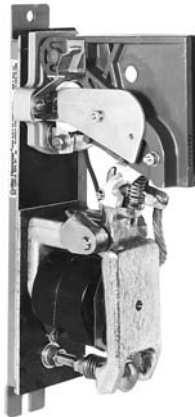
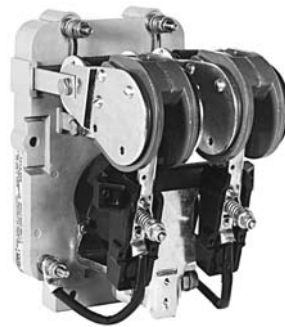


Type C80

5



Cat. No. C80FJ421N00
Size 4 — NC Contactor



Cat. No. C80DG221N00
Size 2 — 2 Pole Contactor

Product Description

These DC mill type contactors are designed for heavy industry service and are suitable for use on moving machinery. The contactors listed in this section are for surface mounting on steel panels and front-of-panel wiring. The power stud assembly is mounted on the side of the contactor, rather than as part of a separate mounting kit.

These contactors utilize DC coils. If control power is 120V AC, the rectifier module listed on **Page 5-5** should be used in conjunction with a 100V coil contactor.

Auxiliary contacts and mechanical interlocks for use with these contactors are listed on the following pages.

The contactors feature forged steel armature levers and magnet frames for superior physical strength. Self-lubricating bearings eliminate the need for lubricating the contactor. Hot-molded arc chute assemblies contain no asbestos and have better arc extinction characteristics for longer contact life. The short stroke armature results in a mechanical life of more than 20 million operations.

The arc chutes and magnetic blowout structures are designed to quickly absorb and dissipate the heat caused by arcing. In addition to increasing contact life, the molded arc chute

offers advantages of improved mechanical life and cooling characteristics plus superior arc-tracking resistance. The arc chutes are hinged to provide front accessibility, easy inspection or replacement of contacts without removing any other contactor parts.

Construction of the pivot pin assembly provides positive pin locking so that the bearing pin remains stationary with respect to the operating movement of the forged armature.

A leaf spring attached to the unit base and the arc chute holds the chute in the "down" or functioning position. The addition of this assembly resists the violent vibrations encountered on open hearth charging machines and on a wide variety of crane applications.

Pre-drilled mounting holes are provided on the unit base to accommodate interlock mounting brackets. An interlock is merely attached to a bracket and the assembly is then bolted in the desired operating position on the contactor.

DC Drive Service Contactors

Eaton's Cutler-Hammer industrial type contactors modified for DC drive service are provided with silver faced contact tips, to provide optimum contact structure and minimum maintenance under continuous duty service. These contactors are designed for steel panel surface mounting.

Power studs are a part of the contactor assembly.

Standards and Certifications

- CMAA 5.6.6-2
- NEMA ICS3-441, 442, 443
- NEMA ICS2-331.23
- NEMA ICS2-110.05.02
- NEMA ICS2-125.21.02

Technical Data and Specifications

- Current Range: 5 to 1800 amperes
- Voltage: 600V DC
- Operation: Magnetic
- Mounting: Steel Panel
- Mechanical Life: 20 million operations
- Electrical Life: 500,000 operations
- Interlock Ratings:
 - 10 amperes continuous
 - 2.2 amperes inductive breaking at 115V
 - 1.1 amperes inductive breaking at 230V
- Duty:
 - Continuous (for intermittent ratings consult factory)

Table 5-1. Coil Ampere Data

NEMA Size	No. of Poles	100V DC Coil	115V DC Coil	230V DC Coil
2	1NO	.288	.263	.125
	2NO	.339	.274	.140
3	1NO	.268	.235	.112
	1NC	.339	.274	.140
4	1NO	.268	.235	.112
	1NC	.339	.274	.140
5	1NO	.433	.391	.187
	1NC	.424	.329	.164
6	1NO	.450	.365	.200
	1NC	1.832/.597 ^①	1.337/.485 ^①	.714/.267 ^①
6A	1NO	.450	.365	.200
8	1NO	.787 ^②	.757 ^②	.438 ^②

^① Inrush/sealed current.

