

Locating Pins

Eccentric / Flanged Flat Type

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
SJPEA	SJPEIA	304 Stainless Steel	—	—
CJPEA	CJPEIA	440C or 420 Stainless Steel	—	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	—	-0.017	—
SJPEA	CJPEIA	20	6.5	11	12	7	M6	2.5	7	11	-0.007	10
SJPEA	CJPEIA	25	9	14	16	9	M8	3.5	9	14	-0.020	12
CJPEA	—	32	11	17.5	20	11	M10	5	12.25	17	-0.009	15
CJPEA	—	40	14	20	24	13	M12	7	17	20	-0.025	18

Ⓢ D 25, 32, 40 sizes are not available for SJPEA part types

Part Number Example

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

Part Number Alterations

Part Number: **JPEIA20** - (LAC, LC)
 Alterations: **LAC45**

Alterations Code	Wrench Hole LAC	Pilot Cut LC																									
Spec.	<p>Machines wrench hole. Selection: 45°, 135° Ordering Code: LAC45</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>D</th> <th>Wrench Hole Dia.</th> <th>ℓ</th> </tr> </thead> <tbody> <tr> <td>16, 20</td> <td>3.5</td> <td>3</td> </tr> <tr> <td>25, 32, 40</td> <td>5</td> <td>6</td> </tr> </tbody> </table>	D	Wrench Hole Dia.	ℓ	16, 20	3.5	3	25, 32, 40	5	6	<p>Cuts the pilot section. Ordering Code: LC8 (1 mm Increment)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>D</th> <th>LC</th> <th>D</th> <th>LC</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>6–7</td> <td>25</td> <td>8–11</td> </tr> <tr> <td>16</td> <td>6–7</td> <td>32</td> <td>10–14</td> </tr> <tr> <td>20</td> <td>6–9</td> <td>40</td> <td>12–17</td> </tr> </tbody> </table>	D	LC	D	LC	12	6–7	25	8–11	16	6–7	32	10–14	20	6–9	40	12–17
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20	6–9	40	12–17																								

Ⓢ Only 1 hole can be specified. Ⓢ Applicable to Pilot Type only.

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	—			Plating Hardness: 750 HV min.
HMASA	—	HMATA	—	304 Stainless Steel	Hard Chrome Plating	—

Round

Compact

Tip Shape Selection

Ⓢ $\ell = \frac{P}{2} / \tan 15^\circ + R - (R / \sin 15^\circ)$
 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	3.0–5.00	3.0–10.0	5.0–10.0	—	—	—	—	—	—	—	—	—	1.8
MASD	MATD	4.0–7.00	3.0–12.0	7.0–15.0	5	36	16	24	5.5	9.5	5.5	4	1.5	2.2
SMASA	SMATA	6.0–9.00	3.0–15.0	—	—	—	—	—	—	—	—	—	3	3.2
HMASA	HMATA	7.0–11.00	4.0–20.0	11.0–20.0	10	54	24	37	9	14	9	5	5	5.5

Part Number Example

Part Number: **MASAA8** - P - B - T
 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	—	48	4	33	33	24
FLPDQ	Compact	16	16.00–20.00	—	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	—	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	—	46	5	33	33	25

Part Number Example

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

Part Number Alterations

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

Alteration Code

Spec. **KC**

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

Height Adjusting Blocks

RoHS 10

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	15	20	2	50	36	22	—
KKB	20	—	—	—	—	—	—
KKB	25	—	—	—	—	—	—

Seating Sensor Hole

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

Part Number Example

Part Number: **KKB15**
 Alterations: **KKBE15** - 1