**Ball Buttons & Vlier Wrench**

Ball Buttons

Vlier Ball Buttons can be easily pushed into a reamed hole to provide the perfect ball plunger mating detent. Ball Buttons prevent part damage and provide a hardened striker plate to take the wear and tear of side loads.

Special Features

- ◆ Chamfered end for easy insertion
- ◆ 440C Stainless Steel, hardened and ground

Vlier Wrench

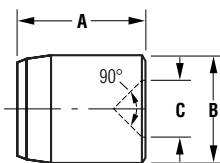
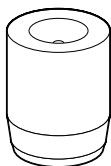
The Vlier Wrench provides fast installation of Vlier Standard Spring, Ball and Stubby Plungers and prevents spring damage that can result when a screwdriver is used on the ball or plunger end.

Special Features

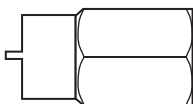
- ◆ Fast installation
- ◆ Prevents spring damage

Ball Buttons - Vlier Wrench

BALL
BUTTON



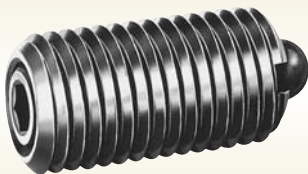
VLIER
WRENCH



Ball Buttons				
Part No.	For Ball Plunger	A	B+.0002 -.000	C
BB46	SSB46, SSB47, DSSB46 & 47 B46, B47	1/8	.1075	.056
BB48	SSB48, DSSB48, B48	1/8	.1175	.061
BB50	B52, BM4, BM6, BL52, BH52, BML6 BMH6, SSB50, SSB52, SSBL52, SSBH52 DSSB50, 50A, 52	3/16	.1614	.069
BB54	SSB54, SSBL54, SSBH54, D54N, D54, DSSB Series	1/4	.2034	.111
BB56	B56, BM8, BMH8, BML8, BL56, BH56, SSB56, SSBH56, SSBH56, D56, DL56, ND56, NDL56, DSSB Series	5/16	.2659	.139
BB58	BM10, BML10, BMH10, B58, BL58, BH58 SSB58, SSBL58, SSBH58, D58, DL58, ND58, NDL58, DSSB Series	3/8	.3284	.164
BB60	B60, BL60, BH60, BM12, BMH12, BML12 SSB60, SSBL60, SSBH60, DSSB Series	1/2	.4378	.241
BB62	B62, BL62, BH62, SSBH62, SSBL62 SSB62	5/8	.5472	.330

Vlier Wrench	
Wrench No.	For Thread Size
VW48	6-32
VW50	8-32 & 8-36
VW52	10-32, M4 & M6
VW54	1/4-20 & 1/4-28
VW56	5/16-18 & M8

Vlier Wrench	
Wrench No.	For Thread Size
VW58	3/8-16 & M10
VW60	1/2-13 & M12
VW62	5/8-11
VW64	3/4-10
VW66	1-8

**Standard Plunger**

Standard Plunger

Vlier Standard Metric steel and stainless standard plungers offer large bearing surfaces that prevent binding and assure perfect alignment at any extension. Our stainless steel is designed for maximum corrosion resistances and elevated temperature.

Typical Uses

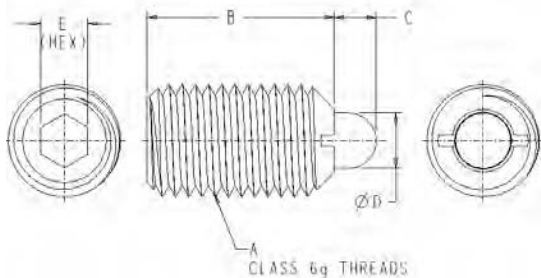
- * Positioning
- * Ejecting
- * Contacts
- * Indexes
- * Lifters Latches
- * Pivot hinge

Special Features

- ◆ Metric Threads
- ◆ Long travel
- ◆ Heavy & light end forces
- ◆ Slotted plunger body for blind hole installation

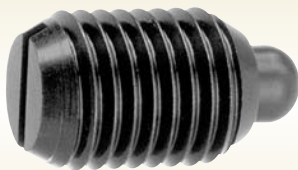
Special Note:

Steel with increased spring force = bright finish plunger.



