

XCA series circular electrical connector



Conform to Chinese military connector standard GJB2889, XCA series is extended from XC series, designed as bayonet coupling, solder or crimp springtac contact. The family can be mated with XC series.

Part number

	XCA	14	F	4	Z	HP ₁	W
Basic series							
Shell size							
14, 18, 22, 24, 27, 30, 33, 36, 39							
Type of plug and receptacle							
T = Plug with crimp contact							
F = Square flange receptacle with crimp contact							
Y = Circular receptacle with crimp contact							
S or S ₃ = Jam nut hermetic receptacle thru bulkhead							
Number of contact							
01 ~ 62							
Type of contact							
Z = Pin with silver plating							
Z ₁ = Pin with gold plating							
K = Socket with silver plating							
K ₁ = Socket with gold plating							
M = Contact of hermetic receptacle with silver plating							
M ₁ = Contact of hermetic receptacle with gold plating							
Finish and back shell							
Omit = Black anodized without thread							
H = Black anodized with straight cable clamp							
D1 = Electroless nickel plating without thread							
D3 = Olive-drab zinc plating passivated without thread							
HP1 = Electroless nickel plating with shielded nut							
HP3 = Olive-drab zinc plating passivated with shielded nut							
E = Black anodized with thread							
W = Black anodized with 90° elbow cable clamp							
P1 = Electroless nickel plating with thread							
P3 = Olive-drab zinc plating passivated with thread							
WP1 = Electroless nickel plating with 90° elbow cable clamp							
WP3 = Olive-drab zinc plating passivated with 90° elbow cable clamp							
Orientation							
N, W, X, Y, Z.							
Omit = N							

Performance specification

Operating temperature: -55 °C ~ +200 °C

Relative humidity: at 40 ± 2 °C, 90% ~ 95%

Working height: ≤ 30000 m

Vibration: at 10 ~ 2000 Hz, acceleration: 196 m/s²

Endurance: ≥ 1000 cycles

Electrical performance

Contact resistance and rated current

Contact No.	Resistance (mΩ)	Rated current (A)
Φ 1.0	≤ 5.0	5
Φ 1.5	≤ 2.5	10
Φ 2.0	≤ 1.25	20
Φ 3.0	≤ 0.75	40