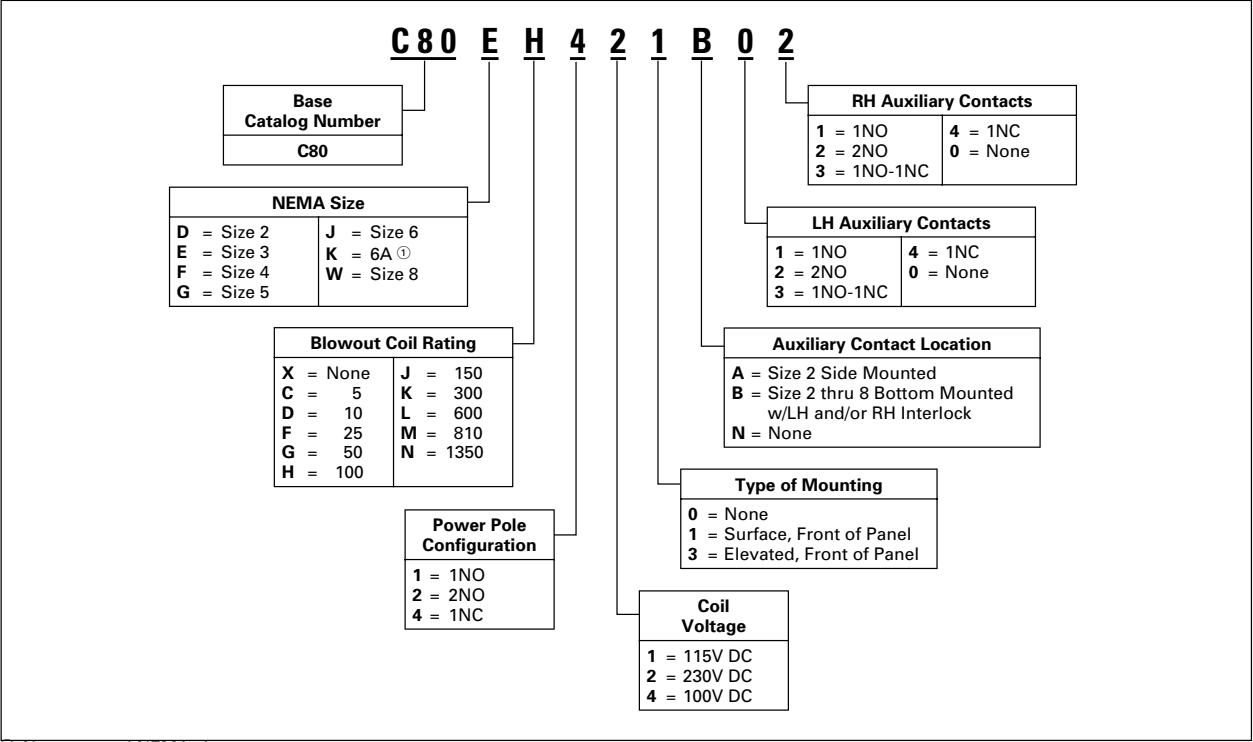
^② Coil used with series resistor.

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Type C80

Catalog Number Selection

Table 5-2. DC Contactor Catalog Numbering System



① Not an actual NEMA size.

Product Selection

When Ordering

- Select complete Catalog Number from **Tables 5-3, 5-4 or 5-5** below. If contactor is to include factory assembled auxiliary contacts, change **N00** Suffix to correct Suffix

letter and digits from **Tables 5-6 and 5-7 on Page 5-5**.

Example: Catalog Number for elevated Size 3 NO contactor, 230V DC

coil with 2NO aux contact bottom mounted on RH side of contactor is C80EH123B02.