Standard Plungers

Steel	Steel w/Delrin Plunger	Stainless Steel	Stainless Steel w/Delrin Plunger	End Force, N (Lbs)		A	B	C	ØD	E
				Initial	Final					
PART#	PART#	PART#	PART#	Thread	6g-ISO	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)
HPSM3	-	-	-	2.0 (.45)	4.0 (.9)	M3	12 (.472)	1.0 (.039)	1.0 (.039)	0.7 (.028)
HPSM4	HDPSM4	HSPSM4	HSDPSM4	4.5 (1.01)	16 (3.6)	M4	15.0 (.591)	1.5 (.059)	1.5 (.059)	1.3 (.051)
HPSM5	HDPSM5	HSPSM5	HSDPSM5	6 (1.35)	19 (4.27)	M5	18 (.709)	2.3 (.091)	2.4 (.094)	1.5 (.059)
HPSMH5	-	-	-	11 (2.47)	40.0 (8.99)	M5	18 (.709)	2.3 (.091)	2.4 (.094)	1.5 (.059)
HPSM6	HDPSM6	HSPSM6	HSDPSM6	6 (1.35)	19 (4.27)	M6	20.0 (.787)	2.5 (.098)	2.7 (.61)	2.0 (.079)
HPSMH6	-	-	-	15.0 (3.37)	43 (9.67)	M6	20.0 (.787)	2.5 (.098)	2.7 (.61)	2.0 (.079)
HPSM8	HDPSM8	HSPSM8	HSDPSM8	10.0 (2.25)	39 (8.77)	M8	22 (.866)	3.0 (.118)	3.5 (.138)	2.5 (.098)
HPSMH8	-	-	-	20 (4.5)	75.0 (16.86)	M8	22 (.866)	3.0 (.118)	3.5 (.138)	2.5 (.098)
HPSM10	HDPSM10	HSPSM10	HSDPSM10	10.0 (2.25)	39 (8.77)	M10	22 (.866)	3.0 (.118)	4.0 (.157)	3.0 (.118)
HPSMH10	-	-	-	20 (4.5)	75.0 (16.86)	M10	22 (.866)	3.0 (.118)	4.0 (.157)	3.0 (.118)
HPSM12	HDPSM12	HSPSM12	HSDPSM12	12 (2.7)	53.0 (11.91)	M12	28 (1.102)	4.0 (.157)	6.0 (.236)	4.0 (.157)
HPSMH12	-	-	-	45 (10.12)	120.0 (26.98)	M12	28 (1.102)	4.0 (.157)	6.0 (.236)	4.0 (.157)
HPSM16	HDPSM16	HSPSM16	HSDPSM16	45 (10.12)	100 (22.48)	M16	32 (1.26)	5.0 (.197)	7.5 (.295)	5.0 (.197)
HPSMH16	-	-	-	64.0 (14.39)	160.0 (35.97)	M16	32 (1.26)	5.0 (.197)	7.5 (.295)	5.0 (.197)
HPSM20	-	HSPSM20	-	52 (11.69)	125 (28.1)	M20	40 (1.575)	7.0 (.276)	10.0 (.393)	6.0 (.236)
HPSMH20	-	-	-	75.0 (16.86)	195.0 (43.84)	M20	40 (1.575)	7.0 (.276)	10.0 (.393)	6.0 (.236)
HPSM24	-	-	-	70 (15.74)	170.0 (38.22)	M24	52 (2.047)	10.0 (.393)	12.0 (.472)	8.0 (.315)
HPSMH24	-	-	-	75.0 (16.69)	245.0 (55.0)	M24	52 (2.047)	10.0 (.393)	12.0 (.472)	8.0 (.315)

**Stubby Plunger**

Stubby Plunger

Vlier Stubby plungers offer considerable plunger travel, high-end forces and are ideal for restricted space applications. These compact units come in two spring force choices in both steel and stainless steel.

Typical Uses

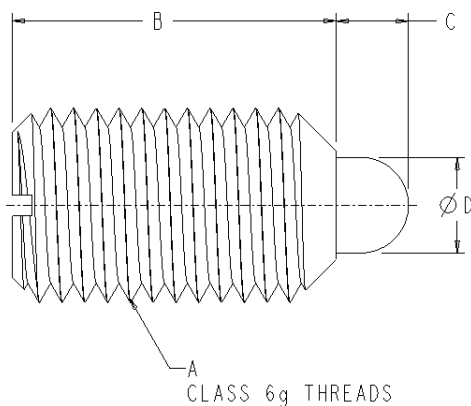
- * Limited Space
- * Indexing
- * Locking
- * Electrical Contacts
- * Detents
- * Part position

Special Features

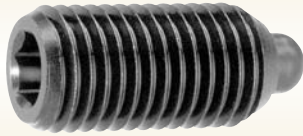
- ◆ Allows some side loading
- ◆ Screwdriver installation
- ◆ Wear resistance
- ◆ Compact size
- ◆ Stainless steel or steel
- ◆ Intermediate travel

Special Note:

Free cutting steel finish with increased spring load = plunger is blue zinc coated. Stainless steel finish with increased spring load = body tip is yellow.



