



HUBBELL INCORPORATED (Delaware)
2112 Fenton Logistics Park Blvd
Fenton, Missouri 63026 USA

KILLARK

**INSTALLATION, OPERATION &
MAINTENANCE DATA SHEET
SERIES SJIC & SJICH ENCLOSURES
Increased Safety Enclosures For Use In Zone
Classified Hazardous Locations**



**SERIES SJIC & SJICH ENCLOSURES
Increased Safety Enclosures For Use In
Zone* Classified Hazardous Locations**

* - Suitable For Use In Division Classified Locations Based On
Equivalency - See North American Certification Ratings Below



1. General Safety Information:

English

French / Spanish / Portuguese / German

CAUTION:

Before installing, make sure you are compliant with area classifications, failure to do so may result in bodily injury, death and property damage. Do not attempt installation until you are familiar with the following procedures. All installation must comply with the applicable Electrical Code.

Make sure that the circuit is De-energized before starting installation or maintenance.

Verify that the installation is grounded. Failure to ground will create electrical shock hazards, which can cause serious injury and or death.

IMPORTANT:

Please read these instructions carefully before installing or maintaining this equipment. Good electrical practices should be followed at all times and this data should be used as a guide only.

Technical information, advice and recommendations contained in these documents is based upon information that Killark believes to be reliable. All the information and advice contained in these documents is intended for use only by persons having been trained and possessing the requisite skill and know-how and to be used by such persons only at their own discretion and risk. The nature of these instructions is informative only and does not cover all of the details, variations or combinations in which this equipment may be used, its storage, delivery, installation, check out, safe operation and maintenance. Since conditions of use of the product are outside of the care, custody and control of Killark, the purchaser should determine the suitability of the product for his intended use, and assumes all risk and liability whatsoever in connection therewith.



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2. Application Information



**SERIES SJIC
SCREW COVER ENCLOSURE**

a: The enclosure forms the basis for certification of a unit or protection system for use in hazardous areas other than Zone 0 (Class I Div. 1).

b: All internal components mounted in this enclosure should be Certified (Listed Or Recognized) for the application and installed in accordance with the component manufacturer's installation instructions.

c: A complete Junction Box or Control Station should be certified by a 3rd party to the applicable product safety Standard(s), and all supply wiring methods (including grounding) shall be in accordance with the local/jurisdictional electrical code(s).

d.: A 1/4-20 UNC (M6) ground / earthing stud is supplied on all Series SJICH and SJICH stainless steel enclosures.

e: To maintain proper IP ratings, be sure to follow all mfr's. mounting instructions when installing certified cable glands or conduit entries.

f: Maintenance on the end product should be carried out by authorized and trained personnel only. Following any maintenance, the enclosure gasket must be checked for damage before the cover is replaced / reinstalled.

Warning: Enclosures **must be** installed in the upright vertical position only. Mounting the enclosures in a horizontal position could cause a fire or explosion due to excessive dust / heat build-up.

CATALOG LOGIC

SJIC	*	12 12 06	U	12	*
1	2	3	4	5	6

1. SERIES
SJIC = Screw Cover
SJICH = Hinged Screw Cover

2. MATERIAL
6 = 316 Stainless Steel
4 = 304 Stainless Steel
Blank = Carbon Steel (Painted)

3. ENCLOSURE SIZE - L x W x D (inches)

4. COMPONENT INDICATOR (Empty Enclosure)

5. GLAND PLATE LOCATOR
1 = Bottom 2 = LHS 3 = Top 4 = RHS

6. OPTIONS (See Catalog)



**SERIES SJICH
HINGED SCREW COVER
ENCLOSURE**



3. Enclosure Installation Instructions

a: Using a screwdriver with a #2 Phillips Head, a Standard Slotted or Robertson style head, remove the cover screws. Securely fasten the enclosure to the mounting location, using up to a 1/4" (M6) diameter steel bolt and washer. The mounting location must be flat and provide proper clearance, rigidity and strength to support the enclosure and all contained devices. Mounting dimensions are shown in this document.

b: Install Internal Components per the Mfrs. installation instructions.

c: Care shall be taken by the end-use product manufacturer to ensure proper separation of circuits (voltages), and spacings (creepage and clearance distances between live parts of opposite polarity, and between all live parts and dead metal) are maintained. Refer to IEC/EN/UL/CSA 60079-7, Table 2, for minimum Increased Safety creepage and clearance distances.