5

DC Contactors

Table 5-3. Surface Mounted DC Contactors w/o Auxiliary Contacts

NEMA Size	Number of Poles	Blowout Coil Ampere	Catalog Number			Price ^③
			100V DC Coil	115V DC Coil	230V DC Coil	
2	1NO	None 5 10 25 50	C80DX141N00 C80DC141N00 C80DD141N00 C80DF141N00 C80DG141N00	C80DX111N00 C80DC111N00 C80DD111N00 C80DF111N00 C80DG111N00	C80DX121N00 C80DC121N00 C80DD121N00 C80DF121N00 C80DG121N00	
	2NO	None 5 10 25 50	C80DX241N00 C80DC241N00 C80DD241N00 C80DF241N00 C80DG241N00	C80DX211N00 C80DC211N00 C80DD211N00 C80DF211N00 C80DG211N00	C80DX221N00 C80DC221N00 C80DD221N00 C80DF221N00 C80DG221N00	
3	1NO	100	C80EH141N00	C80EH111N00	C80EH121N00	
	1NC	100	C80EH441N00	C80EH411N00	C80EH421N00	
4	1NO	150	C80FJ141N00	C80FJ111N00	C80FJ121N00	
	1NC	150	C80FJ441N00	C80FJ411N00	C80FJ421N00	
5	1NO	300	C80GK141N00	C80GK111N00	C80GK121N00	
	1NC	300	C80GK441N00	C80GK411N00	C80GK421N00	
6	1NO	600	C80JL141N00	C80JL111N00	C80JL121N00	
	1NC	600	C80JL441N00	C80JL411N00	C80JL421N00	
6A ^①	1NO	810	C80KM141N00	C80KM111N00	C80KM121N00	
8	1NO	1350	C80WN141N00	C80WN111N00	C80WN121N00	

^① Not a NEMA size.

Table 5-4. Elevated Mounted DC Contactors w/o Auxiliary Contacts

NEMA Size	Number of Poles	Blowout Coil Ampere	Catalog Number			Price ^③
			100V DC Coil	115V DC Coil	230V DC Coil	
3	1NO	100	C80EH143N00	C80EH113N00	C80EH123N00	
	1NC	100	C80EH443N00	C80EH413N00	C80EH423N00	
4	1NO	150	C80FJ143N00	C80FJ113N00	C80FJ123N00	
	1NC	150	C80FJ443N00	C80FJ413N00	C80FJ423N00	
5	1NO	300	C80GK143N00	C80GK113N00	C80GK123N00	
	1NC	300	C80GK443N00	C80GK413N00	C80GK423N00	
6	1NO	600	C80JL143N00	C80JL113N00	C80JL123N00	
	1NC	600	C80JL443N00	C80JL413N00	C80JL423N00	
6A ^②	1NO	810	C80KM143N00	C80KM113N00	C80KM123N00	
8	1NO	1350	C80WN143N00	C80WN113N00	C80WN123N00	

^② Not a NEMA Size.

^③ Consult factory.

DC Drive Service Contactors

Table 5-5 Surface Mounted DP Drive Service Contactors w/o Auxiliary Contacts

Number of Poles	Ampere Rating	Catalog Number 100V DC Coil
1NO	260	C80RK141N00
1NC	260	C80RK441N00
1NO	480	C80SL141N00
1NC	480	C80SL441N00
1NO	960	C80TM141N00

Options **Page 5-5**
 Accessories **Page 5-5**
 Dimensions **Page 5-7**
 Cross-Reference to
 Previous Numbers **Pages 5-8 – 5-11**
 Discount Symbol **MC 7**

Options

Other Options Available

- Silver Faced Contact Tips:
 - Can be supplied in place of standard contact tips.
 - Note:** Use silver tips for non-arcing or long (8 hour) extended continuous current applications.
- Special Voltage Coils:
 - Coils with DC voltage ratings other than those listed are available.
- 1800 Ampere Contactors:
 - Size 8A (not a NEMA size) contactors are also available.
- Consult factory for pricing.

Accessories

Auxiliary Contacts

Table 5-6. Mounting Kits for Auxiliary Contacts

Separate for Field Installation						Factory Installed
For Size and Type of Contactor		Location of Auxiliary Contacts on Contactor and Number of Units Kit Will Mount		Maximum Number of Units Acceptable per Contactor	Mounting Kit Catalog Number	Suffix Code Letter for Factory Installation
NEMA Size	Contactor Power Pole Configuration	Location	No. of Units			
2	1NO	Bottom — Right and Left	2	2	10923H11	B
	1NO or 1NO Ltl	Side — Right or Left	1	1	10923H12	A
	2NO	Bottom — Right and Left	1	2	10923H14	B
		Side — Left	1	2	10923H15	A
		Side — Right	1	2	10923H16	A
3, 4 and 5	2NO-1NC	Side — Left	1	2	10923H15	A
		Side — Right	1	2	10923H16	A
		Bottom — Right and Left	2	2	10923H19	B
	1NO	Bottom — Left Only	1	1	10923H38	B
		Bottom — Right	1	1	10923H20	B
6, 6A, 8 and 8A	1NO	Bottom — Right and Left	2	2	10923H19	B
		Bottom — Left Only	1	1	10923H38	B
		Bottom — Right	1	1	10923H20	B
	1NO Ltl	Bottom — Right	1	1	10923H20	B
	1NC	Bottom — Right	1	1	①	

① 10923H19 supplied with contactor as standard. No charge.