Stubby Plungers							
Steel	Stainless Steel			A	B	C	ØD
Part Number	Part Number	Initial	Final	Thread 6g-ISO	mm (in.)	mm (in.)	mm (in.)
HMM4	HSMM4	4,5 (1.01)	12,5 (2.81)	M4	9 (.354)	1,5 (.059)	1,8 (.071)
HMM5	HSMM5	5 (1.12)	13 (2.92)	M5	12 (.472)	2,0 (.079)	2,4 (.094)
HMM6	HSMM6	6 (1.35)	17 (3.82)	M6	14 (.551)	2,0 (.079)	2,7 (.106)
HMMH6	HSMMH6	11 (2.47)	25 (5.62)	M6	14 (.551)	2,0 (.079)	2,7 (.106)
HMM8	HSMM8	16 (3.6)	33 (7.42)	M8	16 (.63)	2,0 (.079)	3,8 (.15)
HMMH8	HSMMH8	23 (5.17)	59 (13.26)	M8	16 (.63)	2,0 (.079)	3,8 (.15)
HMM10	HSMM10	19 (4.27)	42 (9.44)	M10	19 (.748)	2,5 (.098)	4,5 (.177)
HMMH10	HSMMH10	20 (4.5)	54 (12.14)	M10	19 (.748)	2,5 (.098)	4,5 (.177)
HMM12	HSMM12	22 (4.95)	57 (12.81)	M12	22 (.866)	3,5 (.138)	6,2 (.244)
HMMH12	HSMMH12	38 (8.54)	96 (21.58)	M12	22 (.866)	3,5 (.138)	6,2 (.244)
HMM16	HSMM16	38 (8.54)	78 (17.54)	M16	24 (.945)	4,5 (.177)	8,5 (.335)
HMMH16	HSMMH16	50 (11.24)	100 (22.48)	M16	24 (.945)	4,5 (.177)	8,5 (.335)
HMM20	HSMM20	39 (8.77)	81 (18.21)	M20	30 (1.181)	6,5 (.256)	10,0 (.394)
HMMH20	HSMMH20	52 (11.69)	133 (29.9)	M20	30 (1.181)	6,5 (.256)	10,0 (.394)
HMM24	HSMM24	72 (16.19)	155 (34.85)	M24	34 (1.339)	8,0 (.315)	13,0 (.512)
HMMH24	HSMMH24	91 (20.46)	223 (50.13)	M24	34 (1.339)	8,0 (.315)	13,0 (.512)

**Posi-Hex Stubby**

Posi-Hex Stubby

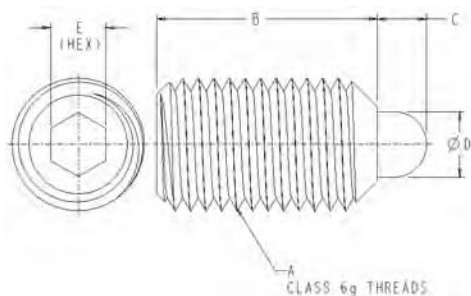
Vlier Posi-hex Stubby plungers offer the same features as the standard stubby plunger with one exception. The feature of using a hex wrench to speed up the installation and removal process. These compact units like the standard Stubby plunger, come in two spring force choices in both steel and stainless steel.

Typical Uses

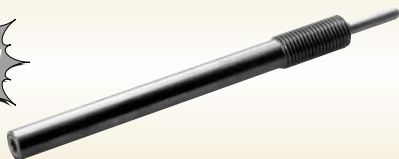
- * Limited Space
- * Indexing
- * Locking
- * Electrical Contacts
- * Detents
- * Part position

Special Features

- ◆ Allows some Side loading
- ◆ Hex Wrench installation
- ◆ Accurate Repeatable end force
- ◆ Compact Size
- ◆ Stainless Steel or steel
- ◆ Intermediate travel



