

# Shaft Coupling Bore Additional Modification Service 1/2

## Service Contents

- Bores, keyways, and set screw holes can be machined in the shaft coupling.
- Select from nine modification types.

## Applicable Products

Flexible Flanged Shaft Couplings

## Fees • Delivery

- Please feel free to contact us.

## Part Number Specification

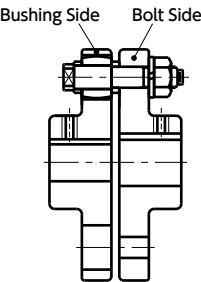
FCL90-18-BKW-H8 N -19-BKT-G6 N

Shaft Couplings Part Number

Select the following eight items.

- Bushing Side
- 1 Bore Diameter
  - 2 Modification Type
  - 3 Bore Tolerance
  - 4 Keyway Standard
- Bolt Side
- 5 Bore Diameter
  - 6 Modification Type
  - 7 Bore Tolerance
  - 8 Keyway Standard

\*For large order quantities, please contact our customer service.



## Order Process

- ① Specify the bore diameter within the range of the minimum bore diameter \*1 or more and the maximum bore diameter \*2 or less of the shaft coupling. 1 5

\*1: In principle, the minimum bore diameter is the length of the shaft coupling (dimension L) × 1/3.

\*2: For the maximum bore diameter, refer to the dimension tables on each product page.

For bore diameters exceeding 130 mm, please contact our customer service.

- ② Select the modification type.

Refer to the Modification Type List on the next page and specify the symbol inside . 2 6

\*If set screw hole modification (modification types BNS BNW BNT BKS BKW BKT) is specified, set screws will be supplied.

- ③ Select the bore tolerance and specify the modification symbol. 3 7

Tolerance Region	Tolerance Class/Class 6	Modification Symbol	Class 7	Class 8
H	H6	H	H	H8
G	G6	G	G	G8
F	F6	F	F	F8

\*Class 7 is standard. Specify Classes 6 or 8 with dimension tolerance symbols.

\*Please contact our customer service for bore tolerances other than the above.

- Fitting example of the shaft coupling shaft and bore

Shaft Diameter Tolerance	Bore Diameter Tolerance
h6	JS6*1 • H7
j6 • k6	H6 • H7
m6	G6 • H7

\*1: Not covered by the additional modification service.

- ④ For keyway modification, select the keyway standard.

- Parallel keyway (modification types BKN BKS BKW BKT)

Specify the modification symbol according to the parallel key standard. 4 8

Parallel Keyway Standards	Modification Symbol
New JIS Parallel Keyway	N
Former JIS Parallel Keyway	Q

\*Refer to next page for the keyway specifications.

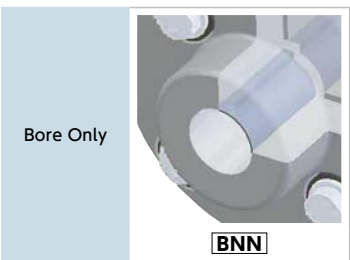
- Taper keyway (modification type BCN)

Specify the modification symbol according to the taper key standard. 4 8

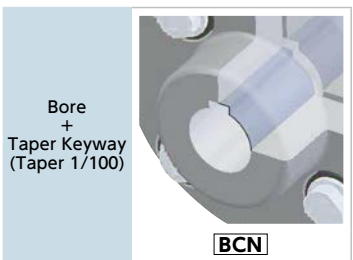
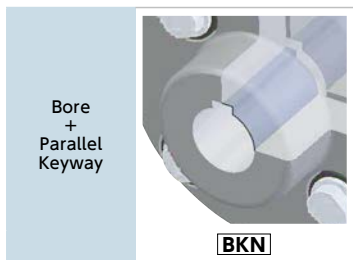
Taper Keyway Standards	Modification Symbol
New JIS Taper Keyway	NS
Former JIS Taper Keyway	QS

\*Refer to next page for the keyway specifications.