Table 5-7. Auxiliary Contacts — without Mounting Kit

Separate for Field Installation			Factory Installed			
Contact Configuration	Catalog Number	Price	Suffix Code LH Position	Adder	Suffix Code RH Position	Price
None	—		0		0	
1NO	10923H1		1		1	
2NO	10923H2		2		2	
1NO-1NC	10923H3		3		3	
1NC	10923H4		4		4	
2NC	10923H5		5		5	

Rectifiers

Table 5-8 Rectifier Module

Description	Contactor Size	Catalog Number	Price
120V AC Input 100V DC Output 3.5 Amps	All	C81EB	

Type C80

Mounting Kits and Mechanical Interlocks

Table 5-9. Contactor Mounting Kits ^① and Mechanical Interlocks

NEMA Size	No. of Poles	Type of Mounting	For Metal Panels	
			Catalog Number	Price
Mounting Kits				
3, 4	1	Surface, Front-of-Panel Wiring Elevated, Front-of-Panel Wiring	C81AEA11 C81AEA13	
5	1	Surface, Front-of-Panel Wiring Elevated, Front-of-Panel Wiring	C81AGA11 C81AGA13	
6, 6A	1	Surface, Front-of-Panel Wiring Elevated, Front-of-Panel Wiring	C81AJA11 C81AJA13	
8, 8A	1	Surface, Front-of-Panel Wiring Elevated, Front-of-Panel Wiring	C81ALA11 C81ALA13	
Mechanical Interlocks				
2	1 2 3	Surface	C81DDA11 C81DDA12 C81DDA13	
3, 4	1	Surface Elevated	C81DEA11 C81DEA21	
5	1	Surface Elevated	C81DGA11 C81DGA21	
6, 6A	1	Surface Elevated	C81DJA11 C81DJA21	
8, 8A	1	Surface Elevated	C81DLA11 C81DLA21	

^① Mounting kits include power studs and stud mounting as well as contactor mounting hardware, but do not include lugs.

Renewal Parts

Table 5-10. Renewal Parts ^②

Description	Size 2, 1-Pole, 2-Pole 3-Pole and Ltl 25 & 50 Ampere	Size 3, 1-Pole NO, NC and Ltl 100 Ampere	Size 4, 1-Pole NO, NC and Ltl 150 Ampere	Size 5, 1-Pole NO, NC and Ltl 300 Ampere	Size 6, 1-Pole NO, NC and Ltl 600 Ampere	Size 6A, 1-Pole NO, NC and Ltl 810 Ampere	Size 8, 1-Pole NO 1350 Ampere
	Part Number	Part Number	Part Number	Part Number	Part Number	Part Number	Part Number
Set of Contacts							
1-Pole Copper	6-599	6-189	6-189	6-189-3	6-189-4	6-189-4	6-215
1-Pole Silver	—	6-189-5	6-189-5	6-189-7	6-189-8	6-189-8	6-215-2
2-Pole Copper	6-169-4	—	—	—	—	—	—
3-Pole Copper	6-169-5	—	—	—	—	—	—
Arc Shield							
Right-Hand	73-2676-2	62-791	62-791	62-793	62-840	62-840	62-804
Left-Hand	73-2676	62-791-2	62-791-2	62-793-2	62-840-2	62-840-2	62-804
Coils							
1-Pole NO 100V	9-1549-18	9-1583-15	9-1583-15	9-1589-10	9-1688-8	9-1688-8	9-547-7 ^②
115V	9-1549-2	9-1583-2	9-1583-2	9-1589-2	9-1688-2	9-1688-2	9-547-7 ^②
230V	9-1549-1	9-1583-1	9-1583-1	9-1589-1	9-1688-1	9-1688-1	9-547-4 ^②
1-Pole NC 110V	—	9-1585-18	9-1585-18	9-967-13	9-1717-4	—	—
115V	—	9-1585-2	9-1585-2	9-967-8	9-1717-1	—	—
230V	—	9-1585-1	9-1585-1	9-967-7	9-1717-2	—	—
1-Pole Ltl ^① 100V	9-1549-18	9-1583-15	9-1583-15	9-1589-10	9-1688-8	—	—
115V	9-1549-2	9-1583-2	9-1583-2	9-1589-2	9-1688-2	—	—
230V	9-1549-1	9-1583-1	9-1583-1	9-1589-1	9-1688-1	—	—
2-Pole 100V	9-1585-18	—	—	—	—	—	—
115V	9-1585-2	—	—	—	—	—	—
230V	9-1585-1	—	—	—	—	—	—
3-Pole 110V	9-1585-18	—	—	—	—	—	—
115V	9-1585-2	—	—	—	—	—	—
230V	9-1585-1	—	—	—	—	—	—