Posi-Hex Stubby Plunger								
Steel	Stainless	End Force, N (Lbs)		A	B	C	ØD	E
Part Number	Part Number	Initial	Final	Thread 6g-ISO	mm (in.)	mm (in.)	mm (in.)	mm (in.)
HPMM4	HSPMM4	4,5 (1.01)	12,5 (2.81)	M4	12 (.472)	1,5 (.059)	1,8 (.071)	2 (.079)
HPMM5	HSPMM5	5 (1.12)	13 (2.92)	M5	14 (.551)	2 (.079)	2,4 (.094)	2,5 (.098)
HPMM6	HSPMM6	6 (1.35)	17 (3.82)	M6	15,0 (.591)	2,0 (.079)	2,7 (.61)	3 (.118)
HPMMH6	HSPMMH6	11 (2.47)	25 (5.62)	M6	15,0 (.591)	2,0 (.079)	2,7 (.61)	3 (.118)
HPMM8	HSPMM8	16 (3.6)	33 (7.42)	M8	18 (.709)	2,0 (.079)	3,8 (.15)	4 (.157)
HPMMH8	HSPMMH8	23 (5.17)	59 (13.26)	M8	18 (.709)	2,0 (.079)	3,8 (.15)	4 (.157)
HPMM10	HSPMM10	19 (4.27)	42 (9.44)	M10	23 (.906)	2,5 (.098)	4,5 (.177)	5 (.197)
HPMMH10	HSPMMH10	20 (4.5)	54 (12.14)	M10	23 (.906)	2,5 (.098)	4,5 (.177)	5 (.197)
HPMM12	HSPMM12	22 (4.95)	57 (12.81)	M12	26 (1.024)	3,5 (.138)	6,2 (.244)	6 (.236)
HPMMH12	HSPMMH12	38 (8.54)	96 (21.58)	M12	26 (1.024)	3,5 (.138)	6,2 (.244)	6 (.236)
HPMM16	HSPMM16	38 (8.54)	78 (17.54)	M16	33 (1.299)	4,5 (.177)	8,5 (.335)	8,0 (.315)
HPMMH16	HSPMMH16	50 (11.24)	100 (22.48)	M16	33 (1.299)	4,5 (.177)	8,5 (.335)	8,0 (.315)
HPMM20	HSPMM20	39 (8.77)	81 (18.21)	M20	43 (1.69)	6,5 (.256)	10 (.393)	10 (.393)
HPMMH20	HSPMMH20	52 (11.69)	133 (29.9)	M20	43 (1.69)	6,5 (.256)	10 (.393)	10 (.393)
HPMM24	HSPMM24	72 (16.19)	155 (34.85)	M24	48 (1.89)	8,0 (.315)	13 (.512)	12 (.472)
HPMMH24	HSPMMH24	91 (20.46)	223 (50.13)	M24	48 (1.89)	8,0 (.315)	13 (.512)	12 (.472)

Spring-Loaded Devices

Long Travel Metric Steel Plungers

Long Travel Metric Steel Plungers

Long travel plungers ideal for high speed, long life applications. Slotted plunger body for blind hole installation.

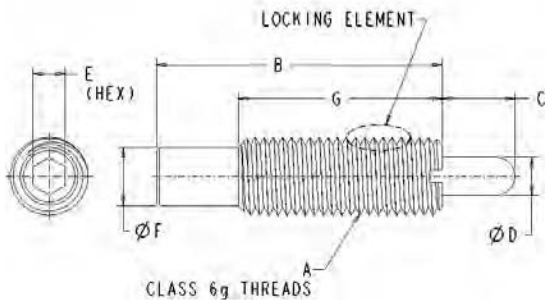
Special Features

- ◆ Impact resistance
- ◆ Choice of spring forces
- ◆ 10mm to 24mm
- ◆ Choice of with or with-out locking element

Long Travel Plunger

Steel W/O Locking Element			A	B	C	ØD	E	ØF	G
Part Number	Initial	Final	Thread 6g-ISO	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)
HTHL16A	17,0 (3.82)	74 (16.64)	M16	80 (3.15)	11 (.433)	7,3 (.287)	8 (.315)	13,4 (.528)	35 (1.378)
HTHL16B	21,0 (4.72)	81 (18.21)	M16	120 (4.724)	21 (.827)	7,3 (.287)	8 (.315)	13,4 (.528)	35 (1.378)
HTHL16C	21,0 (4.72)	89 (20.0)	M16	150 (5.91)	31 (1.22)	7,3 (.287)	8 (.315)	13,4 (.528)	35 (1.378)
HTHL16D	16,0 (3.6)	80 (17.98)	M16	200 (7.874)	41 (1.614)	7,3 (.287)	8 (.315)	13,4 (.528)	35 (1.378)
HTHL22A	80 (17.98)	214 (48.11)	M22	130 (5.118)	21 (.827)	9,0 (.354)	8 (.315)	19,0 (.748)	50 (1.97)
HTHL22B	70,0 (15.74)	210 (47.21)	M22	168 (6.614)	31 (1.22)	9,0 (.354)	8 (.315)	19,0 (.748)	50 (1.97)
HTHL22C	76,0 (17.09)	208 (46.76)	M22	226 (8.898)	41 (1.614)	9,0 (.354)	8 (.315)	19,0 (.748)	50 (1.97)

Steel with Locking Element			A	B	C	ØD	E	ØF	G
Part Number	Initial	Final	Thread 6g-ISO	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)
HHL10	6,0 (1.35)	16 (3.6)	M10	35 (1.38)	8 (.315)	4,0 (.157)	3 (.118)	7,8 (.307)	25 (.984)
HHL12	4,0 (.90)	18 (4.05)	M12	43 (1.693)	10 (.394)	5,5 (.217)	4 (.157)	9,5 (.374)	35 (1.378)
HHLH12	7,0 (1.57)	46 (10.34)	M12	43 (1.693)	10 (.394)	5,5 (.217)	4 (.157)	9,5 (.374)	35 (1.378)
HHL16A	7,0 (1.57)	24 (5.4)	M16	48 (1.89)	10 (.394)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHLH16A	10,0 (2.25)	43 (9.67)	M16	48 (1.89)	10 (.394)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)