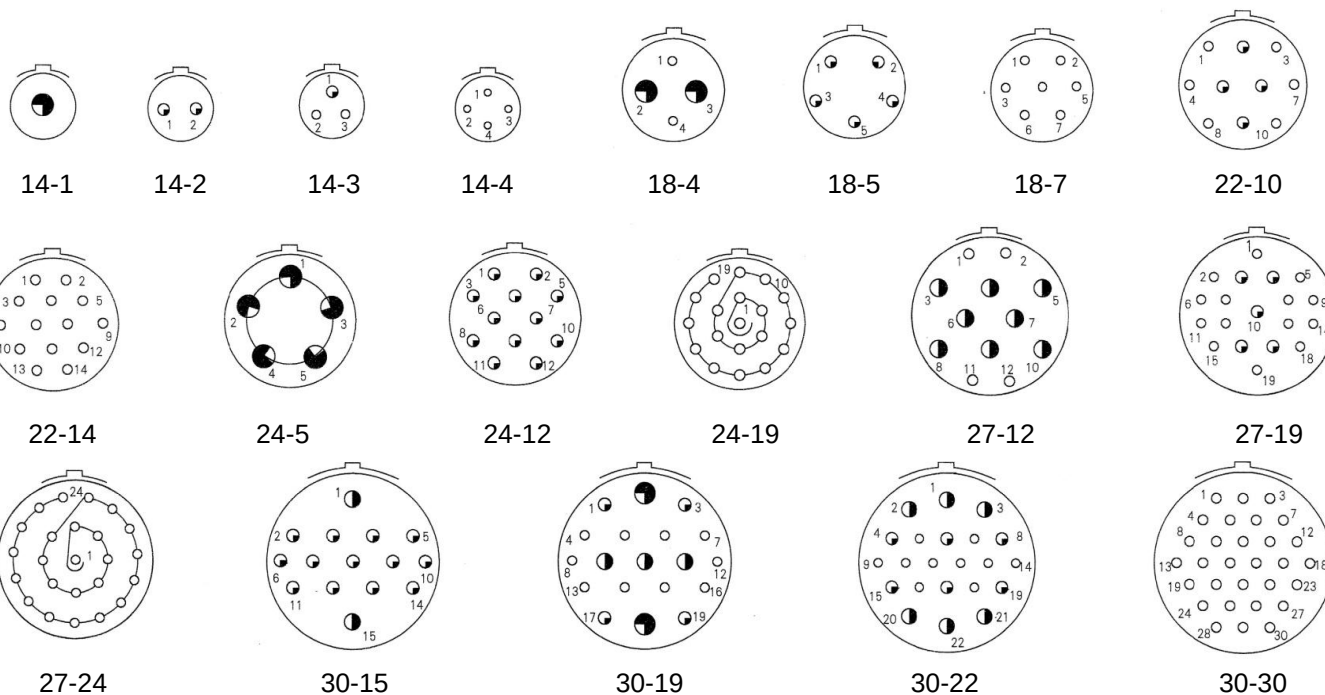
Rated voltage and withstanding voltage

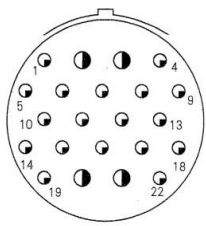
Operating environment	Sealed connector		Unsealed connector	
	Rated voltage (V)	Withstanding voltage (V)	Rated voltage (V)	Withstanding voltage (V)
Normal	500	≥ 1500	500	≥ 1500
Hot and humid	500	≥ 750	500	≥ 1125
Low pressure (1 kPa)	150	≥ 300	250	≥ 300

Insulation resistance (MΩ)

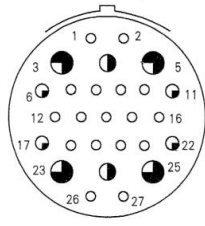
Environment	Normal	Heat	Hot and humid
Insulation resistance	≥ 5000	≥ 1000	≥ 100

Contact layout

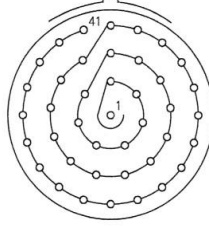




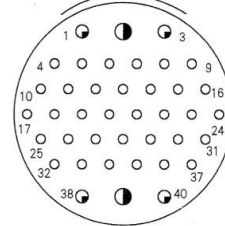
33-22



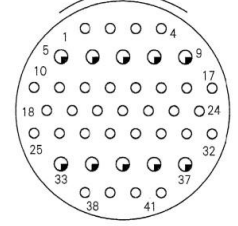
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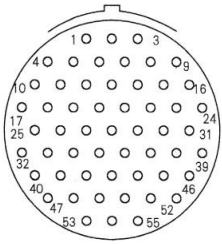
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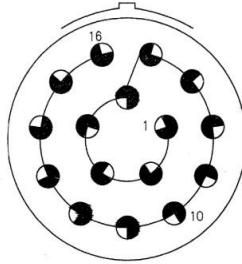
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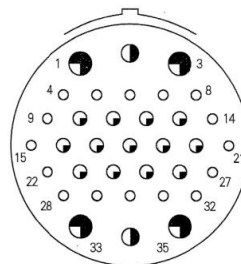
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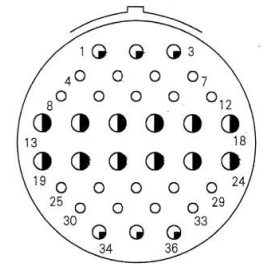
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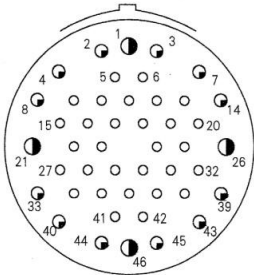
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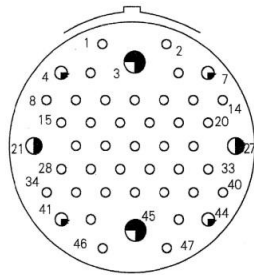
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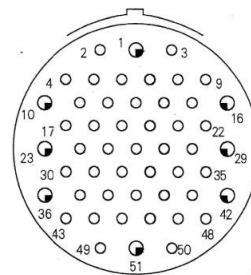
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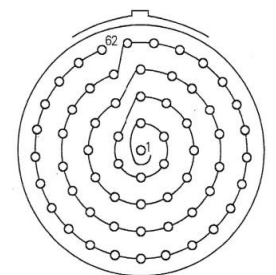
39-46



