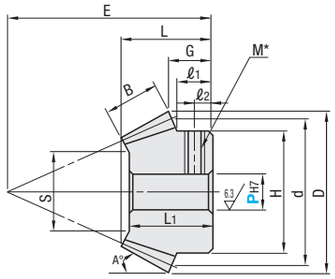
Bevel Gear

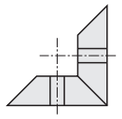
Pressure Angle 20°, Straight / Spiral Type, Module 1.0, 1.5, 2.0

RoHS10

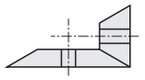
Type					M Material	S Surface Treatment	A Accessory
Straight Type			Spiral Type				
Straight Bore	Straight Bore + Tap	Keyway + Tap	Straight Bore + Tap	Keyway + Tap			
KGEASH	KGEAST	KGEASK	KGEAPT	KGEAPK	S45C Equivalent	-	Set Screw (SCM435, Black Oxide)
KGEASHB	KGEASTB	KGEASKB	KGEAPTB	KGEAPKB		Black Oxide	
KGEASHG	KGEASTG	KGEASKG	KGEAPTG	KGEAPKG		Electroless Nickel Plating	
KGHS	KGTS	KGKS	-	-	SUS304	-	Set Screw (SUS304)

Set Screw is not included in Un-tapped Type products.





R = 1 : 1



R = 1 : 2

Shaft Bore Specifications

Straight Bore	Straight Bore + Tap	Keyway + Tap

Keyway Dimension Details P.1498
Positioning of keyway and teeth is not fixed.
* Straight Bore Type does not have tapped holes.

Accuracy: JIS B 1702 (Class 4)

Straight Type

Part Number Type	Module	Nominal	Shaft Bore Dia. PH7 (1mm Increment) Straight Bore Straight Bore + Tap	Keyway + Tap	Number of Teeth	R (Gear Ratio)	Mating Gear Number	B	H	d	D	S	E	L	G	ℓ1	ℓ2	L1	A°	M (Coarse)
Straight Bore KGEASH KGEASHB KGEASHG KGHS	1.0	2020	6, 8	8	20	1:1	2020	4.3	16	20	21.41	11.8	21	14.53	11.71	9	4.5	13	49°3'	M4
		2525	6, 8, 10	8, 10	25		2525	5.3	20	25	26.41	15	23	14.7	11.21	8	4	13	48°51'	M4
		3030	8, 10, 12	8, 10, 12	30		3030	6.2	22	30	31.41	19.4	26	15.89	11.71	8.9	4.5	14.5	47°42'	M4 (M5)
		2040	6, 8	8	20	1:2	4020	5.7	16	20	21.79	12.1	29.6	15.03	10.05	8.6	4	14	29°8'	M4
		4020	8, 10, 12	8, 10, 12	40		2040	5.7	25	40	40.89	28.4	21.8	15.02	12.69	8	4	13	66°0'	M4 (M5)
Straight Bore + Tap KGEAST KGEASTB KGEASTG KGTS	1.5	2020	10, 12	10, 12	20	1:1	2020	6.8	24	30	32.12	17.7	28	18.53	14.06	10	5	16.5	49°3'	M4
		2525	10~14	10~14	25		2525	7.5	30	37.5	39.62	23.7	34	21.26	16.31	11.5	5	19	48°51'	M4
		3030	12~16	12~16	30		3030	9.3	33	45	47.12	29.6	38	22.83	16.56	12.34	6	21	47°42'	M5
		1836	8, 10, 12	8	18	1:2	3618	9.8	22	27	29.68	12.2 (12.1)	40.74	22.96	14.41	12.5	6	21	29°25'	M4
		3618	10~15	10~15	36		1836	9.8	30	54	55.34	34.3	26.75	18.54	14.59	10	5	15.5	66°17'	M5
Keyway + Tap KGEASK KGEASKB KGEASKG KGKS	2.0	2020	12~14	12~14	20	1:1	2020	8.5	34	40	41.32	23.9	37	24	18.41	14	7	21	49°3'	M5
		*2525			25		2525	10.5	42	50	51.33	32.3	40	23.34	16.41	10.99	5	21	48°51'	M5
		3030	16~18	16~18	30		3030	12.4	44	60	61.36	38.9	51	30.77	22.41	16.79	8	28	47°42'	M6
		1836	10	10	18	1:2	3618	12.6	28	36	37.81	19.1	53.12	29	18.01	15.12	7	27	29°25'	M4
		3618	12~14	12~14	36		1836	12.6	36	72	72.15	47.6	35.21	24.07	19	13	6.5	21	66°17'	M5

Sizes marked with * are only applicable to S45C. Sizes in ( ) are for SUS 304. Module 1.0 is not available for KGHS (Straight Bore Type of SUS304).
Spiral bevel gears from different manufacturers may not mesh correctly. Always select mating sets from MISUMI. Note.) The gears are sold in each piece qty, not as sets.
Specify 10K as the P dimension if keyway width of 4.0mm (height 1.8mm) for Keyway + Tap with shaft bore diameter of 10 is desired. P.1498
The set screw sizes are respectively M4x3, M5x4, and M6x5.

