

Ball Rollers (For upward facing)

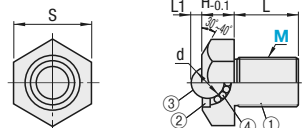
Milled Stainless Steel

Hex Head Stud

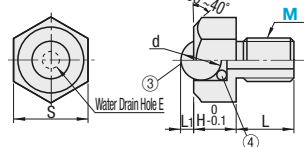


RoHS

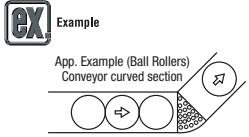
BCHL
BCHLJ



BCHLJJ
BCHLJP



Example



App. Example (Ball Rollers)
Conveyor curved section

Type	① Main Body	② Spacer	③ Main Ball	④ Sub Ball
BCHL	EN 1.4301	EN 1.4301	EN 1.4125 Equiv.(HRC55~)	
BCHLJ	Equiv.	Equiv.		EN 1.4125 Equiv.(HRC55~)
BCHLJJ	Polyacetal	-	Polyacetal Ball	
BCHLJP	PEEK	-	PEEK	

Part Number Type	M	L	L ₁	H	d	S	Allowable Load N (kgf)		Unit Price			
							BCHL	BCHLJ				
BCHL (Stainless Steel Ball) BCHLJ (Polyacetal Ball)	5	6	1.1	5	4	8	12(1.2)	6(0.6)				
	6	8	1.2	6	4.76	10	14(1.4)	7(0.7)				
	8	10	1.5	7	5.56	13	41(4.2)	27(2.8)				
	10	12	2.5	10	8.73	17	55(5.6)	34(3.5)				
	12	15	3.5	11	10.32	19	62(6.3)	55(5.6)				
	16	20	5.3	15	15.87	24	343(35)	69(7)				
BCHLJJ (Polyacetal) BCHLJP (PEEK)	10	12	3.5	3	10	10.32	9.53	17	3.5	11(1.1)	8(0.8)	

⚠BCHLJJ is not suitable for high-speed transfer.

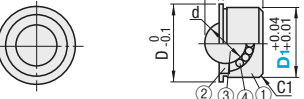
⚠BCHLJJ is not suitable for high-speed transfer.

Press Fit

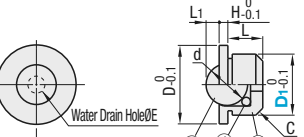


RoHS

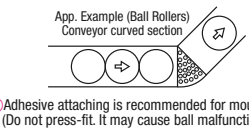
BCHA
BCHAJ



BCHJJ
BCHJP



Example



App. Example (Ball Rollers)
Conveyor curved section

Type	① Main Body	② Spacer	③ Main Ball	④ Sub Ball
BCHA	EN 1.4301	EN 1.4301	EN 1.4125 Equiv.(HRC55~)	
BCHAJ	Equiv.	Equiv.		EN 1.4125 Equiv.(HRC55~)
BCHJJ	Polyacetal	-	Polyacetal Ball	
BCHJP	PEEK	-	PEEK	

Part Number Type	D ₁	D	L	H	L ₁	d	Allowable Load N (kgf)		Unit Price
							BCHA	BCHAJ	
BCHA (Stainless Steel Ball) BCHAJ (Polyacetal Ball)	7.5	9	4		1.1	4	12(1.2)	6(0.6)	
	9	11	5		1.2	4.76	14(1.4)	7(0.7)	
	11	13	6	1	1.5	5.56	41(4.2)	27(2.8)	
	15	17	9		2.5	8.73	55(5.6)	34(3.5)	
	18	20	10		3.5	10.32	62(6.3)	55(5.6)	
	24	26	14	1.5	5.3	15.87	343(35)	69(7)	
BCHJJ (Polyacetal) BCHJP (PEEK)	30	32	17	2	6.3	19.05	412(42)	82(8.4)	

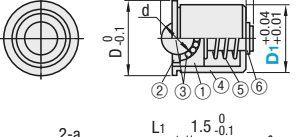
⚠BCHJJ is not suitable for high-speed transfer.