d: Grounding connections are available at the din rail, earth continuity plate and internal- external ground stud.

e: Bonding connections are available on covers and boxes of all enclosures. All exposed metal should be bonded per local electrical codes.

f: Closing / Installing the enclosure cover: *Apply a light coating of Killark "LUBG" lubricant to the box flange before closing the cover.* Thread each cover screw half way into the threaded insert without completely tightening in a diagonal pattern. Then complete installation of cover by tightening screws in the same diagonal pattern to a minimum torque of 3 Nm (26 lb-ins.) to a maximum of 4 Nm (35 lb-ins.). *A consistent fit over the entire length of the cover joint should be verified at the time of installation.*

g: This enclosure is provided without cable glands or conduit sealing devices. Proper selection of cable glands or conduit sealing devices must occur in the field.

h: Cable fittings must be certified "Ex e" components per EN 60079-7. For lines which are not permanently installed, only cable fittings appropriate for this purpose can be used. They are to be protected from loosening and locked against rotation, i.e. clips, cemented, etc., per EN 60079-7. The operating (service) temperature of the enclosure is limited to the temperature of the gland fitting if less than the enclosure.

i: Killark KDE series drain and breather may be installed. The operating temperature of the enclosure is limited to the temperature of the drain and breathers if lower than the enclosure's. **Other drain and breathers may be installed, the user is responsible for ensuring that the protection concept, temperature class and relevant IP rating is maintained.**

j: All unused conduit openings must be fitted with a certified close-up plug of equivalent minimum required IP rating as required.

DO NOT OVERTIGHTEN OR USE AN IMPACT TOOL.



4. Maintenance Instructions:

WARNING: Before servicing the enclosure, to be certain the electrical power is OFF and LOCKED OUT..

WARNING: Enclosures that are powder coated have a potential electrostatic charging hazard. Wipe the enclosure down with a moist cloth before servicing.

a: After installation, the unit should be inspected at regular intervals to verify the cover is tight; that all conduit or gland connections are intact and free of corrosion and that the enclosure mounting bolts are tight and in good condition.

b: Inspect flanged surfaces of the box and of the cover gasket. Surfaces must be free of nicks, dirt or any foreign particle build-up that would prevent a proper seal. Check hinges to ensure they are improper working order.

c: Should the surfaces be damaged, consult factory. Never attempt to rework the surfaces in the field. Surfaces must seat fully against each other to provide the proper joint.

d: Apply a light coating of Killark "LUBG" lubricant to the box flange before closing the cover. All cover screws must be installed tightly (25 to 36 lb-ins.) to ensure the joint between the box and cover is sealed prior to powering the unit. An improper joint can result in an explosion with the possibility of physical injury and property damage.

e: SJICH hinged covers are permanent and are not field removable or replaceable. Prior to securing the cover add lubrication to the hinge pin to aid in operation and the free movement of the cover
Important: Care is to be taken opening the cover to help prevent accidental damage to the cover and cover gasket. Never apply excess force to the cover when closing the hinged cover. Never hammer the cover, this will deform the covers and possibly reduce the protection level of the enclosure.

5. Conditions For Safe Use:

a: The range of enclosures shall only be used in a service temperature range of -55 °C to +135 °C.

WARNING: Enclosures that are powder coated have a potential electrostatic charging hazard. Wipe the enclosure down with a moist cloth before servicing.



6. Certification Information

North American Certifications:

Zone 21 AEx tb IIIC Db IP66 (U.S.)
Ex tb IIIC Db IP66 (CAN)
Class II, Zone 21 & 22
Class II, Groups E, F, G
Class III
Type 4/4X
Service Temperature: -55 °C to +135 °C

Standards Applied:

CSA 60079-0: 2nd Edition
UL 60079-0: 6th Edition
CSA 60079-7: 1st Edition
UL 60079-7: 4th Edition
CSA 60079-31: 1st Edition
UL 60079-31: 1st Edition
CSA No. 94.1 / 94.2 / No. 14
UL50 / UL50E
IEC 60529 Ed. 2.2 B:2013

IEC / ATEX Certifications:

ATEX Ratings:

CE 0539 Ex II 2 G Ex e IIC Gb
II 2 D Ex tb IIIC Db IP66
SIRA 14 ATEX 3156U

IECEx Ratings:

II 2 G Ex e IIC Gb
II 2 D Ex tb IIIC Db IP66
IECEx SIR14.0053U

Standards Applied:

EN 60079-0:2012
IEC 60079-0:2011 Ed. 6.0
EN 60079-7 : 2007
IEC 60079-7:2006-07 Ed. 4
IEC 60079-31:2013st Ed. 2

7. Labels / Nameplates

To maintain the IP (Ingress Protection) levels and the NEMA / TYPE ratings of the Series SJIC / SJICH enclosures, end-product nameplates or label & tag mounting holes must **not penetrate the interior of the enclosure.**

8. Earthing (Grounding) :

The earth connection accepts a cable lug. The cable must be run and fixed near to the enclosure. The earth connection must be made in all circumstances.

