Order guide

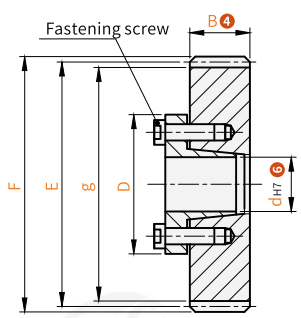
C (Major category) CL (Category) Q (Series) - W (1 Surface treatment) - 1.0 (2 Module) - 35 (3 Tooth number) - B10 (4 Tooth width) - G (5 Gear shape) - d8 (6 Inner diameter)

◉ Please refer to the series code to select the type and parameters for ordering.

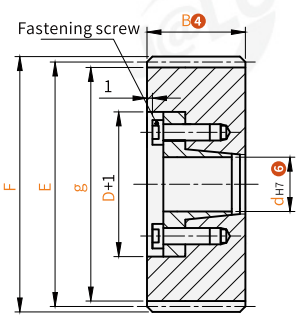
Code	Material		Surface treatment ❶		annex	Use expansion sleeve
	Gear	Expansion sleeve	Gear	Expansion sleeve		
CCLQ-W	S45C		—		Internal hexagonal screw	See next page for expansion sleeve size table
CCLQ-E1			Blackening			
CCLQ-N1			Electroless nickel plating			

◉ No machining of the shaft (keyway, etc.) is required, and the strength of the shaft is not reduced. Easy to perform positioning.

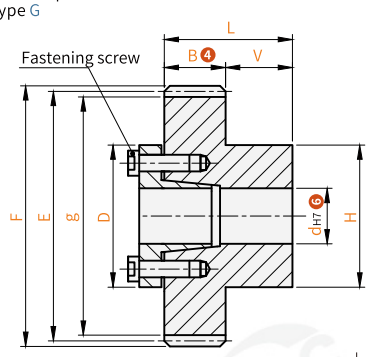
Gear shape
Type E



Gear shape
Type F



Gear shape
Type G



◉ Accuracy JIS B 1702-1 Grade 8

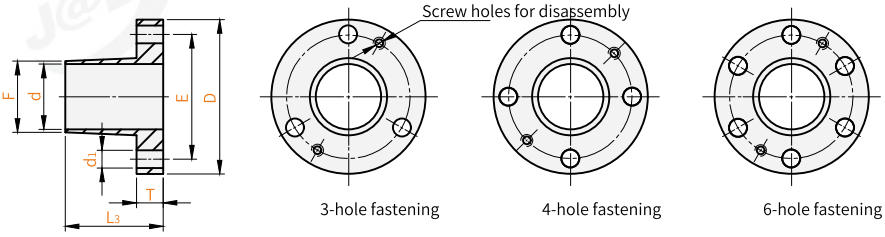
Visual standards: first perspective

Model Code	Module ❷	Tooth number ❸	B ❹	Gear shape ❺	Bore diameter dH7 d_{H7} Min. unit 1 ❻ Type E · Type G	Type F		E Reference circle diameter	F Diameter of tooth tip circle	G Diameter of tooth root circle	V	L	H	Allowable transmission force ★ (N m) Bending strength
CCLQ-W CCLQ-E1 CCLQ-N1	1.0	35	10	G	8·10	—	—	35	37	32.5	10	20	30	12.13
		36						36	38	33.5				12.52
		38						38	40	35.5				13.46
		40			8·10~12			40	42	37.5				14.31
		42						42	44	39.5				15.24
		45						45	47	42.5				16.66
		48			8·10~18			48	50	45.5			44	18.04
		50						50	52	47.5			46	18.95
		52						52	54	49.5				19.87
		60			10~18			60	62	57.5			50	23.64
		70			12~32			70	72	67.5			56	28.31
		80			15~32			80	82	77.5			60	32.98
		100			17~32			100	102	97.5				42.59
		120						120	122	117.5			70	51.87
	1.5	20	15	E G	8	—	—	30	33	26.25	12	27	25	18.81
		24						36	39	32.25			30	24.45
		25						37.5	40.5	33.75				25.92
		26						39	42	35.25			32	27.42
		28			8·10~12			42	45	38.25			34	30.43
		30						45	48	41.25			35	33.30
		32			8·10~17			48	51	44.25			40	36.11
		35			8·10~18			52.5	55.5	48.75				40.93
		36						54	57	50.25				42.24
		40			8·10~30			60	63	56.25			45	48.31
		48			8·10~32			72	75	68.25			50	60.90
		50						75	78	71.25				63.97
		52						78	81	74.25				67.07
		60			12~32			90	93	86.25			55	79.80
		70						105	108	101.25			65	95.56
		80						120	123	116.25				111.30
	2.0	15	20	E F G	8	—	—	30	34	25	14	34	24	28.65
		18						36	40	31			30	38.07
		20					8	40	44	35			33	44.59
		24			8·10~17			48	52	43			40	57.96
		25						50	54	45				61.43
		26			8·10~18			52	56	47			42	64.99
		30						60	64	55			48	78.93
		32						64	68	59			50	85.59
		36			10~32		8·10~12	72	76	67			55	100.13
		40						80	84	75			60	114.52
		48						96	100	91			62	144.35
		50						100	104	95				151.64
		52			12~32			104	108	99			65	158.99
		60						120	124	115				189.16

