

Miniature Ball Guide Set
Standard

= For customers using industry standard products =
The part enclosed in the red frame is as per industry standard specifications (EN 1.3505 Equiv. material, Straight Shafts, Straight Bushings).
Select from the specifications here.

Features: Most common specification in miniature ball guide sets.

Industry Standard

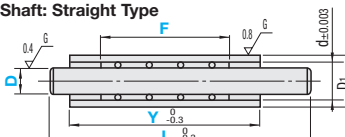


RoHS10

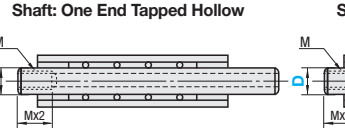
Bushing	Type			Shafts / Bushings	Ball Retainer	Balls	Material		Hardness	
	Straight	One End Tapped Hollow	Both Ends Tapped				Shafts / Bushings	Balls		
Straight Type	BGZ	BGA	BGY	EN 1.3505 Equiv.	EN CW614N Equiv.	EN 1.3505 Equiv.	58HRC~	58HRC~		
Shoulder Type	SSBGZ	SSBGA	SSBGY	EN 1.4125 Equiv.	EN 1.4125 Equiv.	EN 1.4125 Equiv.	56HRC~	56HRC~		
	BGHZ	BGHA	BGHY	EN 1.3505 Equiv.	EN 1.3505 Equiv.	EN 1.3505 Equiv.	58HRC~	58HRC~		
	SSBGHZ	SSBGHA	SSBGHY	EN 1.4125 Equiv.	EN 1.4125 Equiv.	EN 1.4125 Equiv.	56HRC~	56HRC~		

Accuracy P367

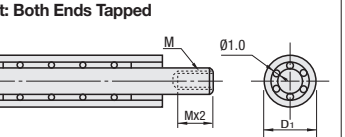
Shaft: Straight Type



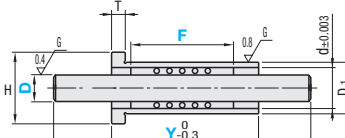
Shaft: One End Tapped Hollow



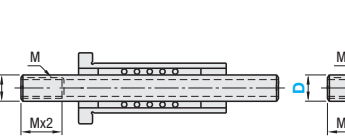
Shaft: Both Ends Tapped



Bushing: Straight



Bushing: Shoulder



Part Number	Type	D	Shaft Dia. Tolerance	L		Y	F	D1	T	H	d	M
				Straight One End Tapped Hollow 1mm Increment	Both Ends Tapped Selection							
Straight L Dimension Configurable	One End Tapped Hollow L Dimension Selectable	(3)	0 -0.005	40~70	-	10 20 30	10 15 20	7 0 -0.006	2.5	9	5	-
				40~90	40 50 60 70 80 90	20 30 40	15 20 30	10	12	7	M3	
				40~150	40 50 60 70 80 90 100	30 40 50	20 30 40	11	13	8	M3	
				40~150	40 50 60 70 80 90 100	30 40 50	20 30 40	12	14	10	M4	
Shoulder L Dimension Configurable	Both Ends Tapped L Dimension Selectable	(4)	0 -0.011	40~70	-	10 20 30	10 15 20	7 0 -0.006	2.5	9	5	-
				40~90	40 50 60 70 80 90	20 30 40	15 20 30	10	12	7	M3	
				40~150	40 50 60 70 80 90 100	30 40 50	20 30 40	11	13	8	M3	
				40~150	40 50 60 70 80 90 100	30 40 50	20 30 40	12	14	10	M4	

Ordering Example: BGZ5 - 72 - 20 - 15

Sizes in () are applicable to BGZ, BGH, SSBGZ and SSBGHZ only. When designing, it is recommended to prevent the ball slider from falling out of the bushing.

Calculate the stroke as "(Y-F)x2". The stroke of bushing or shaft is twice as much as the travel distance of ball slider (Y-F).

Miniature Ball Guide Set
Compact

= For customers selecting Misumi original standard =
The part enclosed in red frame is as per standard specifications (EN 1.3505 Equiv. material, Straight Shafts, Straight Bushings).
Select from the specifications here.

Features: The O.D. is 1 ~ 2mm smaller compared to the Standard Type, contributing to space savings.

Misumi Original

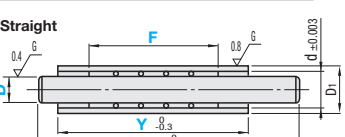


RoHS10

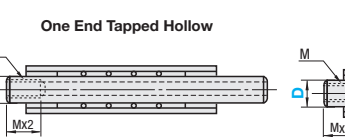
Bushing	Type			Shafts / Bushings	Ball Retainer	Balls	Material		Hardness	
	Straight	One End Tapped Hollow	Both Ends Tapped				Shafts / Bushings	Balls		
Straight Type	BYZ	BYA	BYY	EN 1.3505 Equiv.	EN CW614N Equiv.	EN 1.3505 Equiv.	58HRC~	58HRC~		
Shoulder Type	BYHZ	BYHA	BYHY	EN 1.4125 Equiv.	EN 1.4125 Equiv.	EN 1.4125 Equiv.	56HRC~	56HRC~		