39-47



39-51



39-62



Φ1.0



Φ1.5



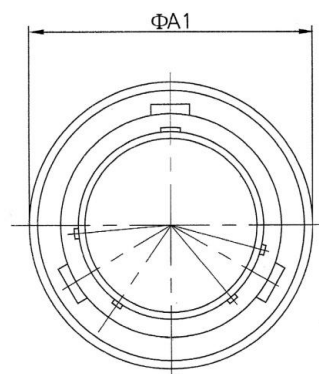
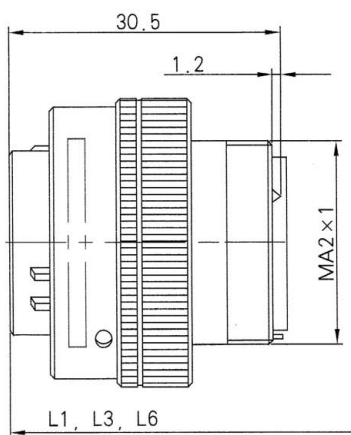
Φ2.0



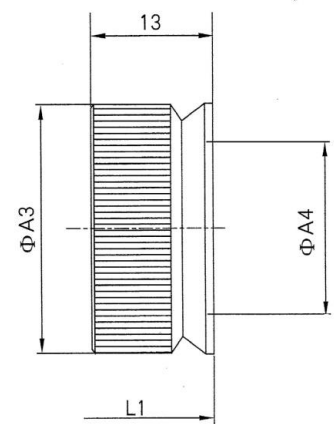
Φ3.0

Shell size

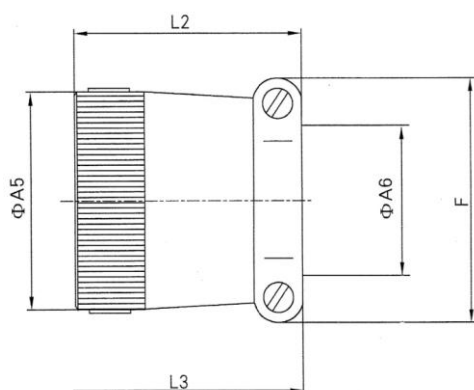
Plug and back shell



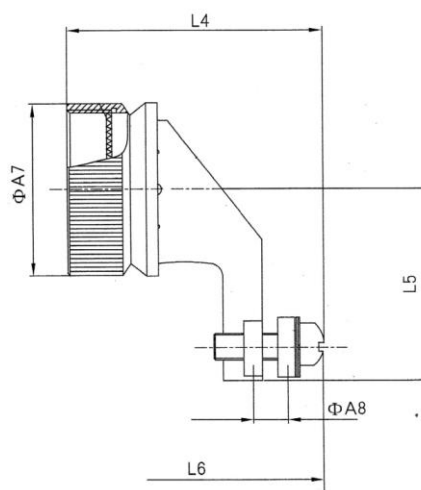
Shielding nut



Straight cable clamp

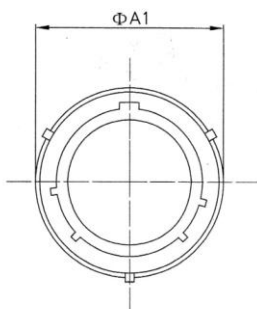
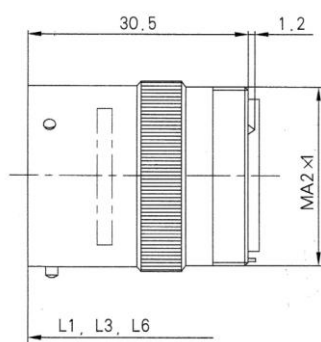