Plunger Type
(Press Fit)

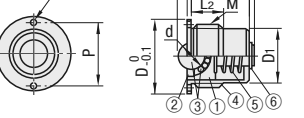


RoHS

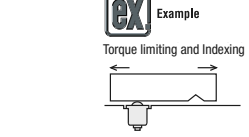
BCHP
(Press Fit)



BCHPT
(Threaded)



Example



Torque limiting and Indexing

Type	① Main Body	② Spacer	③ Ball	④ Casing	⑤ Spring	⑥ Retaining Ring
BCHP	EN 1.4301	EN 1.4301	EN 1.4125 Equiv.(HRC55~)	EN 1.4301	EN 1.4568	EN 1.4301
BCHPT	Equiv.	Equiv.		Equiv.	Equiv.	Equiv.

Part Number Type	D ₁	D	L	L ₁	d	ℓ	Load (N)		Unit Price
							min.	max.	
BCHP	14	16	14	1.5	5.56	1.5	23	30	
	18	20	17	2.5	8.73	2	24	38	
	22	24	21.5	3.5	10.32	2	24	55	

Part Number Type	Nominal	M (Fine)	D	D ₁	L	L ₁	L ₂	a	d	P	ℓ	Load (N)		Unit Price
												min.	max.	
BCHPT	16	16x1.5	19	13.5	14	1.5	9	2	5.56	15.4	1.5	23	30	
	20	20x1.5	24	16.5	17	2.5	10	2	8.73	18.5	2	24	38	
	24	24x1.5	28	20.5	21.5	3.5	12	2.5	10.32	24	2	24	55	

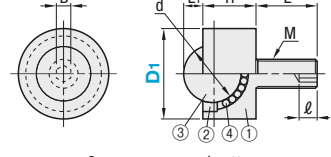
kgf=Nx0.101972

Lock Nut

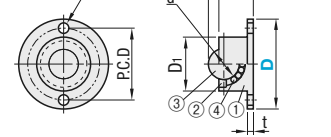


RoHS

BCHN



BCHF



Nut Dimensions

M	B ₁	(e)	T
M6	10	11.5	5
M8	13	15	6.5
M10	17	19.6	8

Type	① Main Body	② Spacer	③ Main Ball	④ Sub Ball
BCHN	EN 1.4301	Equiv.	EN 1.4125 Equiv.(HRC55~)	
BCHF	Equiv.			EN 1.4125 Equiv.(HRC55~)

Part Number Type	D ₁	L ₁	H	M	L	d	B	(ℓ)	Allowable Load N (kgf)	Unit Price
BCHN	12	1.5	6.5	6	15	5.56	3	3.5	41(4.2)	
	16	2.5	9.5	8	20	8.73	4	5	55(5.6)	
	19	3.5	11.5	10	25	10.32	5	6	62(6.3)	
	25	5.3	14.7	12	30	15.87	6	8	343(35)	
	31	6.3	18.7	15	35	19.05	8	10	412(42)	

Part Number Type	D	D ₁	L ₁	H	t	P.C.D	a	d	Allowable Load N (kgf)	Unit Price
BCHF	27	15	2.5	9.5	2	21	3.5	8.73	55(5.6)	
	30	18	3.5	11.5	2	24	3.5	10.32	62(6.3)	
	39	24	5.3	14.7	3	31.5	4.5	15.87	343(35)	
	48	30	6.3	18.7	4	39	5.5	19.05	412(42)	

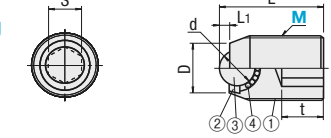
⚠Size M8 main balls are swaged in place without a spacer (2).

Set Screw

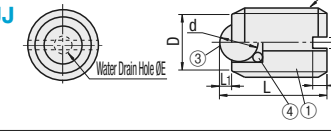


RoHS

BCSB
BCSBJ



BCSBJJ



Type	① Main Body	② Spacer	③ Main Ball	④ Sub Ball
BCSB	SUSXM-7	EN 1.4301	EN 1.4125 Equiv.(HRC55~)	EN 1.4125 Equiv.(HRC55~)
BCSBJ	Equiv.	Equiv.		
BCSBJJ	Polyacetal	-	Polyacetal Ball	