Long Travel Plunger

Steel with Locking Element			A	B	C	ØD	E	ØF	G
Part Number	Initial	Final	Thread 6g-ISO	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)
HHL16B	15,0 (3.37)	42 (9.44)	M16	58 (2.283)	10 (.394)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHLH16B	14,0 (3.15)	84 (18.88)	M16	58 (2.283)	10 (.394)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHL16C	9,0 (2.02)	33 (7.42)	M16	58 (2.283)	15 (.591)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHLH16C	10,0 (2.25)	57 (12.81)	M16	58 (2.283)	15 (.591)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHL16D	4,0 (.90)	23 (5.17)	M16	58 (2.283)	20 (.787)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHL16E	11,0 (2.47)	43 (9.67)	M16	83 (3.268)	20 (.787)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHLH16E	18,0 (4.05)	72 (16.19)	M16	83 (3.268)	20 (.787)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHL16F	13,0 (2.92)	41 (9.22)	M16	98 (3.858)	25 (.984)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHLH16F	20,0 (4.5)	70 (15.74)	M16	98 (3.858)	25 (.984)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHL16G	13,0 (2.92)	47 (10.57)	M16	98 (3.858)	30 (1.181)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHLH16G	20,0 (4.5)	80 (17.98)	M16	98 (3.858)	30 (1.181)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHL16H	24,0 (5.4)	110 (24.73)	M16	118 (4.646)	30 (1.181)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHL16K	13,0 (2.92)	63 (14.16)	M16	148 (5.827)	40 (1.575)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHLH16K	21,0 (4.72)	113 (25.4)	M16	148 (5.827)	40 (1.575)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHL16L	7,0 (1.57)	43 (9.67)	M16	148 (5.827)	50 (1.969)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHLH16L	13,0 (2.92)	75 (16.86)	M16	148 (5.827)	50 (1.969)	8,0 (.315)	6 (.236)	13,4 (.528)	35 (1.378)
HHL24	14,0 (3.15)	87 (19.56)	M24	60 (2.362)	15 (.591)	10,0 (.394)	8 (.315)	19,6 (.772)	45 (1.772)
HHLH24	24,0 (5.4)	192 (43.16)	M24	60 (2.362)	15 (.591)	10,0 (.394)	8 (.315)	19,6 (.772)	45 (1.772)

**Ball Plunger**

Ball Plunger

Vliet Steel & Stainless Steel Metric Ball plungers are compact units. Suitable for applications with side loading requirements. Stainless Steel Ball plungers offer maximum protection against rust and corrosion. Ideal for food, medical, and special environments.

Typical Uses

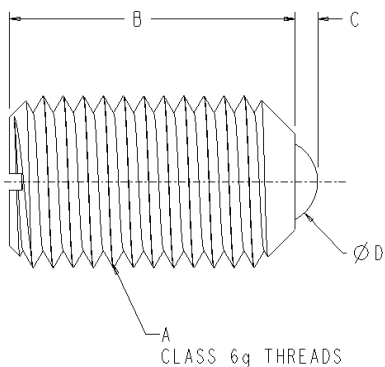
- * Indexing
- * Torque Limiting
- * Gear Shifters
- * Positioning
- * Locators
- * Detents

Special Features

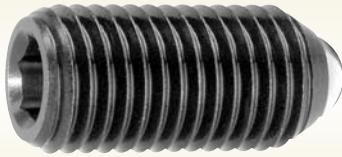
- ◆ Metric Thread
- ◆ Side-load Tolerant
- ◆ Controlled end forces
- ◆ Screwdriver installation
- ◆ Stainless Steel resists Corrosion
- ◆ Stainless Steel withstands high temperatures

Special Note

Free cutting steel finish with increase spring load ball is yellow. Stainless steel finish with increased spring load body tip is yellow.