90° elbow cable clamp

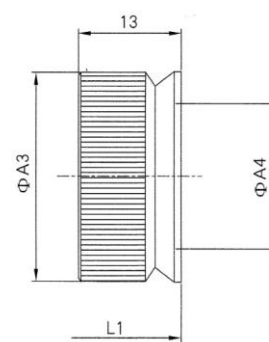


Shell size	14	18	22	24	27	30	33	36	39
A1	24.0	28.0	32.0	34.0	37.0	40.0	43.0	46.0	49.0
A2	14.0	18.0	22.0	24.0	27.0	30.0	33.0	36.0	39.0
A3	18.0	22.0	26.0	28.0	31.0	34.0	37.0	40.0	43.0
A4	10.0	14.0	18.0	20.0	23.0	26.0	29.0	32.0	35.0
L1	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
A5	16.0	20.0	24.0	26.0	29.0	33.0	36.0	39.0	42.0
A6 (min)	5.5	8.5	8.5	10.5	10.5	15.0	15.0	21.0	21.0
A6 (max)	8.0	13.0	13.0	18.0	18.0	23.0	23.0	28.0	28.0
F	22.0	27.0	27.0	32.0	32.0	37.0	37.0	42.0	42.0
L2	22.0	22.0	25.0	25.0	25.0	30.0	30.0	30.0	30.0
L3	47.5	47.5	50.5	50.5	50.5	55.5	55.5	55.5	55.5
A7	16.5	20.5	24.5	26.5	29.5	32.5	35.5	38.5	41.5
A8 (min)	5.0	8.0	8.0	10.0	10.0	14.0	14.0	20.0	20.0
A8 (max)	11.0	15.0	19.0	21.0	24.0	26.0	29.0	32.0	35.0
L4	37.5	39.5	41.5	45.5	45.5	53.5	53.5	55.5	55.5
L5	21.0	23.0	25.0	26.0	27.5	29.5	31.0	32.5	34.0
L6 (max)	62.5	64.5	68.5	70.5	70.5	78.5	78.5	80.5	80.5

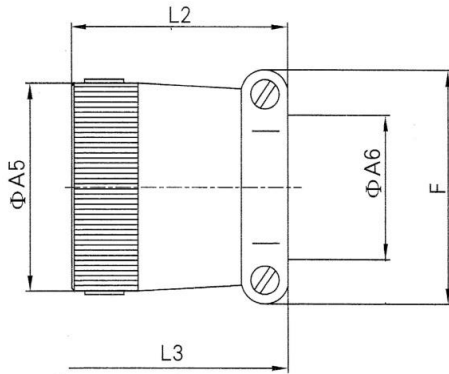
Circular receptacle and back shell



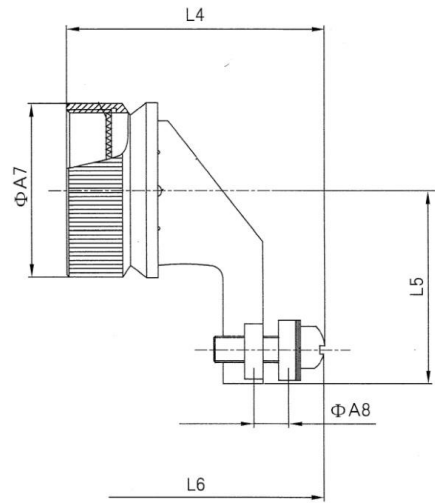
Shielding nut



Straight cable clamp

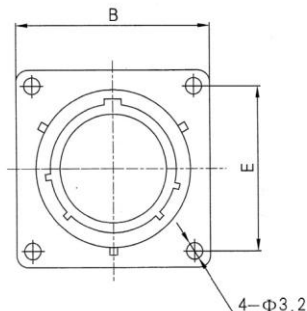
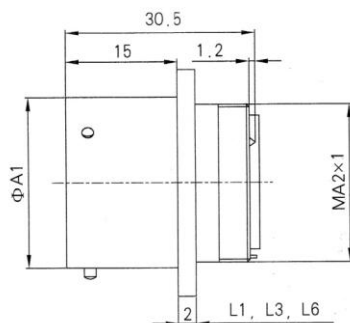