9. Conduit Hub & Cable Gland Installation:

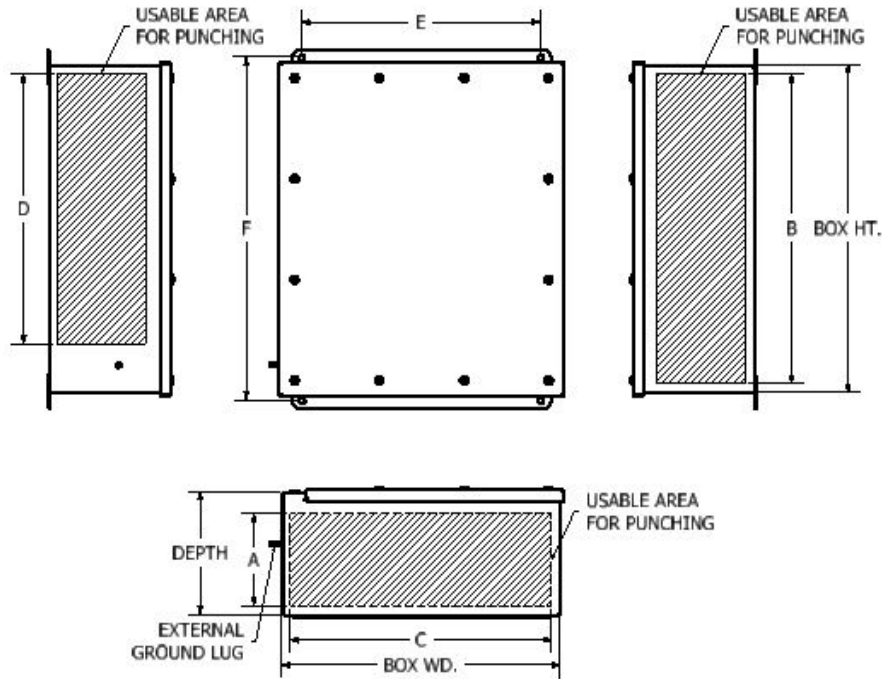
Conduit hubs and cable gland sizes may be mixed. The maximum number of hubs or cable glands must be selected such that the walls are not weakened nor the enclosure stability affected .

See Figure 1 and 2 below, and Tables 1 - 7 below for Enclosure Mounting Hole Locations, Conduit and Gland Opening and Spacing Details, and Max. Power / Wattage Dissipation Allowed (For Calculating T-Codes).



INSTALLATION, OPERATION & MAINTENANCE DATA SHEET
SERIES SJIC & SJICH ENCLOSURES
Increased Safety Enclosures For Use In Zone Classified Hazardous Locations

FIGURE 1 - SJIC (SCREW COVER) - (See Table 2 below)



Note: The maximum hole size for an enclosure wall using the "A" dimension and for boxes with a nominal depth of 3" (76mm) = 1-1/2" NPT (M40), with a nominal depth of 4" (102mm) = 2" NPT (M50), with a nominal depth of 5" (127mm) = 2-1/2" NPT (M63) and with a nominal depth of 6" (152mm) = 3-1/2" NPT (M80) .