Ball Plungers							
Steel	Stainless Steel			A	B	C	ØD
Part Number	Part Number	Initial	Final	Thread 6g-ISO	mm (in.)	mm (in.)	mm (in.)
HBM3	HSBM3	3 (.67)	4,5 (1.01)	M3	7 (.276)	0,4 (.016)	1,5 (.059)
HBM4	HSBM4	8,5 (1.91)	14 (3.15)	M4	9 (.354)	0,8 (.031)	2,5 (.098)
HBM5	HSBM5	8 (1.8)	14 (3.15)	M5	12 (.472)	0,9 (.035)	3,0 (.118)
HBMH5	HSBMH5	15,0 (3.37)	22 (4.95)	M5	12 (.472)	0,9 (.035)	3,0 (.118)
HBM6	HSBM6	11 (2.47)	18 (4.05)	M6	14 (.551)	1,0 (.039)	3,5 (.137)
HBMH6	HSBMH6	19,0 (4.27)	28 (6.29)	M6	14 (.551)	1,0 (.039)	3,5 (.137)
HBM8	HSBM8	18,0 (4.05)	31 (6.97)	M8	16 (.63)	1,5 (.059)	4,5 (.177)
HBMH8	HSBMH8	36,0 (8.09)	62 (13.94)	M8	16 (.63)	1,5 (.059)	4,5 (.177)
HBM10	HSBM10	24,0 (5.4)	45 (10.12)	M10	19 (.748)	2,0 (.079)	6,0 (.236)
HBMH10	HSBMH10	57,0 (12.81)	104 (23.38)	M10	19 (.748)	2,0 (.079)	6,0 (.236)
HBM12	HSBM12	26,0 (5.85)	49 (11.02)	M12	22 (.866)	2,5 (.098)	8,0 (.315)
HBMH12	HSBMH12	61,0 (13.71)	110 (24.73)	M12	22 (.866)	2,5 (.098)	8,0 (.315)
HBM16	HSBM16	41,0 (9.22)	86 (19.33)	M16	24 (.945)	3,5 (.138)	10,0 (.394)
HBMH16	HSBMH16	68 (15.29)	142 (31.92)	M16	24 (.945)	3,5 (.138)	10,0 (.394)
HBM20	HSBM20	56,0 (12.59)	111 (24.95)	M20	30 (1.181)	4,5 (.177)	12,0 (.472)
HBMH20	HSBMH20	84 (18.88)	166 (37.32)	M20	30 (1.181)	4,5 (.177)	12,0 (.472)
HBM24	HSBM24	81,0 (18.21)	151 (33.95)	M24	34 (1.339)	5,5 (.217)	15,0 (.591)
HBMH24	HSBMH24	127 (28.55)	237 (53.28)	M24	34 (1.339)	5,5 (.217)	15,0 (.591)

**Posi-Hex Metric Ball**

Posi-Hex Metric Ball

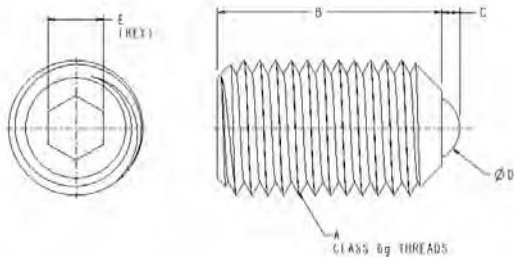
Vliet Steel & Stainless Steel Posi-Hex Metric Ball plungers allow for easy installation and removal using a hex wrench. These units are suitable for high torque applications. The Stainless Steel Ball plungers offer maximum protection against rust and corrosion. Ideal for food, medical, and special environments.

Special Features

- ◆ Metric thread
- ◆ Side-load tolerant
- ◆ Controlled end forces
- ◆ Hex wrench installation
- ◆ Stainless steel resists corrosion
- ◆ Stainless steel withstands high temperatures

Special Note

Free cutting steel finish with increase spring load ball is yellow. Stainless steel finish with increased spring load body tip is yellow.



Posi-Hex Ball Plunger								
Steel	Stainless	End Force, N (Lbs)		A	B	C	ØD	E
Part Number	Part Number	Initial	Final	Thread 6g-ISO	mm (in.)	mm (in.)	mm (in.)	mm (in.)
HPM4	HSPM4	8,5 (1.91)	14 (3.15)	M4	12 (.472)	0,8 (.031)	2,5 (.098)	2 (.079)
HPM5	HSPM5	8 (1.8)	14 (3.15)	M5	14 (.551)	0,9 (.035)	3 (.118)	2,5 (.098)
HPMH5	HSPMH5	15,0 (3.37)	22 (4.95)	M5	14 (.551)	0,9 (.035)	3 (.118)	2,5 (.098)
HPM6	HSPM6	11 (2.47)	18 (4.05)	M6	15 (.591)	1,0 (.039)	3,5 (.138)	3 (.118)
HPMH6	HSPMH6	19,0 (4.27)	28 (6.29)	M6	15 (.591)	1,0 (.039)	3,5 (.138)	3 (.118)
HPM8	HSPM8	18,0 (4.05)	31 (6.97)	M8	18 (.709)	1,5 (.059)	4,5 (.177)	4 (.157)
HPMH8	HSPMH8	36,0 (8.09)	62 (13.94)	M8	18 (.709)	1,5 (.059)	4,5 (.177)	4 (.157)
HPM10	HSPM10	24,0 (5.4)	45 (10.12)	M10	23 (.906)	2,0 (.079)	6,0 (.236)	5 (.197)
HPMH10	HSPMH10	57,0 (12.81)	104 (23.38)	M10	23 (.906)	2,0 (.079)	6,0 (.236)	5 (.197)
HPM12	HSPM12	26,0 (5.85)	49 (11.02)	M12	26 (1.024)	2,5 (.098)	8,0 (.315)	6 (.236)
HPMH12	HSPMH12	61,0 (13.71)	110 (24.73)	M12	26 (1.024)	2,5 (.098)	8,0 (.315)	6 (.236)
HPM16	HSPM16	41,0 (9.22)	86 (19.33)	M16	33 (1.299)	3,5 (.138)	10,0 (.394)	8,0 (.315)
HPMH12	HSPMH16	68 (15.29)	142 (31.92)	M16	33 (1.299)	3,5 (.138)	10,0 (.394)	8,0 (.315)
HPM20	HSPM20	66,0 (14.84)	111 (24.95)	M20	43 (1.69)	4,5 (.177)	12,0 (.472)	10 (.393)
HPMH20	HSPMH20	84 (18.88)	166 (37.32)	M20	43 (1.69)	4,5 (.177)	12,0 (.472)	10 (.393)
HPM24	HSPM24	81,0 (18.21)	151 (33.95)	M24	48 (1.89)	5,5 (.217)	15,0 (.591)	12 (.472)
HPMH24	HSPMH24	127 (28.55)	237 (53.28)	M24	48 (1.89)	5,5 (.217)	15,0 (.591)	12 (.472)