Part Number Type	M	L	L ₁	D	d	S	t	Allowable Load N (kgf)		Unit Price
								BCSB	BCSBJ	
BCSB (Stainless Steel Ball) BCSBJ (Polyacetal Ball)	8	14	1.3	5	4.76	4	5	5(0.5)	1(0.1)	
	10	16	1.2	7	4.76	5	6	14(1.4)	7(0.7)	
	12	20	1.5	8	5.56	6	8	41(4.2)	27(2.8)	
	16	25	2.5	12	8.73	8	10	55(5.6)	34(3.5)	
	20	30	3.5	15	10.32	10	12	62(6.3)	55(5.6)	

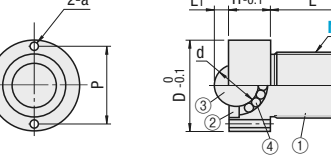
Part Number Type	M	L	L ₁	D	d	E	W	ℓ	Allowable Load N (kgf)	Unit Price
BCSBJJ (Polyacetal)	8	14	1.5	6	4.76	1.5	1.2	1.5	2(0.2)	
	10	16	1.7	8	5.56	2.5	1.5	2	4(0.4)	
	16	25	2.8	12	8.73	3	2	3	7(0.7)	
	20	30	3.5	14	10.32	3.5	3	4	11(1.1)	

Round Head Stud

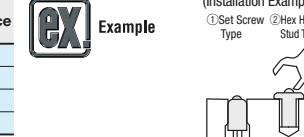


RoHS

BCHM



Example



For tightening, wrenches for ball rollers are required.
(Refer to Alteration BR)

Type	① Main Body	② Spacer	③ Main Ball	④ Sub Ball
BCHM	EN 1.4301	EN 1.4301	EN 1.4125 Equiv.(HRC55~)	EN 1.4125 Equiv.(HRC55~)

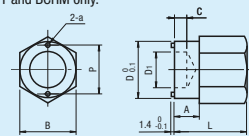
Part Number Type	M	L	L ₁	H	D	d	a	P	Allowable Load N (kgf)	Unit Price
BCHM (Stainless Steel Ball)	10	12	2.5	10	18.5	8.73	2	15.4	55(5.6)	
	12	15	3.5	11	22	10.32	2	18.5	62(6.3)	
	16	20	5.3	15	27	15.87	2.5	24	343(35)	
	20	25	6.3	18	33	19.05	2.5	29.6	412(42)	

Ordering Example

Part Number
BCHP18

Alterations

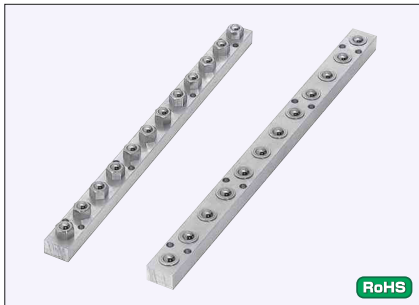
Part Number - (BR)
BCHPT20 - BR

Alteration	Code	Spec.																																																				
Special Wrench Included	BR	Includes a special wrench. ⚠ For BCHPT and BCHM only.																																																				
																																																						
<table><thead><tr><th>Nominal</th><th>BCHPT Applicable (Nominal)</th><th>BCHM Applicable (M)</th><th>L</th><th>A</th><th>B</th><th>C</th><th>D</th><th>D1</th><th>P</th><th>a</th></tr></thead><tbody><tr><td>10</td><td>16</td><td>For M10</td><td>25</td><td>8</td><td>19</td><td>3</td><td>18.5</td><td>10</td><td>15.4</td><td rowspan="4">2</td></tr><tr><td>12</td><td>20</td><td>For M12</td><td>30</td><td>10</td><td>24</td><td>4</td><td>22</td><td>12</td><td>18.5</td></tr><tr><td>16</td><td>24</td><td>For M16</td><td>35</td><td>12</td><td>27</td><td>6</td><td>27</td><td>17</td><td>24</td></tr><tr><td>20</td><td>-</td><td>For M20</td><td>40</td><td>14</td><td>30</td><td>7</td><td>33</td><td>20</td><td>29.6</td></tr></tbody></table>			Nominal	BCHPT Applicable (Nominal)	BCHM Applicable (M)	L	A	B	C	D	D1	P	a	10	16	For M10	25	8	19	3	18.5	10	15.4	2	12	20	For M12	30	10	24	4	22	12	18.5	16	24	For M16	35	12	27	6	27	17	24	20	-	For M20	40	14	30	7	33	20	29.6
Nominal	BCHPT Applicable (Nominal)	BCHM Applicable (M)	L	A	B	C	D	D1	P	a																																												
10	16	For M10	25	8	19	3	18.5	10	15.4	2																																												
12	20	For M12	30	10	24	4	22	12	18.5																																													
16	24	For M16	35	12	27	6	27	17	24																																													
20	-	For M20	40	14	30	7	33	20	29.6																																													