TABLE 1 - SJIC OVERALL DIMENSION CHART

Catalog Number	Height in. (mm)	Width in. (mm)	Depth in. (mm)	"E"	"F"	"A" Blank Wall Area	"B" Blank Wall Area	"C" Blank Wall Area	"D" Blank Wall Area
SJIC 040403	4 (102)	4 (102)	3 (76)	2.00 (51)	4.75 (121)		3.13 (79)	3.13 (79)	1.19 (30)
SJIC 060403	6 (152)	4 (102)	3 (76)	2.00 (51)	6.75 (171)		5.13 (130)	3.13 (79)	3.19 (81)
SJIC 040404	4 (102)	4 (102)	4 (102)	2.00 (51)	4.75 (121)	2.47(63)	3.13 (79)	3.13 (79)	1.19 (30)
SJIC 060404	6 (152)	4 (102)	4 (102)	2.00 (51)	6.75 (171)	2.47(63)	5.13 (130)	3.13 (79)	3.19 (81)
SJIC 060604	6 (152)	6 (152)	4 (102)	4.00 (102)	6.75 (171)	2.47(63)	5.13 (130)	5.13 (130)	3.19 (81)
SJIC 060606	6 (152)	6 (152)	6 (152)	4.00 (102)	6.75 (171)	4.47 (114)	5.13 (130)	5.13 (130)	3.19 (81)
SJIC 080606	8 (203)	6 (152)	6 (152)	4.00 (102)	8.75 (222)	4.47 (114)	7.13 (181)	7.13 (181)	5.19 (132)
SJIC 080804	8 (203)	8 (203)	4 (102)	6.00 (152)	8.75 (222)	2.47(63)	7.13 (181)	7.13 (181)	5.19 (132)
SJIC 080806	8 (203)	8 (203)	6 (152)	6.00 (152)	8.75 (222)	4.47 (114)	7.13 (181)	7.13 (181)	5.19 (132)
SJIC 100804	10 (254)	8 (203)	4 (102)	6.00 (152)	10.75 (273)	2.47(63)	9.13 (232)	7.13 (181)	7.19 (183)
SJIC 100806	10 (254)	8 (203)	6 (152)	6.00 (152)	10.75 (273)	4.47 (114)	9.13 (232)	7.13 (181)	7.19 (183)
SJIC 101006	10 (254)	10 (254)	6 (152)	8.00 (203)	10.75 (273)	4.47 (114)	9.13 (232)	9.13 (232)	7.19 (183)
SJIC 121005	12 (305)	10 (254)	5 (127)	8.00 (203)	12.75 (324)	3.47 (88)	11.13 (283)	9.13 (232)	9.19 (233)
SJIC 121006	12 (305)	10 (254)	6 (152)	8.00 (203)	12.75 (324)	4.47 (114)	11.13 (283)	9.13 (232)	9.19 (233)
SJIC 121206	12 (305)	12 (305)	6 (152)	10.00 (254)	12.75 (324)	4.47 (114)	11.13 (283)	11.13 (283)	9.19 (233)
SJIC 141206	14 (356)	12 (305)	6 (152)	10.00 (254)	14.75 (375)	4.47 (114)	13.13 (334)	11.13 (283)	11.19 (284)
SJIC 161406	16 (406)	14 (356)	6 (152)	12 (305)	16.75 (425)	4.47 (114)	15.13 (384)	13.13 (334)	13.19 (335)

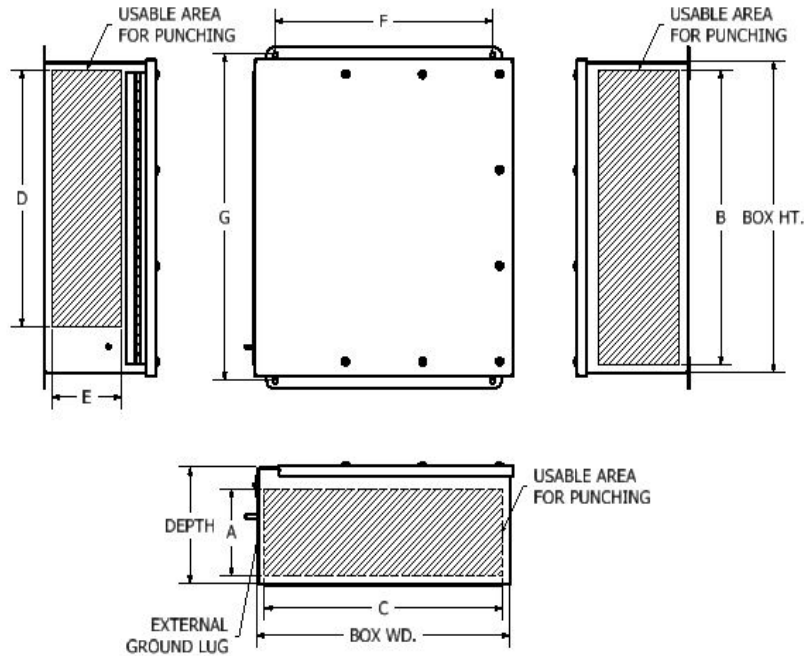


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FIGURE 2 - SJICH (HINGED SCREW COVER) - (See Table 3 below)



Note: The maximum hole size for an enclosure with blank walls using the "A" dimension and for boxes with a nominal depth of 3" (76mm) = 1-1/2" NPT (M40), with a nominal depth of 4" (102mm) = 2" NPT (M50), with a nominal depth of 5" (127mm) = 2-1/2" NPT (M63) and with a nominal depth of 6" (152mm) = 3-1/2" NPT (M80).

