Ceramic Plates

Alumina 96, Steatite, Machinable Ceramics

■Alumina 96: Excels in abrasion resistance, insulation and heat resistance.
■Steatite: Excels in insulation and high frequency characteristic.
■Machinable Ceramics: Excels in insulation, heat insulation and machinability. Can be machined into complex shapes or finished with precision.

■Ceramic Plates

RoHS 10

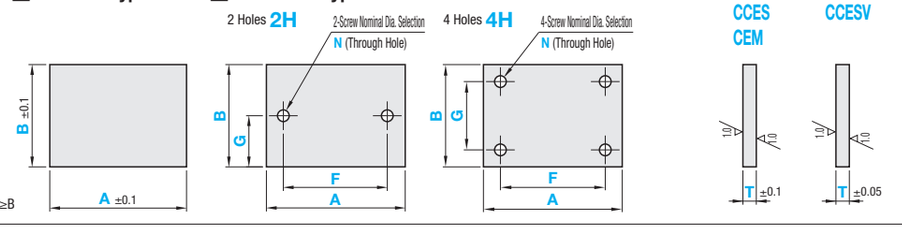
Properties P.955

Part Number	Material	Finish Precision	Color	Operating Ambient Temperature
CEA	Alumina 96	Standard Grade	White	Ambient Temperature~1,300°C
CEAV	Alumina 96	Precision Grade (P)		
CCES	Steatite	Standard Grade	White	Ambient Temperature~1,000°C
CCESV	Steatite	Precision Grade		
CEM	Machinable Ceramics	Standard Grade	Natural Color	Ambient Temperature~1,000°C

(P) Material is alumina 99.5 for Pre-Drilled Types T = 2 or 2.5 and T = 1.

■Standard Type

■Pre-drilled Type



(P) A≥B

Standard Grade	Precision Grade
CEA CCES CEM	CEAV CCESV

■Standard Type

Part Number Type	1mm Increment A	1mm Increment B	Selection T
CEA CEM	10~200	10~100	1 2
CEAV	10~100	10~100	2.5
CCES CCESV	10~70	10~70	3 5

■Accuracy Standards

Item		CEA, CCES, CEM	CEAV, CCESV
Thickness Parallelism (per 100mm)		0.1	0.05
Flatness	T=1	0.1	0.05
(per 100mm)	T=2~5	0.1	0.05

Hole Machining Details

N (Through Hole)

Screw Nominal Dia.	3	4	5	6	8	10
d	3.5	4.5	5.5	6.5	9	11

■Pre-drilled Type

Part Number Type	Number of Holes	1mm Increment A	1mm Increment B	Selection T	0.5mm Increment F	0.5mm Increment G	Screw Nominal Dia. Selection N (Through)
CEA CEM	2H	20~200	10~100	1 2	9~191	5~95 (2H) 9~91 (4H)	3 4 5 6 8 10
CEAV	2H	20~100	10~100	2.5	9~91		
CCES CCESV	4H	20~70	10~70	3 5	9~61	5~65 (2H) 9~61 (4H)	

(P) For F dimension, d+5≤F≤A-d-5 is required.
(P) G Dimension: For 2H, d/2+2.5≤G≤B-d/2-2.5; for 4H, d+5≤G≤B-d-5.

Ordering Example

■Standard Type

Part Number	-	A	-	B	-	T
CEA	-	60	-	55	-	2

■Pre-drilled Type

Part Number	-	A	-	B	-	T	-	F	-	G	-	Screw Nominal Dia.
CEA4H	-	80	-	80	-	1	-	F55	-	G55	-	N6

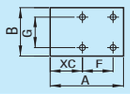
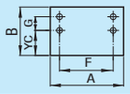
Alterations

Part Number	-	A	-	B	-	T	-	F	-	G	-	Screw Nominal Dia.	-	(XC, YC)
CEA2H	-	80	-	80	-	1	-	F30	-	G40	-	N6	-	XC15

■Standard Type

Part Number	T	A	Unit Price CEA B10~50	CEA B51~100	CEAV B10~50	CEAV B51~100	CEM B10~50	CEM B51~100
CEA	1	10~50		-		-		-
		51~100						
		101~150			-	-		
		151~200			-	-		
CEAV	2	10~50		-		-		-
		51~100						
		101~150			-	-		
		151~200			-	-		
CEM	2.5	10~50		-		-		-
		51~100						
		101~150			-	-		
		151~200			-	-		

Part Number	T	A	Unit Price CCES B10~35	CCES B36~70	CCESV B10~35	CCESV B36~70
CCES	3	10~35		-		-
		36~70				
CCESV	5	10~35		-		-
		36~70				

Alterations	Hole Position from Left	Hole Position from Bottom
		
Code	XC	YC
Spec.	XC = 1mm Increment (P) 5≤XC≤186(CEA, CEM) 5≤XC≤86(CEAV) 5≤XC≤56(CCES, CCESV) (P) d(d1)/2+2.5≤XC≤A-F-d(d1)/2-2.5	YC = 1mm Increment (X) Not available for 2H. (P) 5≤YC≤86(CEA, CEAV, CEM) 5≤YC≤56(CCES, CCESV) (P) d(d1)/2+2.5≤YC≤B-G-d(d1)/2-2.5