^① Magnet closing coil only. If holdout coil is required, give number stamped on coil or advise Bulletin or Serial Number of controller.

^② Series resistor used with coil for voltage shown.

^③ For prices refer to Eaton's Cutler-Hammer parts distributor or call factory.

Discount Symbol MC 7

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Type C80

Dimensions

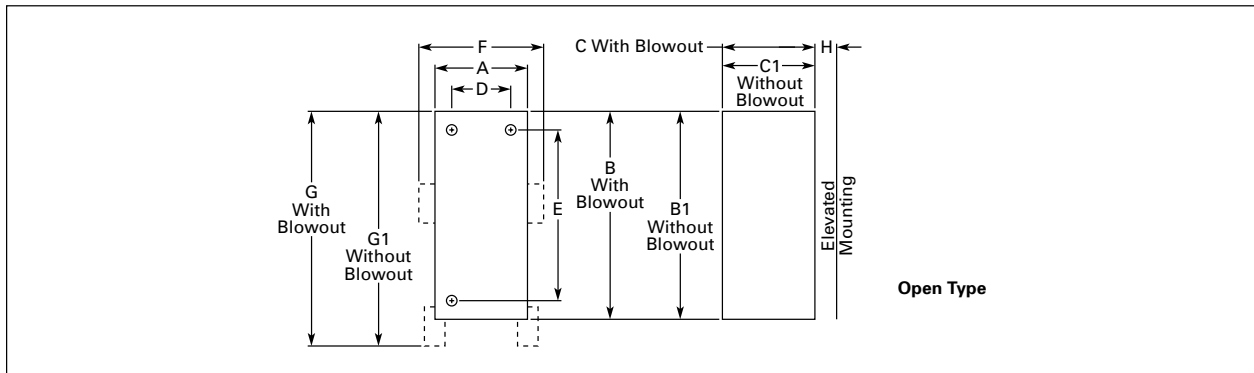


Figure 5-1. Approximate Dimensions and Shipping Weights

Table 5-11.Type C80

Size	Poles	Approximate Dimensions in Inches (mm)												Min. Arc Clearance		Ship. Wt. Lbs. (kg)	Stud Size
		Wide	High		Deep		Mounting		With Auxiliary Contacts			H					
		A	B	B1	C	C1	D	E	F	G	G1	250V	600V				
Open Type DC Contactors																	
2	1NO	3 (76.2)	8.38 (212.9)	6.5 (165.1)	6 (152.4)	5.38 (136.7)	2.25 (57.2)	4.5 (114.3)	7.38 (187.5)	10.88 (276.4)	9.13 (231.9)	—	.59 (15.1)	.91 (23.0)	6 (2.7)	1/4-20	
	2NO	5.75 (146.1)	8.88 (225.6)	8.88 (225.6)	6.88 (174.8)	6.5 (165.1)	5 (127.0)	4.63 (117.6)	10.13 (257.3)	11.38 (289.1)	11.38 (289.1)	—	1.19 (30.2)	2.19 (55.6)	10 (4.5)		
	2NO-1NC	5.75 (146.1)	12.63 (320.8)	12.63 (320.8)	6.88 (174.8)	6.5 (165.1)	5 (127.0)	8.38 (212.9)	10.13 (257.3)	—	—	—	1.19 (30.2)	2.19 (55.6)	13 (5.9)		
3, 4	1NO	4.25 (108.0)	12.13 (308.1)	12.13 (308.1)	7.25 (184.2)	6.38 (162.1)	—	11.25 (285.8)	4.5 (114.3)	12.13 (308.1)	12.13 (308.1)	1.63 (41.4)	2.75 ① (69.9)	3.75 ② (95.3)	11 (5)	3/8-16	
	1NC	4.25 (108.0)	13.63 (346.2)	13.63 (346.2)	7.25 (184.2)	5.63 (143.0)	—	12.75 (323.9)	5 (127.0)	13.63 (346.2)	13.63 (346.2)	1.63 (41.4)	4.25 ① (108.0)	5.25 ② (133.4)	13 (5.9)		
5	1NO	5.13 (130.3)	16.88 (428.8)	16.88 (428.8)	10 (254.0)	8 (203.2)	1.25 (31.8)	16 (406.4)	5.13 (130.3)	16.88 (428.8)	16.88 (428.8)	1.88 (47.8)	3.5 (88.9)	4.5 (114.3)	26 (12)	1/2-13	