NEW!

Push-Fit Plungers

Push-Fit Plungers

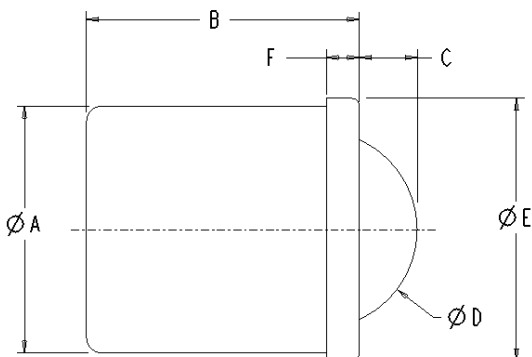
Vlier push-fit Metric Ball plungers are designed for simple easy installation into wood, soft plastics or aluminum. Ideal quick changes or multiple installations when threaded adjustments are not needed.

Typical Uses

- * Indexing
- * Torque Limiting
- * Electric Contacts
- * Positioning
- * Locators
- * Detents

Special Features

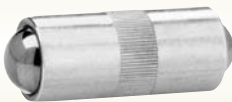
- ◆ Simple Quick installation
- ◆ No thread adjustments
- ◆ Brass, Stainless Steel, Delrin material choices
- ◆ Minimize design time



Push-Fit Plunger									
SS Body with SS Ball	Brass Body with SS Ball	End Force, N (lbs)		ØA	B	C	ØD	ØE	F, REF
Part Number	Part Number	Initial	Final	+0.1 (+.004)	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)
HSPFB4	HBPFB4	2.5 (.56)	6.0 (1.35)	4.0 (.157)	5.0 (.197)	0.8 (.031)	3.0 (.118)	4.6 (.181)	0.9 (.035)
HSPFB5	HBPFB5	3.0 (.67)	6.5 (1.46)	5.0 (.197)	6.0 (.236)	1.0 (.039)	4.0 (.157)	5.6 (.220)	0.9 (.035)
HSPFB6	HBPFB6	5.5 (1.24)	11.5 (2.59)	6.0 (.236)	7.0 (.276)	1.6 (.062)	5.0 (.197)	6.5 (.256)	1.0 (.039)
HSPFB8	HBPFB8	7.0 (1.57)	12.5 (2.81)	8.0 (.315)	9.0 (.354)	1.9 (.075)	6.5 (.256)	8.5 (.335)	1.1 (.043)
HSPFB10	N/A	8.5 (1.91)	18.5 (4.16)	10.0 (.394)	13.5 (.531)	3.1 (.122)	8.5 (.335)	11.0 (.433)	1.9 (.075)
HSPFB12	N/A	12.0 (2.7)	26.5 (5.96)	12.0 (.472)	16.0 (.63)	3.8 (.15)	10.0 (.394)	13.0 (.512)	2.5 (.098)
Delrin Body with SS Ball	Delrin Body & Ball	End Force, N (Lbs)		ØA	B	C	ØD	ØE	F, REF
Part Number	Part Number	Initial	Final	+0.1 (+.004)	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)
HDPFB4	HDDPFB4	2.5 (.56)	6.0 (1.35)	4.0 (.157)	5.0 (.197)	0.8 (.031)	3.0 (.118)	4.6 (.181)	0.9 (.035)
HDPFB5	HDDPFB5	3.0 (.67)	6.5 (1.46)	5.0 (.197)	6.0 (.236)	1.0 (.039)	4.0 (.157)	5.6 (.220)	0.9 (.035)
HDPFB6	HDDPFB6	5.5 (1.24)	11.5 (2.59)	6.0 (.236)	7.0 (.276)	1.6 (.062)	5.0 (.197)	6.5 (.256)	1.0 (.039)
HDPFB8	HDDPFB8	7.0 (1.57)	12.5 (2.81)	8.0 (.315)	9.0 (.354)	1.9 (.075)	6.5 (.256)	8.5 (.335)	1.1 (.043)
HDPFB10	HDDPFB10	8.5 (1.91)	18.5 (4.16)	10.0 (.394)	13.5 (.531)	3.1 (.122)	8.5 (.335)	11.0 (.433)	1.9 (.075)
HDPFB12	HDDPFB12	12.0 (2.7)	26.5 (5.96)	12.0 (.472)	16.0 (.63)	3.8 (.15)	10.0 (.394)	13.0 (.512)	2.5 (.098)