Spiral Type (Spiral Angle 35°)

Part Number Type	Module	Nominal	Shaft Bore Dia. PH7 (1mm Increment) Straight Bore + Tap	Keyway + Tap	Twisting Direction	Number of Teeth	R (Gear Ratio)	Mating Gear Number	B	H	d	D	S	E	L	G	ℓ1	ℓ2	L1	A°	M (Coarse)
Straight Bore + Tap KGEAPT KGEAPTB KGEAPTG	1.0	2020	6, 8	8	L R (Left) (Right)	20	1:1	2020	4.5	16	20	21.12	11.3	21	14.43	11.56	9	4.5	13	50°31'	M4
		3030	10, 12	10, 12		30		3030	6.2	22	30	31.09	19.4	26	15.67	11.54	9	4.5	14.5	48°21'	M5
		2040	8, 10, 12	8	L (Left)	20	1:2	4020	5.7	16	20	21.87	12.1	29.6	15	10.07	8.6	4	14	30°13'	M4
		4020	10, 12	10, 12	R (Right)	40		2040	5.7	25	40	40.41	28.4	21.8	14.57	12.21	8	4	13	65°36'	M5
Keyway + Tap KGEAPK KGEAPKB KGEAPKG	1.5	2020	10, 12	10, 12	L R (Left) (Right)	20	1:1	2020	7	24	30	31.85	17.2	28	18.44	13.93	10	5	16.5	50°5'	M4
		3030	12~16	12~16		30		3030	9.3	33	45	46.79	29.7	38	22.64	16.4	12	6	21	47°54'	M5
		1836	8, 10, 12	8	L (Left)	18	1:2	3618	9.8	22	27	30.09	12.2	40.74	22.96	14.51	12.49	6	21	30°44'	M4
		3618	10~15	10~15	R (Right)	36		1836	9.8	30	54	54.76	34.3	26.75	18.01	14.01	9	4.5	15.5	65°57'	M5

Use Spiral Type in L and R sets.
Spiral bevel gears from different manufacturers may not mesh correctly. Always select mating sets from MISUMI. Note.) The gears are sold in each piece qty, not as sets.
Specify 10K as the P dimension if keyway width of 4.0mm (height 1.8mm) for Keyway + Tap with shaft bore diameter of 10 is desired. P.1498

Ordering Example

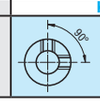
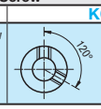
Part Number	-	Nominal (Number of Teeth, Mating Gear)	-	Shaft Bore Dia. PH7	-	Twisting Direction
KGEASH1.0	-	2020	-	6		
KGEAPTG1.5	-	3618	-	10	-	R

Module	Nominal	Unit Price 1 ~ 5 pc(s). Straight Type: Straight Bore KGEASH	KGEASHB	KGEASHG	KGHS	Straight Bore + Tap KGEAST	KGEASTB	KGEASTG	KGTS	Keyway + Tap KGEASK	KGEASKB	KGEASKG	KGKS
1.0	2020				-								
	2525				-								
	3030				-								
	2040				-								
	4020				-								
1.5	2020												
	2525												
	3030												
	1836												
	3618												
2.0	2020												
	2525				-				-				-
	3030												
	1836												
	3618												

Module	Nominal	Unit Price 1 ~ 5 pc(s). Spiral Type: Straight Bore + Tap KGEAPT	KGEAPTB	KGEAPTG	Keyway + Tap KGEAPK	KGEAPKB	KGEAPKG
1.0	2020						
	3030						
	2040						
	4020						
1.5	2020						
	3030						
	1836						
	3618						

Alterations

Part Number	-	Nominal	-	Shaft Bore Dia. PH7	-	Twisting Direction	-	(KC90, KC120)
KGEAPTB1.0	-	3030	-	10	-	R	-	KC90

Alterations	Set Screw	
Code	KC90	KC120
Spec.	 Adds another set screw at 90° position. ⊗Not applicable to Straight Bore Type.	 Adds another set screw at 120° position. ⊗Not applicable to Straight Bore Type.

Helical Gear

Pressure Angle 20°, Helix Angle 45°, Module 1.0, 1.5, 2.0, 2.5, 3.0

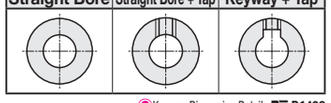
Features: Spur gears used for the power transmission between unparallel shafts.

RoHS10

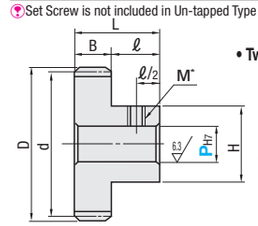
Type Straight Bore	Straight Bore + Tap	Keyway + Tap	M Material	S Surface Treatment	A Accessory
NEGHN	NEGTN	NEGKN	S45C Equivalent	-	Set Screw (SCM435, Black Oxide)
NEGHB	NEGTB	NEGKB		Black Oxide	
NEGHS	NEGTS	NEGKS	SUS304	-	Set Screw (SUS304)
NEGHM	NEGTM	-	MC Nylon	-	Set Screw (SUS304)

Set Screw is not included in Un-tapped Type products.