The maximum hole size for an enclosure with blank walls using the "E" dimension and for boxes with a nominal depth of 3" (76mm) = N/A, with a nominal depth of 4" (102mm) = 1-1/4" NPT (M32), with a nominal depth of 5" (127mm) = 2" NPT (M50) and with a nominal depth of 6" (152mm) = 3" NPT (M75).

TABLE 2 - SJICH OVERALL DIMENSION CHART

Catalog Number	Height in. (mm)	Width in. (mm)	Depth in. (mm)	"F"	"G"	"A" Blank Wall Area	"B" Blank Wall Area	"C" Blank Wall Area	"D" Blank Wall Area	"E" Blank Wall Area
SJICH 060604	6 (152)	6 (152)	4 (102)	4.00 (102)	6.75 (171)	2.47(63)	5.13 (130)	5.13 (130)	3.19 (81)	1.81 (46)
SJICH 060606	6 (152)	6 (152)	6 (152)	4.00 (102)	6.75 (171)	4.47 (114)	5.13 (130)	5.13 (130)	3.19 (81)	3.81 (97)
SJICH 080606	8 (203)	6 (152)	6 (152)	4.00 (102)	8.75 (222)	4.47 (114)	7.13 (181)	7.13 (181)	5.19 (132)	3.81 (97)
SJICH 080804	8 (203)	8 (203)	4 (102)	6.00 (152)	8.75 (222)	2.47(63)	7.13 (181)	7.13 (181)	5.19 (132)	1.81 (46)
SJICH 080806	8 (203)	8 (203)	6 (152)	6.00 (152)	8.75 (222)	4.47 (114)	7.13 (181)	7.13 (181)	5.19 (132)	3.81 (97)
SJICH 100804	10 (254)	8 (203)	4 (102)	6.00 (152)	10.75 (273)	2.47(63)	9.13 (232)	7.13 (181)	7.19 (183)	1.81 (46)
SJICH 100806	10 (254)	8 (203)	6 (152)	6.00 (152)	10.75 (273)	4.47 (114)	9.13 (232)	7.13 (181)	7.19 (183)	3.81 (97)
SJICH 101006	10 (254)	10 (254)	6 (152)	8.00 (203)	10.75 (273)	4.47 (114)	9.13 (232)	9.13 (232)	7.19 (183)	3.81 (97)
SJICH 121005	12 (305)	10 (254)	5 (127)	8.00 (203)	12.75 (324)	3.47 (88)	11.13 (283)	9.13 (232)	9.19 (233)	2.81 (71)
SJICH 121006	12 (305)	10 (254)	6 (152)	8.00 (203)	12.75 (324)	4.47 (114)	11.13 (283)	9.13 (232)	9.19 (233)	3.81 (97)
SJICH 121206	12 (305)	12 (305)	6 (152)	10.00 (254)	12.75 (324)	4.47 (114)	11.13 (283)	11.13 (283)	9.19 (233)	3.81 (97)
SJICH 141206	14 (356)	12 (305)	6 (152)	10.00 (254)	14.75 (375)	4.47 (114)	13.13 (334)	11.13 (283)	11.19 (284)	3.81 (97)
SJICH 161406	16 (406)	14 (356)	6 (152)	12 (305)	16.75 (425)	4.47 (114)	15.13 (384)	13.13 (334)	13.19 (335)	3.81 (97)



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TABLE 3 - Minimum Distance - From Edge of Enclosure to Center of Conduit / Cable Entry

NPT (Metric)	4"	3-1/2"	3" (M75)	2-1/2" (M63)	2" (M50)	1-1/2" (M40)	1-1/4" (M32)	1" (M25)	3/4" (M20)	1/2" (M16)
IN. (mm)	2-3/4 (70)	2-1/2 (64)	2 (51)	2 (51)	1-5/8 (41)	1-3/8 (35)	1-1/4 (32)	1 (25)	7/8 (22)	3/4 (19)