No collar push



Double ended

Push-Fit Plungers**Push-Fit Plungers**

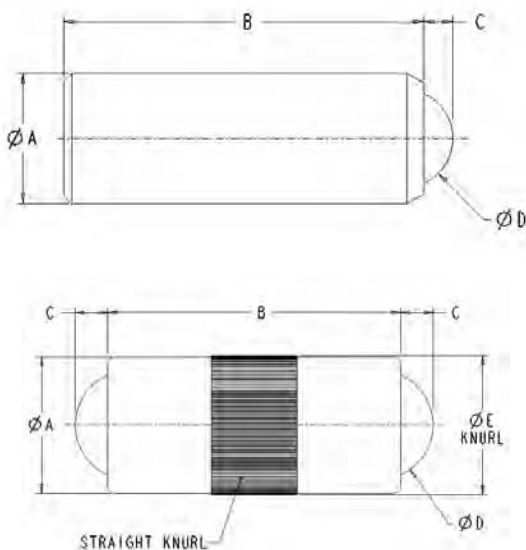
Vlier push-fit Metric Ball plungers are designed for simple easy installation into wood, soft plastics or aluminum. Ideal quick changes or multiple installations when threaded adjustments are not needed.

Typical Uses

- * Indexing
- * Torque Limiting
- * Electric Contacts
- * Positioning
- * Locators
- * Detents

Special Features

- ◆ Simple Quick installation
- ◆ No thread adjustments
- ◆ Brass, Stainless Steel, Delrin material choices
- ◆ Minimize design time



Double Ended Push-Fit Plunger

Part Number	Initial	Final	ØA	B	C	ØD	ØE
			mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm +0.05/-0.0 (in. +.022/-0.0)
HBPF25	1,3 (.29)	2,5 (.56)	2,5 (.098)	5,3 (.209)	0,65 (.026)	2,0 (.079)	2,52 (.099)
HBPF30	2,0 (.45)	4,5 (1.01)	3,0 (.118)	7,3 (.287)	0,80 (.031)	2,5 (.098)	3,02 (.119)
HBPF40	2,5 (.562)	7,5 (.3)	4,0 (.157)	9,0 (.354)	0,90 (.035)	3,0 (.118)	4,03 (.169)
HBPF50	3,5 (.79)	8,0 (1.8)	5,0 (.197)	10,8 (.425)	1,2 (.047)	4,0 (.157)	5,03 (.198)
HBPF70	4,0 (.9)	12,0 (2.7)	7,0 (.276)	14,0 (.551)	2,00 (.079)	6,0 (.236)	7,03 (.277)
HBPF80	6,0 (1.35)	15,0 (3.37)	8,0 (.315)	18,0 (.709)	2,10 (.083)	6,5 (.256)	8,03 (.316)

Single Ended Push-Fit Plunger

Part Number	Initial	Final	ØA	B	C	ØD
			mm ± 0.04 (in. ± .002)	mm (in.)	mm (in.)	mm (in.)
HSPFS30	4,5 (1.01)	7,5 (1.69)	3,0 (.118)	7,0 (.276)	0,65 (.026)	2,0 (.079)
HSPFS35	6,0 (1.35)	14,5 (3.26)	3,5 (.138)	9,0 (.354)	0,80 (.031)	2,5 (.098)
HSPFS40	8,0 (1.8)	14,0 (3.15)	4,0 (.157)	11,0 (.433)	0,90 (.035)	3,0 (.118)
HSPFS45	9,5 (2.14)	16,5 (3.71)	4,5 (.177)	12,0 (.472)	0,95 (.037)	3,2 (.125)
HSPFS50	11,0 (2.47)	18,0 (4.05)	5,0 (.197)	13,0 (.512)	1,00 (.039)	3,5 (.138)
HSPFS55	15,5 (3.48)	25,0 (5.62)	5,5 (.217)	14,0 (.551)	1,20 (.047)	4,0 (.157)
HSPFS60	18,0 (4.05)	31,0 (6.97)	6,0 (.236)	15,0 (.591)	1,50 (.059)	4,5 (.177)