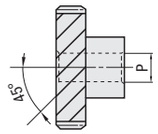
Shaft Bore Specifications

Straight Bore	Straight Bore + Tap	Keyway + Tap
		

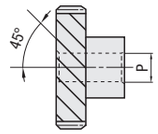
Keyway Dimension Details P.1498
Positioning of keyway and teeth is not fixed.



• Twisting Direction: L (Left)



• Twisting Direction: R (Right)



* Rectangular tooth Module * Straight Bore Type does not have tapped holes.

Tapped Hole Dimension List

Shaft Bore Dia. PH7	M (Coarse)	Accessory Set Screw
6~12	M4	M4x3
13~17	M5	M5x4
18~30	M6	M6x5
31~45	M8	M8x6
46~65	M10	M10x8

Accuracy: New JIS B 1702-1 Class 9
Previous JIS B 1702 Class 5

Part Number Type	Module	Number of Teeth	Shaft Bore Dia. PH7 (1mm Increment) Straight Bore Straight Bore + Tap	Keyway + Tap	Twisting Direction	d	D	B	H	L	ℓ
Straight Bore NEGHN NEGHB NEGHS NEGHM	1.0	13	6~7	-	L (Left) R (Right)	18.38	20.38	10	15	20	10
		15	6~10	8		21.21	23.21		18		
		20	8~16	8~13		28.28	30.28		25		
		26	10~20	10~17		36.77	38.77		30		
		30	10~25	10~22		42.43	44.43		35		
	1.5	10	8	-		21.21	24.21	15	16	25	10
		13	10~14	10~12		27.58	30.58		23		
		15	10~16	10~13		31.82	34.82		25		
		20	12~20	12~17		42.43	45.43		30		
		26	12~30	12~26		55.15	58.15		40		
		30	12~33	12~30		63.64	66.64		45		
Straight Bore + Tap NEGTN NEGTB NEGTS NEGTM	2.0	10	12~13	12		28.28	32.28	20	22	35	15
		13	12~20	12~17		36.77	40.77		30		
		15	12~25	12~22		42.43	46.43		35		
		20	15~33	15~30		56.57	60.57		45		
		26	20~46	20~44		73.54	77.54		60		
		30	20~51	20~47		84.85	88.85		65		
Keyway + Tap NEGKN NEGKB NEGKS	2.5	10	12~17	12~14		35.36	40.36	22	26	38	16
		13	15~25	15~22		45.96	50.96		35		
		15	15~30	15~26		53.03	58.03		40		
		20	20~46	20~44		70.71	75.71		60		
		26	20~56	20~50		91.92	96.92		70		
		30	20~65	20~50		106.07	111.07		80		
	3.0	10	15~24	15~21		42.43	48.43	25	34	43	18
		13	20~33	20~30		55.15	61.15		45		
		15	20~38	20~34		63.64	69.64		50		
		20	20~46	20~44		84.85	90.85		60		
		26	20~65	20~50		110.31	116.31		80		
		30	20~65	20~50		127.28	133.28		90		

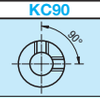
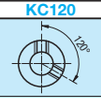
Shaft Bore Dia. 6.35 is available for Straight Bore and Straight Bore + Tap. Specify 10K as P dimension if keyway width of 4.0mm (height 1.8mm) for Keyway + Tap with shaft bore diameter of 10 is desired. P.1498
Shaft Bore Dia. 9 is not available for Keyway + Tap. Combine the same handedness (L and L or R and R) for unparallel shafts and different handedness (L and R) for parallel shafts.
Helical gears generate axial thrust on shafts. Choose bearings that can withstand the axial thrust generated by the gears.

Ordering Example

Part Number	-	Number of Teeth	-	Shaft Bore Dia. P	-	Twisting Direction
NEGHN1.0	-	20	-	10	-	L

Alterations

Part Number	-	Number of Teeth	-	Shaft Bore Dia. PH7	-	Twisting Direction	-	(KC90, KC120)
NEGTN1.5	-	30	-	20	-	R	-	KC90

Alterations	Set Screw	
Code	KC90	KC120
Spec.		
	Adds another set screw.	

⊗Not applicable to Straight Bore Type.

Module	Number of Teeth	Unit Price 1 ~ 10 pc(s). Straight Bore: NEGHN	NEGHB	NEGHS	NEGHM	Straight Bore + Tap: NEGTN	NEGTB	NEGTS	NEGTM	Keyway + Tap: NEGKN	NEGKB	NEGKS
1.0	13									-	-	-
	15											
	20											
	26											
	30											
1.5	10									-	-	-
	13											
	15											
	20											
	26											
	30											
2.0	10											
	13											
	15											
	20											
	26											
	30											
2.5	10											
	13											
	15											
	20											
	26											
	30											
3.0	10											
	13											
	15											
	20											
	26											
	30											

For orders larger than indicated quantity, please request a quotation.