	1NC	5.25 (133.4)	18.88 (479.6)	18.88 (479.6)	10 (254.0)	7.5 (190.5)	1.25 (31.8)	18 (457.2)	6.13 (155.7)	18.88 (479.6)	18.88 (479.6)	1.88 (47.8)	3 (76.2)	4 (101.6)	34 (15)		
6	1NO	7.13 (181.1)	18.75 (476.3)	16.88 (428.8)	12.25 (311.2)	9.5 (241.3)	1.25 (31.8)	17.5 (444.5)	7.13 (181.1)	18.75 (476.3)	18.75 (476.3)	1.88 (47.8)	5.5 (139.7)	5.5 (139.7)	43 (20)	3/4-12	
	1NC	7.25 (184.2)	22.88 (581.2)	18.88 (479.6)	12.25 (311.2)	9.88 (251.0)	1.25 (31.8)	22 (558.8)	7.25 (184.2)	22.88 (581.2)	22.88 (581.2)	1.88 (47.8)	5.5 (139.7)	5.5 (139.7)	66 (30)		
6A	1NO	7.63 (193.8)	18.75 (476.3)	18.75 (476.3)	12.25 (311.2)	9.5 (241.3)	1.25 (31.8)	17.5 (444.5)	7.63 (193.8)	18.75 (476.3)	18.75 (476.3)	1.88 (47.8)	5.5 (139.7)	5.5 (139.7)	45 (20)	3/4-12	
8, 8A	1NO	9.5 (241.3)	24 (609.6)	22.5 (571.5)	17 (431.8)	14.88 (378.0)	7 (177.8)	10 (254.0)	9.5 (241.3)	24 (609.6)	24 (609.6)	2 (50.8)	8 (203.2)	10 (254.0)	130 (59)	1/2 hole	
Definite Purpose Contactors																	
260A	1NO	4.25 (108.0)	12.13 (308.1)	12.13 (308.1)	7.25 (184.2)	6.38 (162.1)	—	11.25 (285.8)	4.5 (114.3)	12.13 (308.1)	12.13 (308.1)	1.63 (41.4)	2.5 (63.5)	3.5 (88.9)	11 (5)	3/8-16	
	1NC	4.25 (108.0)	13.63 (346.2)	13.63 (346.2)	7.25 (184.2)	5.63 (143.0)	—	12.75 (323.9)	5 (127.0)	13.63 (346.2)	13.63 (346.2)	1.63 (41.4)	2.5 (63.5)	3.5 (88.9)	13 (5.9)		
480A	1NO	5.13 (130.3)	16.88 (428.8)	16.88 (428.8)	10 (254.0)	8 (203.2)	1.25 (31.8)	16 (406.4)	5.13 (130.3)	16.88 (428.8)	16.88 (428.8)	1.88 (47.8)	3 (76.2)	4 (101.6)	26 (12)	1/2-13	
	1NC	5.25 (133.4)	18.88 (479.6)	18.88 (428.8)	10 (254.0)	7.5 (190.5)	1.25 (31.8)	18 (457.2)	6.13 (155.7)	18.88 (479.6)	18.88 (479.6)	1.88 (47.8)	3 (76.2)	4 (101.6)	34 (15)		
960A	1NO	7.63 (193.8)	18.75 (476.3)	18.75 (476.3)	12.25 (311.2)	9.5 (241.3)	1.25 (31.8)	17.5 (444.5)	7.63 (193.8)	18.75 (476.3)	18.75 (476.3)	1.88 (47.8)	5.5 (139.7)	5.5 (139.7)	45 (20)	3/4-12	

① May be reduced to 2.5 (63.5) for Size 3.

② May be reduced to 3.5 (88.9) for Size 3.