TABLE 4 - Minimum Distance - From Edge of Gland Plate to Center of Conduit / Cable Entry

NPT (Metric)	4"	3-1/2"	3" (M75)	2-1/2" (M63)	2" (M50)	1-1/2" (M40)	1-1/4" (M32)	1" (M25)	3/4" (M20)	1/2" (M16)
IN. (mm)	3-1/4 (83)	3 (76)	2-3/4 (70)	2-1/2 (64)	2-1/8 (54)	1-7/8 (48)	1-3/4 (44)	1-1/2 (38)	1-3/8 (35)	1-1/4 (32)

TABLE 5 - CEC / NEC Minimum Wire Bending Space - From Inside Wall of Enclosure (North America Applications Only)

Size AWG (mm ²)	16 (1.5)	14 (2.5)	12 (4)	10 (6)	8 (10)	6 (16)	4 (25)	2 (35)	1/0 (50)	2/0 (70)	3/0 (95)	4/0 (120)
IN. (mm)	1.5 (38)	1.5 (38)	1.5 (38)	1.5 (38)	1.5 (38)	2 (51)	3 (76)	3.5 (89)	5.5 (140)	6 (152)	6.5 (164)	7 (178)

TABLE 6 - Conduit / Cable Gland Hole Diameters - For additional sizes, please contact Customer Service

NPT	4"	3-1/2"	3"	2-1/2"	2"	1-1/2"	1-1/4"	1"	3/4"	1/2"
Max. Hole Dia. IN. (mm)	4.53 (115.06)	4.03 (102.36)	3.53 (89.66)	2.905 (73.79)	2.405 (61.08)	1.93 (49.2)	1.69 (42.93)	1.345 (34.16)	1.08 (27.4)	.87 (22.09)
Metric	M100	M80	M75	M63	M50	M40	M32	M25	M20	M16
Max. Hole Dia. mm (IN.)	100.7 (3.94)	80.7 (3.15)	75.7 (2.95)	63.7 (2.48)	50.7 (1.97)	40.7 (1.58)	32.7 (1.26)	25.7 (0.98)	20.7 (0.79)	16.7 (0.63)

TABLE 7 - Minimum Distance - From Center Line to Center Line of Conduit / Cable Entries

(NPT) [METRIC]	4 [M100]	3 1/2 [M80]	3 [M75]	2 1/2 [M63]	2 [M50]	1 1/2 [M40]	1 1/4 [M32]	1 [M25]	3/4 [M20]	1/2 [M16]
1/2 [M16]	3 5/8 [92mm]	3 3/8 [86mm]	3 1/8 [80mm]	2 3/4 [70mm]	2 1/2 [64mm]	2 1/4 [58mm]	2 1/8 [54mm]	1 7/8 [48mm]	1 3/4 [45mm]	1 5/8 [41mm]
3/4 [M20]	3 3/4 [96mm]	3 1/2 [89mm]	3 1/4 [83mm]	2 7/8 [74mm]	2 5/8 [68mm]	2 3/8 [60mm]	2 1/4 [58mm]	2 [51mm]	1 7/8 [48mm]	
1 [M25]	3 7/8 [99mm]	3 5/8 [92mm]	3 3/8 [86mm]	3 [77mm]	2 3/4 [70mm]	2 1/2 [64mm]	2 3/8 [60mm]	2 1/8 [54mm]		
1 1/4 [M32]	4 1/8 [105mm]	3 7/8 [99mm]	3 1/2 [89mm]	3 1/4 [83mm]	3 [77mm]	2 3/4 [70mm]	2 1/2 [64mm]			
1 1/2 [M40]	4 1/4 [108mm]	4 [102mm]	3 3/4 [96mm]	3 3/8 [86mm]	3 1/8 [80mm]	2 7/8 [73mm]				
2 [M50]	4 3/4 [121mm]	4 1/2 [115mm]	4 [102mm]	3 5/8 [92mm]	3 3/8 [86mm]					
2 1/2 [M63]	4 7/8 [124mm]	4 5/8 [118mm]	4 1/4 [108mm]	3 7/8 [99mm]						
3 [M75]	5 1/4 [134mm]	5 [127mm]	4 5/8 [118mm]							
3 1/2 [M80]	5 3/4 [147mm]	5 1/2 [140mm]								
4 [M100]	6 1/4 [159mm]									