matching Handle Plug, for the tapped hole (chrome-plated steel).



Hand wheels up through 8" diameter have three spokes; sizes 10" and larger have five spokes. Sizes 8" and larger have a wavy inside rim for better gripping.

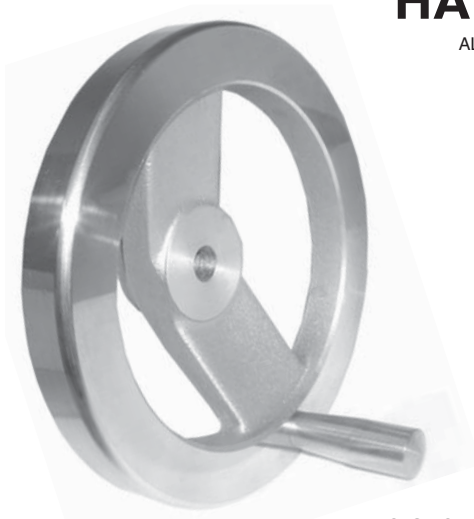


ORDER HAND WHEEL AND SOLID/REVOLVING HANDLE SEPARATELY

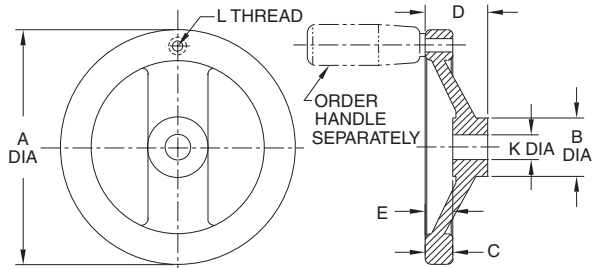
PART NO. WITH TAPPED HOLE FOR HANDLE	A DIA	B DIA	C	D	E	H	K DIA	L	MATCHING HANDLE			HANDLE PLUG
									SIZE	SOLID	REVOLVING	
CL-40-HWAR	4	1-1/8	9/16	1-1/2	7/16	1/2	3/8	1/4-20	SIZE 2	CL-250-SH-S	CL-250-RH-S	CL-2-HW-PLUG
CL-50-HWAR	5	1-1/4	19/32	1-5/8								
CL-60-HWAR	6	1-3/8	21/32	1-13/16	9/16	9/16	1/2	5/16-18	SIZE 3	CL-350-SH-S	CL-350-RH-S	CL-3-HW-PLUG
CL-80-HWAR	8	1-21/32	7/8	2-3/16	11/16	5/8	5/8	3/8-16	SIZE 4	CL-450-SH-S	CL-450-RH-S	CL-4-HW-PLUG
CL-100-HWAR	10	1-7/8	15/16	2-3/8	23/32	3/4	5/8	3/8-16	SIZE 4	CL-450-SH-S	CL-450-RH-S	CL-4-HW-PLUG
CL-120-HWAR	12	2-5/32	1	2-1/2	23/32	7/8	3/4	1/2-13	SIZE 5	CL-550-SH-S	CL-550-RH-S	CL-5-HW-PLUG

HAND WHEELS

ALUMINUM, GRAVITY DIE CAST

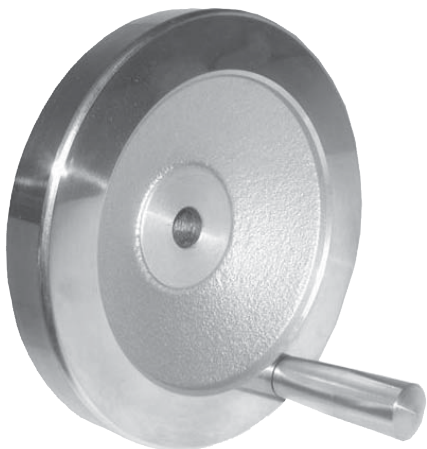


High-quality, modern-design aluminum Hand Wheel with two spokes. Rim is machined and highly polished on all sides. Spokes are shot blasted to a satin finish. These Hand Wheels are bored to the standard shaft diameter for their size, and are tapped for a Solid or Revolving Handle (also available without tapped hole for handle). Rim is concentric and square to the bore. Order Solid or Revolving Handle separately. Matching square-design stainless steel handles are recommended.