## Modification Type List



### • Bore + Keyway



### • Bore + Set Screw Hole

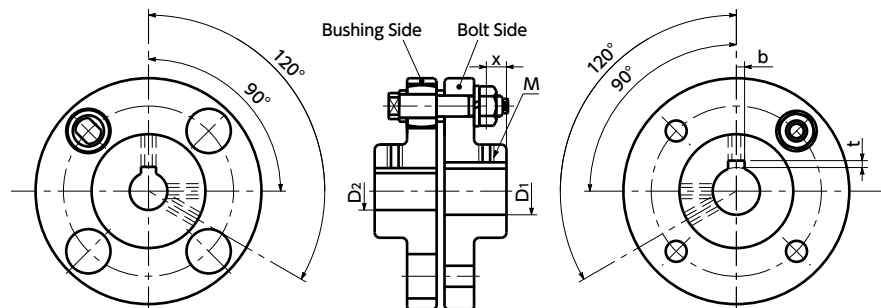
	Number/Position of Set Screw Holes		
	1 Place	2 Places (arranged at 90°)	2 Places (arranged at 120°)
Bore + Set Screw Hole	 BNS	 BNW	 BNT
Bore + Set Screw Hole + Parallel Keyway	 BKS	 BKW	 BKT

\* If set screw hole modification (modification types BNS BNW BNT BKS BKW BKT) is specified, set screws will be supplied.



# Shaft Coupling Bore Additional Modification Service 2/2

## Dimensions



- Bore **D1 D2** : Specify within the range of the minimum bore diameter \*1 or more and the maximum bore diameter \*2 or less of the shaft coupling.

\*1: In principle, the minimum bore diameter is the length of the shaft coupling (dimension L)×1/3.

\*2: For the maximum bore diameter, refer to the dimension tables on each product page.  
For bore diameters exceeding 130 mm, please contact our customer service.

- Keyway **b t** : Keyways will be machined according to the JIS standard.
- Set screw **M** : Set as shown below according to the bore diameter.
- x** : Dimension x from the end face of the hub to the center of the set screw is 1.5 times the thread diameter as a reference.

⚠ The size and position of the set screw may differ depending on the type of shaft coupling.

N New JIS Parallel Key							Unit: mm
Standard Bore Diameter D1 and D2		Keyway				Key	Set Screw* M
		b		t		Nominal Dimension b×h	
		Reference Dimensions	Allowance (JS9)	Reference Dimensions	Allowance		
Over	or Less						
—	10	3	±0.0125	1.4	+0.1 0	3×3	M6
10	12	4	±0.0150	1.8	+0.1 0	4×4	M6
12	17	5	±0.0150	2.3	+0.1 0	5×5	M6
17	22	6	±0.0150	2.8	+0.1 0	6×6	M6
22	30	8	±0.0180	3.3	+0.2 0	8×7	M8
30	38	10	±0.0180	3.3	+0.2 0	10×8	M8
38	44	12	±0.0215	3.3	+0.2 0	12×8	M8
44	50	14	±0.0215	3.8	+0.2 0	14×9	M10
50	58	16	±0.0215	4.3	+0.2 0	16×10	M10
58	65	18	±0.0215	4.4	+0.2 0	18×11	M12
65	75	20	±0.0260	4.9	+0.2 0	20×12	M12
75	85	22	±0.0260	5.4	+0.2 0	22×14	M12
85	95	25	±0.0260	5.4	+0.2 0	25×14	M12
95	110	28	±0.0260	6.4	+0.2 0	28×16	M12
110	130	32	±0.0310	7.4	+0.2 0	32×18	M12

\*The size of the set screw may differ depending on the type of shaft coupling.  
● Excerpt from JIS B 1301 - 1996

