

High Precision Linear Shafts

One End Tapped / One End Tapped with Wrench Flats

■ This type of Shaft is suitable for being used in environments where combination of high perpendicular precision ($\perp 0.03$) and high accuracy is required.

Type	D Tol.	Material	Hardness	Surface Treatment	D Tol.	
					D	g6
VFJT	g6	SUJ2	Induction Hardened Effective Hardened Depth $\geq$ P142	Hard Chrome Plating Plating Hardness HV750 ~ Plating Thickness: 5 μ or More Low Temp. Black Chrome Plating	4	-0.004
VSFJT		SUS440C Equivalent			5	-0.012
VPFJT		SUJ2			6	
VPSFJT		SUS440C Equivalent			8	-0.005
VRJT		SUJ2			10	-0.014
VFJC		SUJ2	58HRC~56HRC		12	-0.006
VSFJC		SUS440C Equivalent			13	-0.017
VPFJC		SUJ2			15	
VPSFJC		SUS440C Equivalent			16	
VRJC		SUJ2			18	-0.007
					20	-0.020
					25	
					30	

For plated products, the surface roughness of D part is $Ra 0.4$; and for unplated products, it is $Ra 0.4$.

W/o Wrench Flats

With Wrench Flats

Part Number	Type	D	L	M (Coarse) Selection	Wrench Flats Dimensions			C
					SC	W	ℓ_1	
(W/o Wrench Flats) (D4~D30)	VFJT	4	25~200	2	SC = 1mm Increment $SC + \ell_1 \leq L$ $SC \geq 0$ Details of Wrench Flats $\geq$ P142	-	-	0.2 or Less
		5	25~300	2.6 3				
		6	20~350	3				
		8	20~350	3 4 5				
		10	20~400	3 4 5 6				
		12	20~400	4 5 6 8				
		13	20~400	4 5 6 8				
		15	20~400	4 5 6 8 10				
		16	20~400	4 5 6 8 10				
		18	20~400	4 5 6 8 10 12				
		20	25~500	4 5 6 8 10 12				
		25	25~500	4 5 6 8 10 12 16				
		30	25~500	6 8 10 12 16 20				

For overall length L, when $M \times 2.5 + 4 \geq L$, tap pilot holes may go through.

Ordering Example	Part Number	-	L	-	M	-	SC
	VFJT20	-	100	-	M8	-	
	VFJC20	-	100	-	M8	-	SC10

Alterations	Part Number	-	L	-	M(MSC, MD)	-	SC	-	(LKC...etc.)
	VFJC20	-	100	-	M8	-	SC10	-	LKC
	VFJT20	-	100	-	M8	-		-	FC10-E8

Alteration Details $\geq$ P143

Alterations	Code	Spec.
LKC	LKC	Alteration to L dimension tolerance (Ordering Code) LKC (Application Notes) Applicable when $L=200$ or less. L dimensions can be specified in 0.1mm increment for LKC. $L \leq 200 \rightarrow L \pm 0.03$
FC	FC	Set Screw Flat at One Location (Ordering Code) FC10-E8 FC, E=1mm Increment $FC \leq 5 \times D$ E=0 or $A \geq 2$ Not available in combination with WFC.
WFC	WFC	Set Screw Flats at Two Locations (Ordering Code) WFC8-A8-E2 WFC, A, E=1mm Increment $20 \sim 30$ WFC $\leq 5 \times D$ $A(E)=0$ or $A(E) \geq 2$ Orientation between set screw flats is not coplanar. Not available in combination with FC.