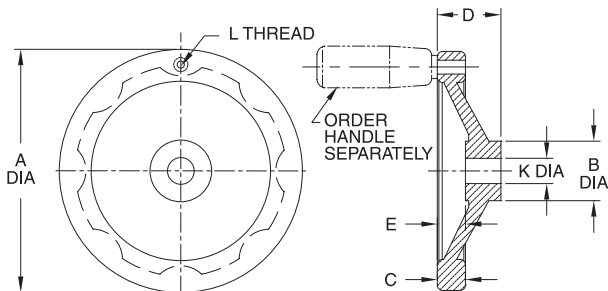


TWO-SPOKE SQUARE DESIGN — ALUMINUM

PART NO. WITH TAPPED HOLE FOR HANDLE	PART NO. WITHOUT TAPPED HOLE FOR HANDLE	A DIA	B DIA	C	D	E	K DIA	L	HANDLE		
									SIZE	SOLID	REVOLVING
CL-50-HWTS-A	CL-5-HWTS-A	4.92	1.22	.59	1.30	.59	.375	1/4-20	SIZE 2	SEE PAGE 120	SEE PAGES 121-123
CL-60-HWTS-A	CL-6-HWTS-A	6.30	1.42	.71	1.54	.75	.500	5/16-18	SIZE 3	SEE PAGE 120	SEE PAGES 121-123
CL-80-HWTS-A	CL-8-HWTS-A	7.87	1.65	.81	1.77	.83	.625	3/8-16	SIZE 4	SEE PAGE 120	SEE PAGES 121-123
CL-100-HWTS-A	CL-10-HWTS-A	9.84	1.89	.91	2.01	.91					



High-quality, modern-design aluminum Hand Wheel. Rim is machined and highly polished on all sides. Solid inner dish is shot-blasted to a satin finish. These Hand Wheels are bored to the standard shaft diameter for their size, and are tapped for a Solid or Revolving Handle (also available without tapped hole for handle). Rim is concentric and square to the bore. Order Solid or Revolving Handle separately. Matching square-design stainless steel handles are recommended.

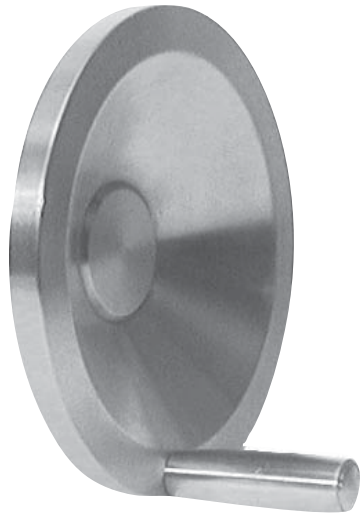


SOLID SQUARE DESIGN — ALUMINUM

PART NO. WITH TAPPED HOLE FOR HANDLE	PART NO. WITHOUT TAPPED HOLE FOR HANDLE	A DIA	B DIA	C	D	E	K DIA	L	HANDLE		
									SIZE	SOLID	REVOLVING
CL-40-HWSS-A	CL-4-HWSS-A	3.94	1.10	.55	1.18	.51	.375	1/4-20	SIZE 2	SEE PAGE 120	SEE PAGES 121-123
CL-50-HWSS-A	CL-5-HWSS-A	4.92	1.22	.59	1.30	.59	.500	5/16-18	SIZE 3	SEE PAGE 120	SEE PAGES 121-123
CL-60-HWSS-A	CL-6-HWSS-A	6.30	1.42	.71	1.54	.75	.625	3/8-16	SIZE 4	SEE PAGE 120	SEE PAGES 121-123
CL-80-HWSS-A	CL-8-HWSS-A	7.87	1.65	.81	1.77	.83					
CL-100-HWSS-A	CL-10-HWSS-A	9.84	1.89	.91	2.01	.91					

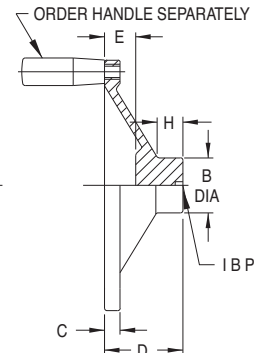
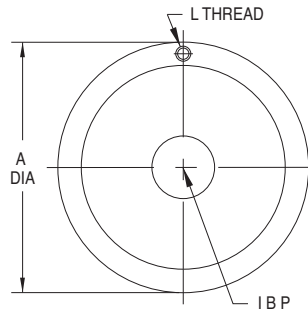
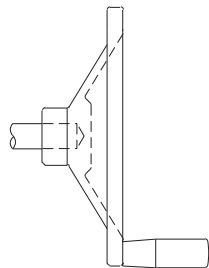
HAND WHEELS

300-SERIES STAINLESS STEEL



**Solid Square Design
Stainless Steel**

High-quality, stainless steel Hand Wheel. Modern square design, completely machined to a fine finish from solid 300-series stainless steel. This precision Hand Wheel is extremely strong, yet lightweight. Stainless steel Hand Wheels are center drilled, and also tapped for a standard Solid or Revolving Handle. Order handle separately. See table below for matching square-design handle (stainless steel), or pages 120-123 for additional styles.