Q Former JIS Parallel Key							Unit: mm
Standard Bore Diameter D1 and D2		Keyway				Key	Set Screw* M
		b		t		Nominal Dimension b×h	
		Reference Dimensions	Allowance (F7)	Reference Dimensions	Allowance		
Over	or Less						
—	10	4	+0.022 +0.010	1.5	+0.1 0	4×4	M6
10	13	4	+0.022 +0.010	1.5	+0.1 0	4×4	M6
13	20	5	+0.022 +0.010	2	+0.1 0	5×5	M6
20	30	7	+0.028 +0.013	3	+0.1 0	7×7	M8
30	40	10	+0.028 +0.013	3.5	+0.1 0	10×8	M8
40	50	12	+0.034 +0.016	3.5	+0.1 0	12×8	M10
50	60	15	+0.034 +0.016	5	+0.1 0	15×10	M10
60	70	18	+0.034 +0.016	6	+0.1 0	18×12	M12
70	80	20	+0.041 +0.020	6	+0.1 0	20×13	M12
80	95	24	+0.041 +0.020	8	+0.1 0	24×16	M12
95	110	28	+0.041 +0.020	9	+0.1 0	28×18	M12
110	125	32	+0.050 +0.025	10	+0.1 0	32×20	M12
125	140	35	+0.050 +0.025	11	+0.1 0	35×22	M12

\*The size of the set screw may differ depending on the type of shaft coupling.  
● Excerpt from JIS B 1301 - 1959

## Inspection

- Bores (all)  
Inspection by limit plug gauge or cylinder gauge
- Keyways (first item)  
Keyway width: Inspection by limit key width gauge  
Keyway depth: Inspection by calipers
- Set screw holes (first item)  
Set screw diameter: Inspection by limit gauge for screws

N New JIS Taper Key						Unit: mm	
Standard Bore Diameter* D1 and D2		Keyway				Key	
		b		t		Nominal Dimension b×h	
		Reference Dimensions	Allowance (D10)	Reference Dimensions	Allowance		
Over	or Less						
—	12	4	+0.078 +0.030	1.2	+0.1 0	4×4	
12	17	5	+0.078 +0.030	1.7	+0.1 0	5×5	
17	22	6	+0.078 +0.030	2.2	+0.1 0	6×6	
22	30	8	+0.098 +0.040	2.4	+0.2 0	8×7	
30	38	10	+0.098 +0.040	2.4	+0.2 0	10×8	
38	44	12	+0.120 +0.050	2.4	+0.2 0	12×8	
44	50	14	+0.120 +0.050	2.9	+0.2 0	14×9	
50	58	16	+0.120 +0.050	3.4	+0.2 0	16×10	
58	65	18	+0.120 +0.050	3.4	+0.2 0	18×11	
65	75	20	+0.149 +0.065	3.9	+0.2 0	20×12	
75	85	22	+0.149 +0.065	4.4	+0.2 0	22×14	
85	95	25	+0.149 +0.065	4.4	+0.2 0	25×14	
95	110	28	+0.149 +0.065	5.4	+0.2 0	28×16	
110	130	32	+0.180 +0.080	6.4	+0.2 0	32×18	

\*The standard bore diameter is  $\phi$  12 or more and does not include decimal points.  
● The taper of the keyway is 1/100.  
● Excerpt from JIS B 1301 - 1996

Q Former JIS Taper Key							Unit: mm
Standard Bore Diameter* D1 and D2		Keyway				Key	
		b		t		Nominal Dimension b×h	
		Reference Dimensions	Allowance (D10)	Reference Dimensions	Allowance		
Over	or Less						
—	13	4	+0.078 +0.030	1.5	+0.1 0	4×4	
13	20	5	+0.078 +0.030	2	+0.1 0	5×5	
20	30	7	+0.098 +0.040	3	+0.1 0	7×7	
30	40	10	+0.098 +0.040	3.5	+0.1 0	10×8	
40	50	12	+0.120 +0.050	3.5	+0.1 0	12×8	
50	60	15	+0.120 +0.050	5	+0.1 0	15×10	
60	70	18	+0.120 +0.050	6	+0.1 0	18×12	
70	80	20	+0.149 +0.065	6	+0.1 0	20×13	
80	95	24	+0.149 +0.065	8	+0.1 0	24×16	
95	110	28	+0.149 +0.065	9	+0.1 0	28×18	
110	125	32	+0.180 +0.080	10	+0.1 0	32×20	
125	140	35	+0.180 +0.080	11	+0.15 0	35×22	

\*The standard bore diameter is  $\phi$  12 or more and does not include decimal points.  
● The taper of the keyway is 1/100.  
● Excerpt from JIS B 1301 - 1959