Model Code	Module ②	Tooth number ③	B ④	Gear shape ⑤	Bore diameter dH7 d_{H7} Min. unit 1 ⑥ Type E· Type G CT Expansion sleeve	Type F CT Expansion sleeve	Type F CH Expansion sleeve	E Reference circle diameter	F Diameter of tooth tip circle	G Diameter of tooth root circle	V	L	H	Allowable transmission force (N m) Bending strength *
CCLQ-W CCLQ-E1 CCLQ-N1	2.5	14	25	E F G	8	—	—	35	40	28.75	16	41	25	49.96
		15						37.5	42.5	31.25			30	55.96
		16					8	40	45	33.75			32	61.98
		18			8·10~14			45	50	38.75			38	74.36
		20					—	50	55	43.75			40	87.09
		24			8·10~22			60	65	53.75			48	113.19
		25			8·10~25			62.5	67.5	56.25			50	119.98
		28						70	75	63.75			60	140.86
		30				8·10~12		75	80	68.75			65	154.16
		32			10~28		14~19	80	85	73.75			70	167.17
		36			10~35			90	95	83.75			75	195.56
		40						100	105	93.75			80	223.66
		48			12~35			120	125	113.75			85	281.94
		50						125	130	118.75				296.17
	3.0	12	30	E F G	8	—	—	36	42	28.5	18	48	27	66.66
		14			8·10			42	48	34.5			32	86.33
		15			8·10~12	8		45	51	37.5			35	96.70
		16				8·10	11	48	54	40.5			40	107.10
		18			8·10~17	8·10~15	—	54	60	46.5			44	128.50
		20				8·10~17	18·19	60	66	52.5			50	150.49
		24			8·10~25		28	72	78	64.5			58	195.60
		25					28·30	75	81	67.5			60	207.33
		28						84	90	76.5			70	243.41
		30			10~35	8·10~25		90	96	82.5			75	266.40
		32					28~35	96	102	88.5				288.88
		36			12~35			108	114	100.5			80	337.93
		40						120	126	112.5			85	386.49

The allowable transmission forces in the table with * are reference values calculated under ordinary conditions.

Expansion sleeve size table



Use temperature: -20°C~+80°C H bushings have 3 removal screw holes.

CT Expansion sleeve

d Shaft hole specification	Fastening screw Number	Fastening screw Specification	Screw holes for disassembly	Allowable max. torque N m	Allowable axial load kN	Screw tightening torque N m	D	E	F	d_1	L_3	T
8	4	M3-L12	M3-2 (pieces)	16	4.0	2.0	25.5	19	10	3.3	15.5	4
10				39			30	22	12			
11	3	M4-L16	M4-2 (pieces)	43			31	23	13		16.5	5
12				48			32	24	14			
14				73	5.34	4.0	35	27	16.6	4.5	22	6
15		M4-L18	M4-2 (pieces)	78			36	28	17.6			
16				83			37	29	18.6			
17				88			38	30	19.6			
18	4			154			43	33	20.6			
19				163			45	35	22.4		23	7
20		M5-L20	M5-2 (pieces)	171			46	36	23.4			
22				186			48	38	24.6			
24				206	8.74	8.3	50	40	26.6	5.5		
25				216			52	42	28.4			
28	6	M5-L25	M5-2 (pieces)	353			54	44	30.6		24	8
30				382			57	47	33.4			
32				412			59	49	34.7		25	9
35				451			63	53	38.4		26.5	

CT Expansion sleeve

d Shaft hole specification	Fastening screw Number	Fastening screw Specification	Screw holes for disassembly	Allowable max. torque N m	Allowable axial load kN	Screw tightening torque N m	D	E	F	d_1	L_3	T
8		M3-L10	M3-3 (pieces)	8.5	2.12	1.9	24.5	18	10.5	3.3	10.5	3
10	3			18	3.59		29	21	12.75			
11		M4-L12	M4-3 (pieces)	20	3.63		30	22	13.75		13	4
12				23	3.76		31	23	14.75			
14				37	5.21		36	26	17.65			
15				39	5.1	3.9	37	27	18.65	4.4		
16		M4-L18	M4-2 (pieces)	42	5.17		38	28	19.65		17	5
17				45	5.23		39	29	20.65			
18				48	5.28		40	30	21.85			
19				49	5.12		42	32	22.85			
20	4			97	9.68		46	36	24.1			
22				110	9.98		47	37	25.75			
24				121	10		49	39	27.75			
25		M5-L18	M5-2 (pieces)	124	9.9	7.8	51	41	28.75	5.5	19	6
28				141	10		53	43	31.75			
30				149	9.89		56	46	33.75			
32				163	10.12		58	47	35.75			
35				173	9.88		61	50	39.1		20	

When keyway machining and D-cut machining are performed on the mounting shaft, the transmission torque will be reduced by approximately 15% or more.
When electroless nickel plating is used, the allowable maximum torque and allowable axial load are reduced by 20 to 30%.