These Hand Wheels can be bored with a blind hole to hide the shaft, for an extremely attractive finished appearance.

ORDER HAND WHEEL AND SOLID/REVOLVING HANDLE SEPARATELY

PART NO. WITH TAPPED HOLE FOR HANDLE	A DIA	B DIA	C	D	E	H	L	MATCHING HANDLE		
								SIZE	SOLID	REVOLVING
CL-30-HWSS-S	3	.87	1/4	1.10	.43	3/8	1/4-20	SIZE 1	CL-100-SH-S	CL-100-RH-S
CL-40-HWSS-S	4	1.02	5/16	1.25	.54	7/16		SIZE 2	CL-200-SH-S	CL-200-RH-S
CL-60-HWSS-S	6	1.50	1/2	1.50	.63	1/2	5/16-18	SIZE 3	CL-300-SH-S	CL-300-RH-S
CL-80-HWSS-S	8	1.80	9/16	1.80	.85	5/8		SIZE 4	CL-400-SH-S	CL-400-RH-S
CL-100-HWSS-S	10	2	5/8	2	.95	3/4	3/8-16			

HAND WHEELS

BODY: BLACK FIBER-REINFORCED NYLON THERMOPLASTIC
HUB: MILD STEEL, ZINC PLATED CLEAR CHROMATE

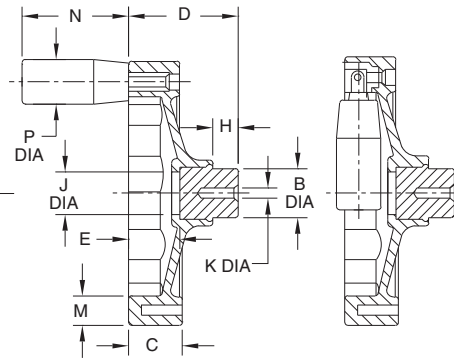
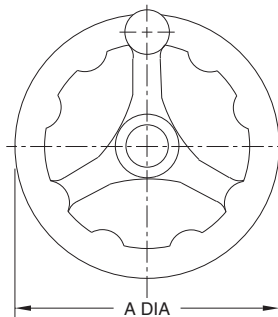


**Angled-Spoke Square Design
Thermoplastic
with Revolving Handle**



**Angled-Spoke Square Design
Thermoplastic
with Foldable Revolving Handle**

High-quality, modern-design thermoplastic Hand Wheel with three spokes. Molded-in steel hub, blank with a pilot hole. Available with either a Revolving Handle, a Foldable Revolving Handle, or a plain rim without a handle. Matte black fiber-reinforced nylon thermoplastic (textured surface for secure gripping, excellent impact resistance, operating temperatures to 230°F).



PART NO. WITH REVOLVING HANDLE	PART NO. WITH FOLDABLE REVOLVING HANDLE	PART NO. WITHOUT HANDLE (NOT TAPPED)	A DIA	B DIA	C	D	E	H	J DIA	K DIA	M	N	P DIA
CL-41-HWAS-P	CL-42-HWAS-P	CL-4-HWAS-P	3.94	.94	.79	1.69	.75	.47	.71	.157	.59	1.97	.83
CL-51-HWAS-P	CL-52-HWAS-P	CL-5-HWAS-P	4.92	.94	.94	2.01	.91		.79	.236	.67		
CL-61-HWAS-P	CL-62-HWAS-P	CL-6-HWAS-P	6.30	1.26	1.10	2.40	1.18	.59	1.18	.236	.79	2.76	.91
CL-81-HWAS-P	CL-82-HWAS-P	CL-8-HWAS-P	7.87	1.57	1.26	2.87	1.30		1.38		.91	3.54	1.02