90° elbow cable clamp

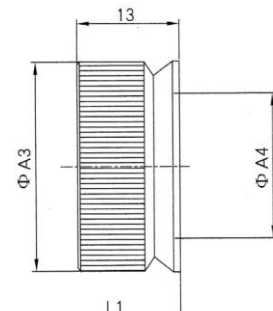


Shell size	14	18	22	24	27	30	33	36	39
A1	24.0	28.0	32.0	34.0	37.0	40.0	43.0	46.0	49.0
A2	14.0	18.0	22.0	24.0	27.0	30.0	33.0	36.0	39.0
A3	18.0	22.0	26.0	28.0	31.0	34.0	37.0	40.0	43.0
A4	10.0	14.0	18.0	20.0	23.0	26.0	29.0	32.0	35.0
L1	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
A5	16.0	20.0	24.0	26.0	29.0	33.0	36.0	39.0	42.0
A6 (min)	5.5	8.5	8.5	10.5	10.5	15.0	15.0	21.0	21.0
A6 (max)	8.0	13.0	13.0	18.0	18.0	23.0	23.0	28.0	28.0
F	22.0	27.0	27.0	32.0	32.0	37.0	37.0	42.0	42.0
L2	22.0	22.0	25.0	25.0	25.0	30.0	30.0	30.0	30.0
L3	47.5	47.5	50.5	50.5	50.5	55.5	55.5	55.5	55.5
A7	16.5	20.5	24.5	26.5	29.5	32.5	35.5	38.5	41.5
A8 (min)	5.0	8.0	8.0	10.0	10.0	14.0	14.0	20.0	20.0
A8 (max)	11.0	15.0	19.0	21.0	24.0	26.0	29.0	32.0	35.0
L4	37.5	39.5	41.5	45.5	45.5	53.5	53.5	55.5	55.5
L5	21.0	23.0	25.0	26.0	27.5	29.5	31.0	32.5	34.0
L6 (max)	62.5	64.5	68.5	70.5	70.5	78.5	78.5	80.5	80.5

