

Locating Pins

Eccentric / Flanged Flat Type

Locating Pins/Bushings for Locating Pins

Locating Pins – Eccentric

RoHS 10

Type		Material	Surface Treatment	Hardness
Standard	Pilot			
JPEA	JPEIA	O1 Tool Steel or Equivalent	—	Treated Hardness: 60–63 HRC min.
GJPEA	—			Hard Chrome Plating Plating Thickness 3 μm or More
SJPEA	SJPEIA	304 Stainless Steel	—	—
CJPEA	CJPEIA	440C Stainless Steel or Equivalent	—	Treated Hardness: 50–55 HRC min.

Standard

Pilot

Part Number		D	d ₁	d ₂	T	H	Applicable Screw	e	(a)	D ₁	D _{1g6}	L
Standard	Pilot	10	3.5	6.5	6	4	M3	1	2.75	—	—	—
JPEA	JPEIA	12	4.5	8	8	5	M4	1.2	3.2	8	-0.006	8
GJPEA	SJPEIA	16	5.5	9.5	10	6	M5	2	5.25	11	-0.017	10
SJPEA	CJPEIA	20	6.5	11	12	7	M6	2.5	7	14	-0.007	12
SJPEA	CJPEIA	25	9	14	16	9	M8	3.5	9	17	-0.020	15
CJPEA	—	32	11	17.5	20	11	M10	5	12.25	20	-0.009	18
CJPEA	—	40	14	20	24	13	M12	7	17	—	-0.025	—

*Tightening torque will be within Strength Class of 10.9 as indicated in the Technical Data P4016 (10.9). Not applicable when using locking materials or lock washers.
 Ⓢ D 25, 32, 40 sizes are not available for SJPEA part types

Part Number Example

Part Number: **JPEA32**
 Alterations: **SJPEIA25**

Alterations Code	Wrench Hole LAC	Pilot Cut LC
Spec.	Machines wrench hole. Selection: 45°, 135° Ordering Code: LAC45	Cuts the pilot section. Ordering Code: LC8 (1 mm Increment)

D	Wrench Hole Dia.	ℓ
16, 20	3.5	3
25, 32, 40	5	6

Application Example

JPEIA

Easy eccentric adjustment due to the presence of a pilot.

Locating Pins – Flanged Flat Type

RoHS 10

Round Flange		Compact Flange		Material	Surface Treatment	Hardness
Round	Diamond	Round	Diamond			
MASA	MASD	MATA	MATD	O1 Tool Steel Equivalent	—	Treated Hardness: 60–63 HRC min.
SMASA	—	SMATA	—			304 Stainless Steel
HMASA	—	HMATA	—	—	—	—

Round

Compact

Tip Shape Selection

Ⓢ ℓ = $\frac{P}{2} \tan 15^\circ + R - (R/\sin 15^\circ)$
 Reference: $\tan 15^\circ = 0.267$, $\sin 15^\circ = 0.259$

Part Number		P	B	T	F	H	G	P.C.D.	d	d ₁	h	m	R	(W)
Round Flange	Compact Flange	0.01 mm Increment	0.1 mm Increment	0.1 mm Increment	5	25	11	16	3.5	6.5	3.5	3	1	1.5
MASA	MATA	4.00–7.00	3.0–12.0	5.0–10.0	5	36	16	24	5.5	9.5	5.5	4	2	3
MASD	MATD	7.00–11.00	4.0–20.0	7.0–15.0	5	36	16	24	5.5	9.5	5.5	4	2	3
SMASA	SMATA	8.00–12.00	4.0–20.0	7.0–15.0	5	36	16	24	5.5	9.5	5.5	4	2	3
HMASA	HMATA	13.00–16.00	5.0–20.0	11.0–20.0	10	54	24	37	9	14	9	5	4	4
HMASA	HMATA	16.00–20.00	5.0–20.0	11.0–20.0	10	54	24	37	9	14	9	5	5	5.5

Part Number Example

Part Number: **MASAA8**
 Alterations: **- P6.50 - B7.5 - T8.2**

Flanged Locating Pins / Height Adjusting Blocks

Standard / Compact Flanged

Flanged Locating Pins

RoHS 10

Standard	Compact Flange	Pin Shape	Flange Shape	Material	Hardness
FLPDC	—	Diamond	Round	SCM415 Alloy Steel (JIS)	Carburized Hardness 55 HRC min. (Depth: 0.7–0.8)
FLPAQ	FSPAQ	Round	Round		
FLPDQ	FSPDQ	Diamond	Compact		

Ⓢ The head of mounting screw may project out of the flange surface depending on dimensions.

(+) When L=13–18, h=4
 When L=19–23, h=7

Round Flanged

Compact Flanged

Standard

Part Number		L	P	B	H	(W)	P.C.D.	Q	F
FLPDC	Round	10	6.00–13.00	3–7	44	2.5	30	30	21
FLPAQ	Compact	12	13.00–16.00	3–7	48	4	33	33	24
FLPDQ	Compact	16	16.00–20.00	3–7	56	5	41	41	28

Compact Flanged

Part Number		L	P	B	H	(W)	P.C.D.	Q	F
FSPAQ	Compact	12	6.00–13.00	3–7	38	2.5	25	25	17
FSPDQ	Compact	16	13.00–16.00	3–7	42	4	29	29	21
FSPDQ	Compact	20	16.00–20.00	3–7	46	5	33	33	25

Part Number Example

Part Number: **FLPDC12**
 Alterations: **- L18 - P14.25 - B7**

Part Number Example

Part Number: **FLPDQ12**
 Alterations: **- L18 - P14.25 - B7 - KC**

Alteration

Code: **KC**

Spec. Changes the diamond angle to 90° from the standard position 0°.
 Ⓢ Applicable to Compact Flanged with Diamond Shape only.

Height Adjusting Blocks

RoHS 10

Part Number		L	P	B	H	Q	F
KKB	Standard	15	20	2	50	36	22
KKB	Standard	20	20	2	50	36	22
KKB	Standard	25	20	2	50	36	22

Standard KKB

Seating Sensor Hole KKBE

Material: O1 Tool Steel or Equivalent
 Hardness: 60–63 HRC min.

Standard

Part Number		L	P	B	H	Q	F
KKB	Standard	15	20	2	50	36	22
KKB	Standard	20	20	2	50	36	22
KKB	Standard	25	20	2	50	36	22

Part Number Example

Part Number: **KKB15**
 Alterations: **- A**

Seating Sensor Hole

Part Number		L	A	P	B	H	Q	F
KKBE	Standard	15	1	20	2	50	36	22
KKBE	Standard	20	1.5	20	2	50	36	22
KKBE	Standard	25	2	20	2	50	36	22

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