HAND WHEELS

BODY: MATTE BLACK HIGH-IMPACT THERMOPLASTIC
HUB: MILD STEEL, BLACK OXIDE FINISH
CENTER TRIM COVER: ALUMINUM, ANODIZED



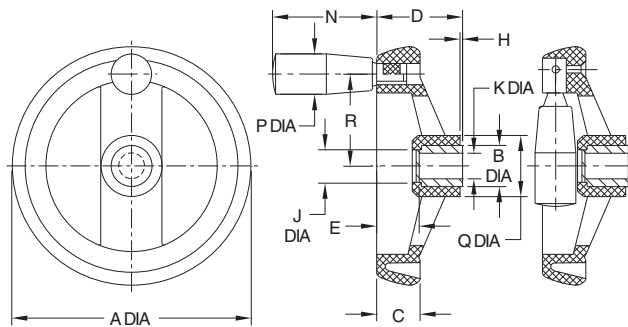
**Two-Spoke Rounded Design
Thermoplastic
with Revolving Handle**



**Two-Spoke Rounded Design
Thermoplastic
with Foldable Revolving Handle**

**ELESA
ORIGINAL
DESIGN**

High-quality, modern-design thermoplastic Hand Wheel with two spokes. Molded-in steel hub. These Hand Wheels are bored to the standard shaft diameter for their size. Available with either a Revolving Handle, a Foldable Revolving Handle, or a plain rim without a handle. Matte black high-impact thermoplastic (textured surface for secure gripping, excellent impact resistance, operating temperatures to 230°F).



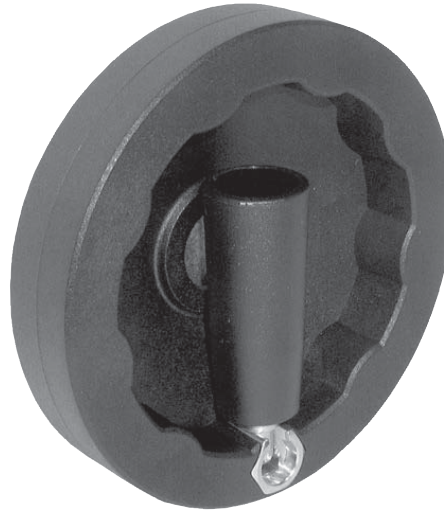
PART NO. WITH REVOLVING HANDLE	PART NO. WITH FOLDABLE REVOLVING HANDLE	PART NO. WITHOUT HANDLE (NOT TAPPED)	A DIA	B HUB DIA	C	D	E	H	J DIA	K BORE DIA	N	P DIA	Q DIA	R
CL-41-HWTR-P	CL-42-HWTR-P	CL-4-HWTR-P	3.90	.71	.79	1.46	.79	.01	.67	.375	1.97	.83	.98	1.45
CL-51-HWTR-P	CL-52-HWTR-P	CL-5-HWTR-P	4.88	.87	.87	1.73	.87		.83	.375	2.56	.91	1.22	1.83
CL-61-HWTR-P	CL-62-HWTR-P	CL-6-HWTR-P	6.30	1.02	.98	2.01	.94		.98	.500		1.57	2.56	
CL-81-HWTR-P	CL-82-HWTR-P	CL-8-HWTR-P	7.87	1.18	1.10	2.40	1.06		1.22	.625	3.15	1.02	1.97	3.30

HAND WHEELS

BODY: MATTE BLACK FIBER-REINFORCED NYLON THERMOPLASTIC
HUB: MILD STEEL, ZINC PLATED CLEAR CHROMATE

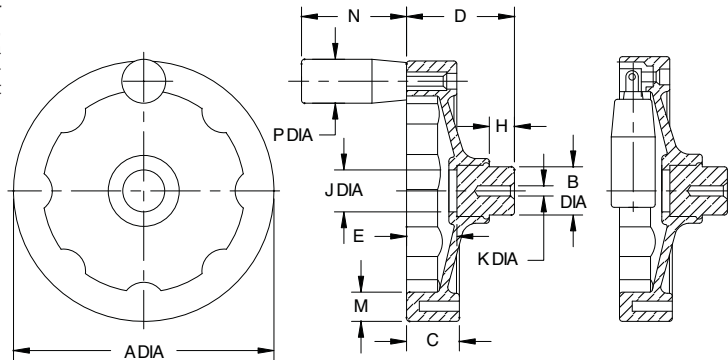


**Solid Square Design
Thermoplastic
with Revolving Handle**



**Solid Square Design
Thermoplastic
with Foldable Revolving Handle**

High-quality, modern-design thermoplastic Hand Wheel with two spokes. Molded-in steel hub. These Hand Wheels are bored to the standard shaft diameter for their size. Available with either a Revolving Handle, a Foldable Revolving Handle, or a plain rim without a handle. Matte black high-impact thermoplastic (textured surface for secure gripping, excellent impact resistance, operating temperatures to 230°F).