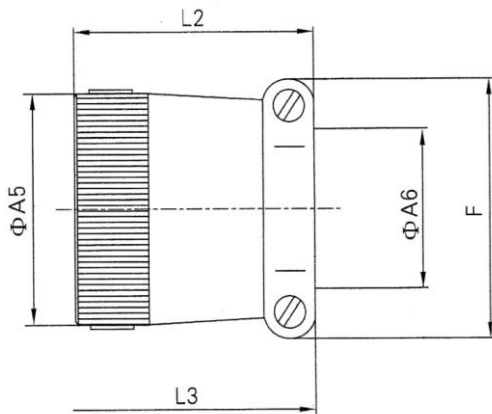
Square flange receptacle and back shell



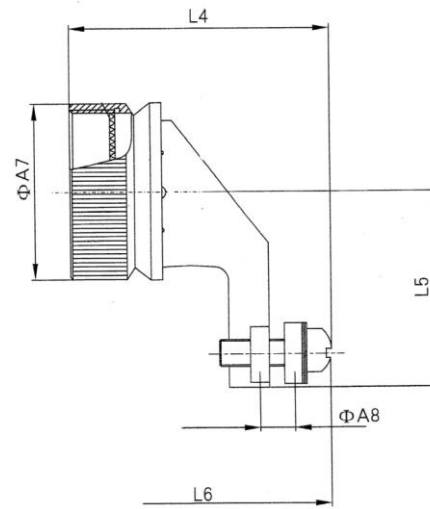
Shielding nut



Straight cable clamp

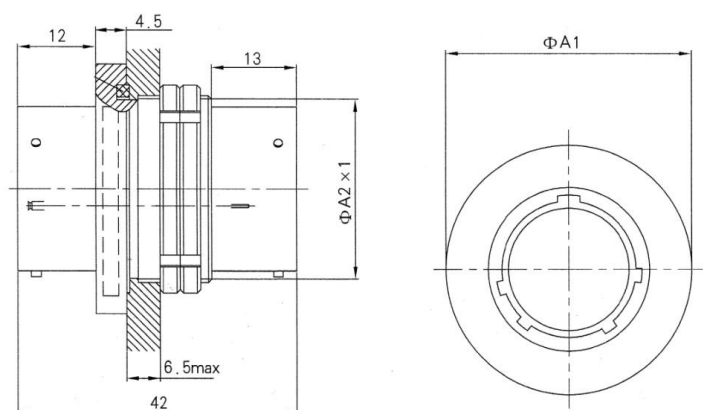


90° elbow cable clamp



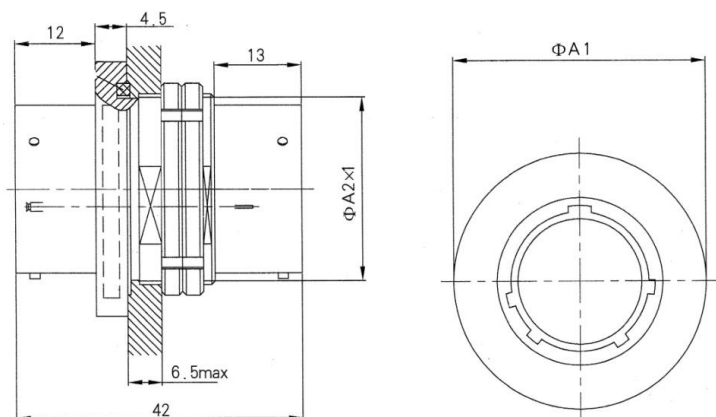
Shell size	14	18	22	24	27	30	33	36	39
A1	15.7	19.7	23.7	25.7	28.7	31.7	34.7	37.7	40.7
A2	14.0	18.0	22.0	24.0	27.0	30.0	33.0	36.0	39.0
B	25.0	27.5	30.0	32.0	34.5	36.5	39.5	41.0	43.0
E	19.0	21.5	24.0	26.0	28.0	30.0	32.5	34.0	36.0
A3	18.0	22.0	26.0	28.0	31.0	34.0	37.0	40.0	43.0
A4	10.0	14.0	18.0	20.0	23.0	26.0	29.0	32.0	35.0
L1	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
A5	16.0	20.0	24.0	26.0	29.0	33.0	36.0	39.0	42.0
A6 (min)	5.5	8.5	8.5	10.5	10.5	15.0	15.0	21.0	21.0
A6 (max)	8.0	13.0	13.0	18.0	18.0	23.0	23.0	28.0	28.0
F	22.0	27.0	27.0	32.0	32.0	37.0	37.0	42.0	42.0
L2	22.0	22.0	25.0	25.0	25.0	30.0	30.0	30.0	30.0
L3	30.5	30.5	33.5	33.5	33.5	38.5	38.5	38.5	38.5
A7	16.5	20.5	24.5	26.5	29.5	32.5	35.5	38.5	41.5
A8 (min)	5.0	8.0	8.0	10.0	10.0	14.0	14.0	20.0	20.0
A8 (max)	11.0	15.0	19.0	21.0	24.0	26.0	29.0	32.0	35.0
L4	37.5	39.5	41.5	45.5	45.5	53.5	53.5	55.5	55.5
L5	21.0	23.0	25.0	26.0	27.5	29.5	31.0	32.5	34.0
L6 (max)	45.5	47.5	51.5	53.5	53.5	61.5	61.5	63.5	63.5

Jam nut hermetic receptacle thru bulkhead (S)



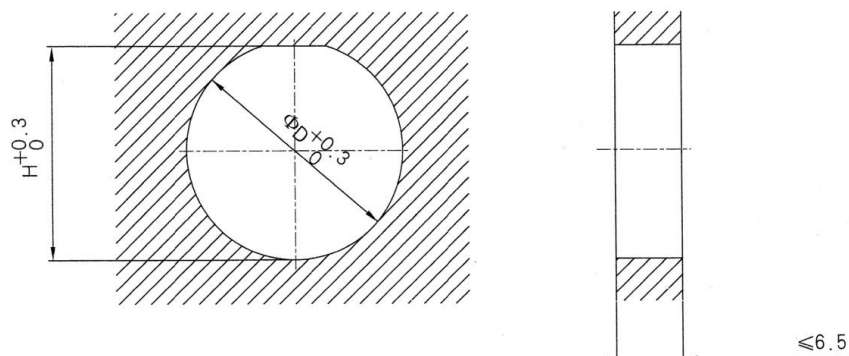
Shell size	A1	A2
14	27	18
18	31	22
22	36	27
24	36	27
27	39	30
30	42	33
33	45	36
36	48	39
39	51	42

Jam nut hermetic receptacle thru bulkhead (S₃)



Shell size	A1	A2
14	27	18
18	31	22
22	36	27
24	36	27
27	39	30
30	42	33
33	45	36
36	48	39
39	51	42

Suggestion size



Shell size	D	H
14	18.3	17.0
18	22.3	21.0
22	27.3	25.4
24	27.3	26.4
27	30.3	29.4
30	33.3	32.4
33	36.3	35.4
36	39.3	38.4
39	42.3	41.4