Ball Roller Units (For upward facing)

Ball Rollers (For upward facing)

Milled Steel / Steel Press Formed



Type	Ball Roller		Material				Frame
	Shape	Part Number (P1045)	Bearing	Spacer	Main Ball	Sub Ball	
BUHL	Hex Head Stud	BCHL16	EN 1.4301 Equiv.	EN 1.4301 Equiv.	EN 1.4125 Equiv. (HRC55~)	EN 1.4125 Equiv. (HRC35~)	EN AW-6063 Equiv. (Clear Anodize)
BUHA	Press Fit	BCHA24					

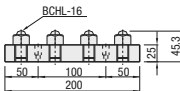
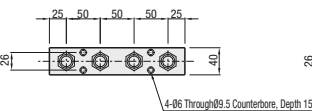
For details on Ball Rollers, see P.1179.

Hex Head Stud

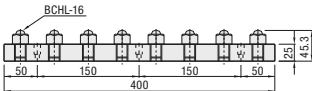
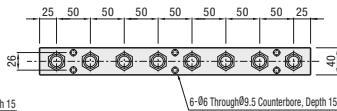
BUHL

(Stainless Steel Ball)

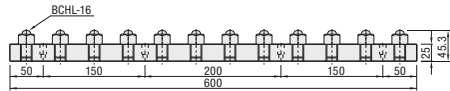
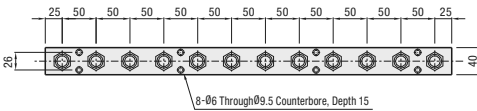
Overall Length 200



Overall Length 400



Overall Length 600

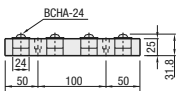
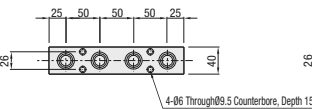


Press Fit

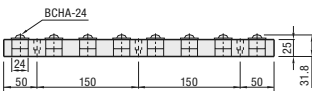
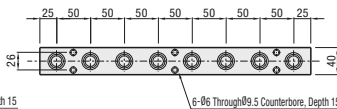
BUHA

(Stainless Steel Ball)

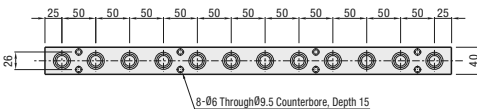
Overall Length 200



Overall Length 400



Overall Length 600



Part Number		Number of Rollers	Unit Price	
Type	Overall Length		BUHL	BUHA
Hex Head Stud				
BUHL (Stainless Steel Ball)	200	4		
Press Fit				
BUHA (Stainless Steel Ball)	400	8		
	600	12		

Allowable Load per Ball Roller

Type	Allowable Load N (kgf)
BUHL BUHA	343 (35)



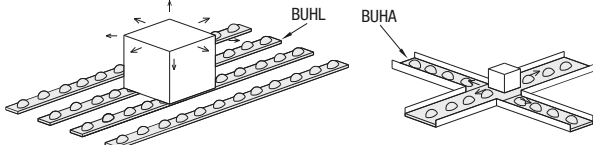
Ordering Example

Part Number
BUHL200



Example

* Ball Roller Units can allow 360 degree transfer of objects as shown below.