PART NO. WITH REVOLVING HANDLE	PART NO. WITH FOLDABLE REVOLVING HANDLE	PART NO. WITHOUT HANDLE (NOT TAPPED)	A DIA	B DIA	C	D	E	H	J DIA	K DIA	M	N	P DIA
CL-41-HWSS-P	CL-42-HWSS-P	CL-4-HWSS-P	3.94	.94	.79	1.81	.87	.47	.71	.157	.59	1.97	.83
CL-51-HWSS-P	CL-52-HWSS-P	CL-5-HWSS-P	4.92	.94	.94	2.01	.91		.79	.236	.67		
CL-61-HWSS-P	CL-62-HWSS-P	CL-6-HWSS-P	6.30	1.26	1.10	2.40	1.18	.59	1.18	.236	.79	2.76	.91
CL-81-HWSS-P	CL-82-HWSS-P	CL-8-HWSS-P	7.87	1.57	1.26	2.91	1.34		1.38		.94	3.54	1.02

HAND WHEELS

BODY: MATTE BLACK HIGH-IMPACT THERMOPLASTIC
HUB: MILD STEEL, BLACK OXIDE FINISH
CENTER TRIM COVER: GRAY THERMOPLASTIC, PUSH FIT



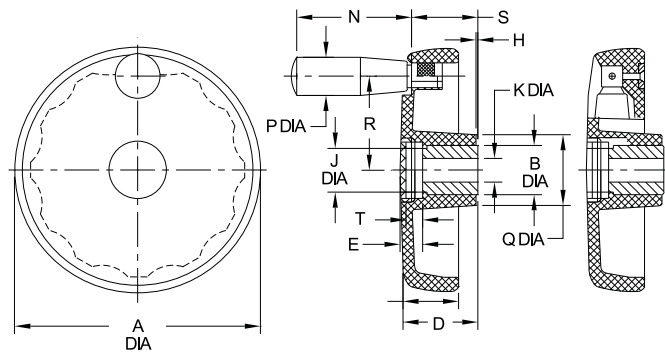
**Solid Disk Design
Thermoplastic
with Revolving Handle**



**ELESA
ORIGINAL
DESIGN**

**Solid Disk Design
Thermoplastic
with Foldable Revolving Handle**

High-quality, modern-design, solid-disk thermoplastic Hand Wheel. Molded-in steel hub. These Hand Wheels are bored to the standard shaft diameter for their size. Available with either a Revolving Handle, a Foldable Revolving Handle, or a plain rim without a handle. Matte black high-impact thermoplastic (textured surface for secure gripping, excellent impact resistance, operating temperatures to 230°F).



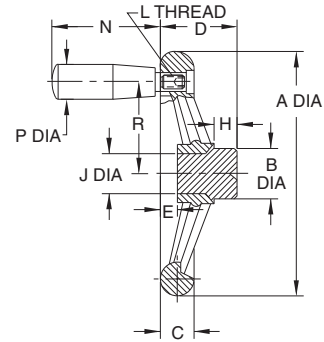
PART NO. WITH REVOLVING HANDLE	PART NO. WITH FOLDABLE REVOLVING HANDLE	A DIA	B HUB DIA	C	D	E	H	J DIA	K BORE DIA	N	P DIA	Q DIA	R	S	T
CL-41-HWSD-P	CL-42-HWSD-P	4.02	.87	.94	1.34	.47	.01	.79	.375	1.97	.83	1.18	1.53	1.18	.35
CL-51-HWSD-P	CL-52-HWSD-P	4.92	1.02	1.10	1.54	.47		.94	.375	2.20	.87	1.38	1.93	1.38	.31
CL-61-HWSD-P	CL-62-HWSD-P	5.91		1.26	1.73	.55		.500	2.56	.91	1.50	2.28	1.57	.39	
CL-81-HWSD-P	CL-82-HWSD-P	7.87		1.57	1.54	2.09		.67	1.50	.625	3.54	1.10	1.97	3.19	1.89

HAND WHEELS

BODY: BLACK PHENOLIC PLASTIC
HUB (ANGLED SPOKE): MILD STEEL, BLACK OXIDE FINISH
HUB (SOLID): MILD STEEL, ZINC PLATED CLEAR CHROMATE



High-quality, modern-design phenolic Hand Wheel with three spokes. Molded-in steel hub, blank without a pilot hole. Available with either a Revolving Handle or a plain rim without a handle. Black phenolic plastic (glossy smooth finish, extremely hard, electrical insulator, operating temperatures to 300°F, resistant to oils and most common chemicals).