Accuracy P367

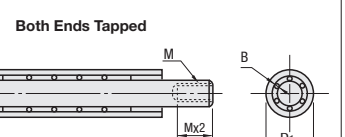
Straight



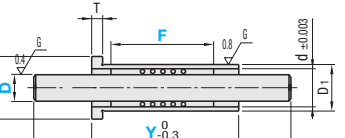
One End Tapped Hollow



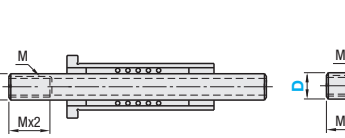
Both Ends Tapped



Bushing: Straight



Bushing: Shoulder



Part Number	Type	D	Shaft Dia. Tolerance	L		Y	F	D1	T	H	d	M
				Straight One End Tapped Hollow 1mm Increment	Both Ends Tapped Selection							
Straight L Dimension Configurable	One End Tapped Hollow L Dimension Selectable	(2)	0 -0.005	30~50	-	10 15 20	10 15 20	5 0 -0.006	2.5	7	3.2	-
				40~70	-	10 20 30	10 15 20	6	8	4.2	-	
				40~90	40 50 60 70 80 90	20 30 40	15 20 30	7	9	5.2	-	
				40~150	40 50 60 70 80 90 100	30 40 50	20 30 40	8	10	6.2	M3	
Shoulder L Dimension Configurable	Both Ends Tapped L Dimension Selectable	(3)	0 -0.011	30~50	-	10 15 20	10 15 20	5 0 -0.006	2.5	7	3.2	-
				40~70	-	10 20 30	10 15 20	6	8	4.2	-	
				40~90	40 50 60 70 80 90	20 30 40	15 20 30	7	9	5.2	-	
				40~150	40 50 60 70 80 90 100	30 40 50	20 30 40	8	10	6.2	M3	

Ordering Example: BYZ5 - 72 - 20 - 15

Sizes in () are applicable to BYZ and BYHZ only. When designing, it is recommended to prevent the ball slider from falling out of the bushing.

Calculate the stroke as "(Y-F)x2". The stroke of bushing or shaft is twice as much as the travel distance of ball slider (Y-F).

D	Y	Unit Price							
		BGZ		BGHZ		SSBGZ		SSBGHZ	
		L40-50	L51-100	L40-50	L51-100	L40-50	L51-100	L40-50	L51-100
3	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-
4	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-
5	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-
6	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-
8	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-
10	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-
12	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-

D	Y	Unit Price											
		BGA		BGHA		SSBGA		SSBGHA		BGY		BGHY	
		L40-50	L51-100	L40-50	L51-100	L40-50	L51-100	L40-50	L51-100	L40, 50	L60~	L40, 50	L60~
5	10	-	-	-	-	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-	-	-	-	-
6	10	-	-	-	-	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-	-	-	-	-
8	10	-	-	-	-	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-	-	-	-	-
10	10	-	-	-	-	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-	-	-	-	-
12	10	-	-	-	-	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-	-	-	-	-

Basic Load Rating Table		
D	F	Basic Load Rating Co (Static) N
3	10	30.4
	15	50.7
	20	71
4	10	40.4
	15	67.3
	20	87.5
5	10	50.7
	15	84.5
	20	109.9
6	15	101.5
	20	113.2
	30	182.9
8	15	105.1
	20	126.1
	30	189.2
10	20	147.7
	30	221.5
	40	307.7
12	20	187.4
	30	281.1
	40	390.5

D	Y	Unit Price					
		BYZ		BYHZ			
		L30-50	L51-100	L101-150	L40-50	L51-100	L101-150
2	10	-	-	-	-	-	-
	15	-	-	-	-	-	-
	20	-	-	-	-	-	-
3	10	-	-	-	-	-	-
	15	-	-	-	-	-	-
	20	-	-	-	-	-	-
4	10	-	-	-	-	-	-
	15	-	-	-	-	-	-
	20	-	-	-	-	-	-
5	10	-	-	-	-	-	-
	15	-	-	-	-	-	-
	20	-	-	-	-	-	-
6	10	-	-	-	-	-	-
	15	-	-	-	-	-	-
	20	-	-	-	-	-	-
8	10	-	-	-	-	-	-
	15	-	-	-	-	-	-
	20	-	-	-	-	-	-
10	10	-	-	-	-	-	-
	15	-	-	-	-	-	-
	20	-	-	-	-	-	-
12	10	-	-	-	-	-	-
	15	-	-	-	-	-	-
	20	-	-	-	-	-	-

D	Y	Unit Price							
		BYA		BYHA		BYY		BYHY	
		L40-50	L51-100	L101-150	L40-50	L51-100	L101-150	L40, 50	L60~
5	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-
6	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-
8	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-
10	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-
12	10	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-

Basic Load Rating Table		
D	F	Basic Load Rating Co (Static) N
2	10	15.0
	15	24.4
	20	33.7
3	10	16.3
	15	26.5
	20	36.7
4	10	21.1
	15	34.3
	20	47.5
5	10	26.1
	15	42.4
	20	58.7
6	15	43.2
	20	59.8
	30	83.1
8	15	59.0
	20	81.6
	30	113.4
10	20	147.7
	30	221.5
	40	307.7
12	20	187.4
	30	281.1
	40	390.5