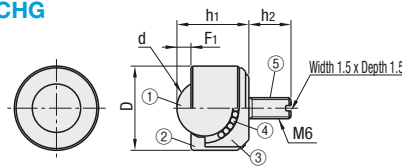


Milled Threaded Stud Type

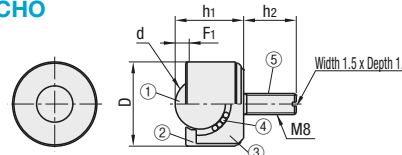


RoHS

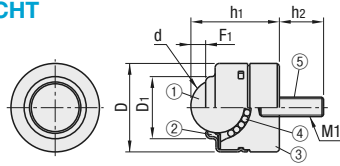
BCHG



BCHO



BCHT



Type	Material				
	① Main Ball	② Cover	③ Bearing	④ Sub Ball	⑤ Threaded Section
BCHG	EN 1.3505 Equiv.	EN 1.0038 Equiv.	EN 1.7242 Equiv.	EN 1.3505 Equiv.	EN 1.7242 Equiv.
BCHO		SPCD			EN 1.7220 Equiv.
BCHT					

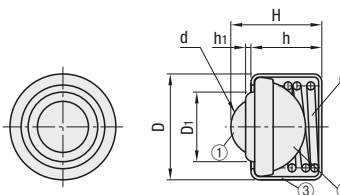
Part Number		D	D1	d	h1	h2	F1	Allowable Load N (kgf)	Unit Price
Type	No.								
BCHG	24	24	-	15.875	20.5	12	4	196.1(20)	
BCHO	32	32	-	19.05	26	20	4	490.3(50)	
BCHT	42	42	31.3	25.40	42	21	7.4	784.5(80)	

Built-in Spring Type



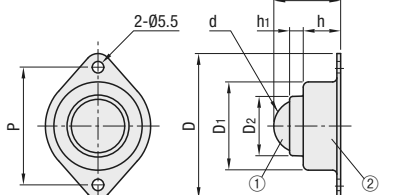
RoHS

BCHW (Built-in Spring Type)



Recommended Hole Tolerance
BCHW20: Ø20.5 ~ Ø20.6
BCHW26: Ø26 ~ Ø26.1

BCHY (Flange Mounting Type)



Type	Material			
	① Main Ball	② Bearing	③ Frame	④ Spring
BCHW	EN 1.3505 Equiv.	SPCD	SPCE	JIS-SWP-A
BCHY	JIS-SWRM12			

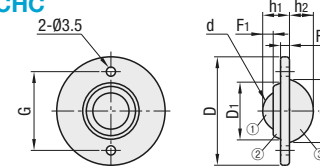
Part Number		D	D1	D2	d	H	h	h1	P	Spring Ball Movement	Allowable Load N (kgf)	Unit Price
Type	No.											
BCHW	20	20	13	-	11.113	17.2	13.4	2.8	-	1.8	49(5kg)	
	26	25.8	17.5	-	15.875	23.6	17.5	3.7	-	2	78(8kg)	
BCHY	69	69	42	29.5	25.40	31	17	7.5	56	-	294(30kg)	

Press Formed Screw Mounted Threaded Stud Type

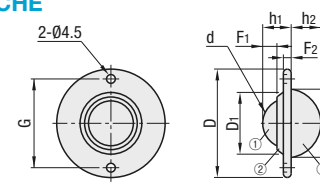


RoHS

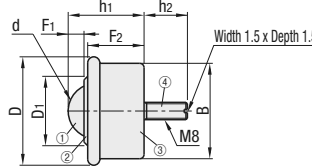
BCHC



BCHE



BCHH



Type	Material			
	① Main Ball	② Cover	③ Bearing	④ Threaded Section
BCHC	JIS-SWRM12	SPCD	EN 1.4301 Equiv.	-
BCHE			EN 1.0330 Equiv.	EN 1.0338 Equiv.
BCHH				

Part Number		D	D1	d	G	B	h1	h2	F1	F2	Allowable Load N (kgf)	Unit Price
Type	No.											
BCHC	40	41.3	22	15.875	30	24	10.2	9.1	4	3.4	78.5(8)	
BCHE	55	55.5	32.5	25.40	45.5	36	14.6	15.2	7.3	4	294.2(30)	
BCHH	50	50	32	25.40	-	44	35	20	7.3	26	294.2(30)	



Ordering Example

Part Number
BCHW 20