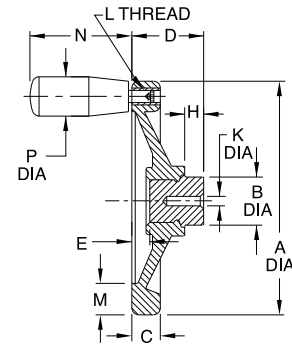
**ELESA
ORIGINAL
DESIGN**

ANGLED-SPOKE ROUNDED DESIGN — PHENOLIC

PART NO. WITH REVOLVING HANDLE	PART NO. WITHOUT HANDLE (NOT TAPPED)	A DIA	B DIA	C	D	E	H	J DIA	L	N	P DIA
CL-41-HWAR-F	CL-4-HWAR-F	3.86	.94	.55	1.57	.16	.47	.79	M6	1.57	.71
CL-51-HWAR-F	CL-5-HWAR-F	4.88		.71	1.38	.35			M8	1.97	.83
CL-61-HWAR-F	CL-6-HWAR-F	6.18	1.26	.87	1.57	.47	.59	.94	M8	2.56	.91
CL-81-HWAR-F	CL-8-HWAR-F	7.80	1.57	.94	2.20	.51			1.22	M10	3.15



High-quality, modern-design phenolic Hand Wheel. Molded-in steel hub, blank with a pilot hole. Available with either a Revolving Handle or a plain rim without a handle. Black phenolic plastic (glossy smooth finish, extremely hard, electrical insulator, operating temperatures to 300°F, resistant to oils and most common chemicals).



SOLID SQUARE DESIGN — PHENOLIC

PART NO. WITH REVOLVING HANDLE	PART NO. WITHOUT HANDLE (NOT TAPPED)	A DIA	B DIA	C	D	E	H	K DIA	L	M	N	P DIA
CL-31-HWSS-F	CL-3-HWSS-F	3.15	.79	.55	1.22	.16	.39	.157	M6	.59	1.57	.71
CL-41-HWSS-F	CL-4-HWSS-F	3.94	.94		.24	.43			M8	.63	1.97	.83
CL-51-HWSS-F	CL-5-HWSS-F	4.92	1.26	.63	1.73	.35	.51	.236	M8	.71	2.17	.91
CL-61-HWSS-F	CL-6-HWSS-F	5.91	1.26	.71	1.89	.43			.51	M10	.79	2.56
CL-81-HWSS-F	CL-8-HWSS-F	7.87	1.57	.83	2.28	.55	.63		M10	.94		

FLUTED HAND WHEELS

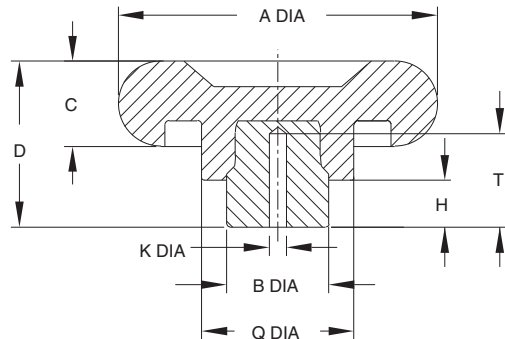
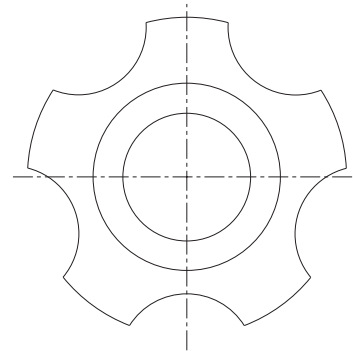
BODY: BLACK PHENOLIC PLASTIC
HUB: MILD STEEL, ZINC PLATED CLEAR CHROMATE



CL-4-FHW



CL-3-FHW



Small five-lobed phenolic hand wheels that are useful as control knobs or clamping knobs. Available in two diameters. Molded-in steel hub, blank with a pilot hole. Black phenolic plastic (glossy smooth finish, extremely hard, electrical insulator, operating temperatures to 300°F, resistant to oils and most common chemicals). Note: Catalog photos are actual size.

PART NO.	A DIA	B DIA	C	D	H	K DIA	Q DIA	T
CL-3-FHW	2.95	.94	.79	1.54	.43	.157	1.34	.87
CL-4-FHW	3.54	1.26		1.65	.47	.236	1.73	.98