Alterations	Code	Spec.
SX	SX	Second Set of Wrench Flats (Ordering Code) SX15 (Application Notes) Applicable to $D=6$ or more $SX=1$ mm Increment $SC+SX+\ell_1 \times 2 < L$ $SX \geq 0$ Orientation between two set screw flats is not coplanar.
MSC (Fine)	MSC	Change to Fine Tapped Thread (Ordering Code) MSC14 (M is changed to MSC) NSC14 (N is changed to NSC) (Application Notes) Applicable to $D=12$ or more
MD (Mx3)	MD	Change the effective length of tapped part to Mx3. (Ordering Code) MD6 (M is changed to MD) (Application Notes) Only applicable to $D=10 \sim 30$ and $M=6 \sim 20$ One End Tapped: $MD \times 3.5 + 4 \leq L$

Please see Shaft Alteration Overview for details if provided. $\geq$ P143

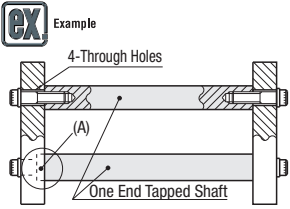
When selecting multiple alteration additions, the distance between machined areas should be greater than 2mm.

The distance between wrench flats and cross-drilled holes should be greater than 2mm for alterations.

Alterations may lower hardness. See $\geq$ P142.

For products uncovered by the e-Catalog Standards, see $\geq$ P131.

Part Number	Type	D	Unit Price					
			Min. L	L51	L101	L201	L301	L451
VFJT	VFJT	4	50	100	200	300	450	500
		5				-	-	-
		6				-	-	-
		8				-	-	-
		10				-	-	-
		12				-	-	-
		13				-	-	-
		15, 16				-	-	-
		18				-	-	-
		20				-	-	-
		25				-	-	-
		30				-	-	-
						-	-	-
						-	-	-
						-	-	-
VSFJT	VSFJT	4				-	-	-
		5				-	-	-
		6				-	-	-
		8				-	-	-
		10				-	-	-
		12				-	-	-
		13				-	-	-
		15, 16				-	-	-
		18				-	-	-
		20				-	-	-
		25				-	-	-
		30				-	-	-
						-	-	-
						-	-	-
						-	-	-
VPFJT	VPFJT	4				-	-	-
		5				-	-	-
		6				-	-	-
		8				-	-	-
		10				-	-	-
		12				-	-	-
		13				-	-	-
		15, 16				-	-	-
		18				-	-	-
		20				-	-	-
		25				-	-	-
		30				-	-	-
						-	-	-
						-	-	-
						-	-	-
VPSFJT	VPSFJT	4				-	-	-
		5				-	-	-
		6				-	-	-
		8				-	-	-
		10				-	-	-
		12				-	-	-
		13				-	-	-
		15, 16				-	-	-
		18				-	-	-
		20				-	-	-
		25				-	-	-
		30				-	-	-
						-	-	-
						-	-	-
						-	-	-
VRJT	VRJT	4				-	-	-
		5				-	-	-
		6				-	-	-
		8				-	-	-
		10				-	-	-
		12				-	-	-
		13				-	-	-
		15, 16				-	-	-
		18				-	-	-
		20				-	-	-
		25				-	-	-
		30				-	-	-
						-	-	-
						-	-	-
						-	-	-



Precision Type does not require stepped machining as (A), which enables effective assembly.

Part Number		Unit Price					
Type	D	Min. L 1 50	L51 1 100	L101 1 200	L201 1 300	L301 1 450	L451 1 500
VFJC	6						-
	8						-
	10						-
	12						-
	13						-
	15, 16						-
	18						-
	20						
	25						
	30						
VSFJC	6						-
	8						-
	10						-
	12						-
	13						-
	15, 16						-
	18						-
	20						
	25						
	30						
VPFJC	6						-
	8						-
	10						-
	12						-
	13						-
	15, 16						-
	18						-
	20						
	25						
	30						
VPSFJC	6						-
	8						-
	10						-
	12						-
	13						-
	15, 16						-
	18						-
	20						
	25						
	30						
VRJC	6						-
	8						-
	10						-
	12						-
	13						-
	15, 16						-
	18						-
	20						
	25						
	30						