■Hole Machining Charge

Pre-drilled Type	Screw Nominal N (Through)
2H	
4H	

(Ex.) Part Number - A - B - T - F - G - Screw Nominal Dia. >>
CEA2H - 90 - 60 - 1 - F60 - G30 - N6

(Standard Type Unit Price) + (Hole Machining Charge) = Pre-drilled Type Price

(P) Pre-drilled Type Price = Standard Type Unit Price + Hole Machining Charge

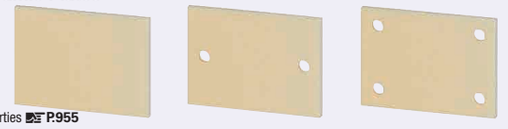
Ceramic Plates

Al2O3/Alumina 99

■Al2O3/Alumina 99: Excels in abrasion resistance, insulation and heat resistance.

■Ceramic Plates

RoHS 10

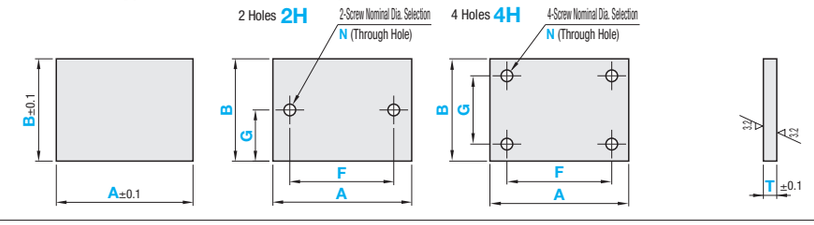


Properties P.955

Part Number	Material	Finish Precision	Color	Operating Ambient Temperature
CEMN	Al2O3/Alumina 99	Standard Grade	Natural Color	Room Temp. ~ 1500°C

■Standard Type

■Pre-drilled Type



(P) A≥B

■Standard Type

Part Number Type	1mm Increment A	1mm Increment B	Selection T
CEMN	50~470	50~170	3 5 10

■Pre-drilled Type

Part Number Type	Number of Holes	1mm Increment A	1mm Increment B	Selection T	0.5mm Increment F	0.5mm Increment G	Screw Nominal Dia. Selection N (Through)
CEMN	2H 4H	50~470	50~170	3	9~461	5~165 (2H) 9~161 (4H)	3 4 5 6 8 10
				5			
				10			

(P) For F dimension, d+5≤F≤A-d-5 is required.
(P) G Dimension: For 2H, d/2+2.5≤G≤B-d/2-2.5; for 4H, d+5≤G≤B-d-5.

Hole Machining Details

N (Through Hole)

Screw Nominal Dia.	3	4	5	6	8	10
d	3.5	4.5	5.5	6.5	9	11

Ordering Example

■Standard Type

Part Number	-	A	-	B	-	T
CEMN	-	60	-	55	-	3

■Pre-drilled Type

Part Number	-	A	-	B	-	T	-	F	-	G	-	Screw Nominal Dia.
CEMN4H	-	80	-	80	-	3	-	F55	-	G55	-	N6

■Standard Type

T	A	Unit Price B50~100	Unit Price B101~150	Unit Price B151~170
3	50~100		-	-
	101~150			-
	151~200			
	201~250			
	251~350			
	351~470			
5	50~100		-	-
	101~150			-
	151~200			
	201~250			
	251~350			
	351~470			
10	50~100		-	-
	101~150			-
	151~200			
	201~250			
	251~350			
	351~470			

■Hole Machining Charge

Pre-drilled Type	Screw Nominal N	T 3	T 5	T 10
2H	3			
	4, 5, 6			
	8			
	10			
4H	3			
	4, 5, 6			
	8			
	10			

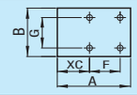
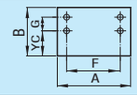
(P) Pre-drilled Type Price = Standard Type Unit Price + Hole Machining Charge

(Ex.) Part Number - A - B - T - F - G - Screw Nominal Dia. >>
CEMN2H - 90 - 60 - 3 - F60 - G30 - N6

(Standard Type Unit Price) + (Hole Machining Charge) = Pre-drilled Type Price

Alterations

Part Number	-	A	-	B	-	T	-	F	-	G	-	Screw Nominal Dia.	-	(XC, YC)
CEMN2H	-	80	-	80	-	3	-	F30	-	G40	-	N6	-	XC15

Alterations	Hole Position from Left	Hole Position from Bottom
		
Code	XC	YC
Spec.	XC = 1mm Increment (P) 5≤XC≤456 (P) d/2+2.5≤XC≤A-F-d/2-2.5	YC = 1mm Increment (X) Not available for 2H. (P) 5≤YC≤160 (P) d/2+2.5≤YC≤B-G-d/2-2.5