

ZP,PL,PLH,ZN,PLN

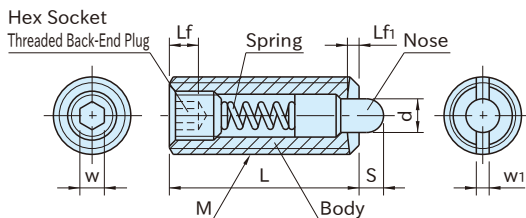
SPRING PLUNGERS



ZP
Light Force,
Steel Nose



PL
Heavy Force,
Steel Nose



ZN
Light Force,
Plastic Nose



PLH-SUS
Extra Heavy Force,
Stainless Steel Nose

Type	Body	Spring	Nose
ZP PL	Steel (SUM22L) Black oxide finish	Steel (SWPA)	Steel (SUM22L)
PLH			(ZP : Black oxide finish) Heat treated to Rc56-60
ZN PLN			Polyacetal
PL-SUS	SUS303	Stainless steel (SUS301)	Stainless steel
PLH-SUS			(SUS420)
PLN-SUS			Polyacetal

Type / Size		M	d	L	S	Lf	Lf ₁	w	w ₁	Weight (g)	Plunger Wrenches
ZP PL PLH ZN PLN PL-SUS PLH-SUS PLN-SUS	3	M 3×0.5	1	10	1.5	1.5	1	0.7	0.4	0.35	-
	4	M 4×0.7	1.5	15		2	0.6	1.3	0.6	0.8	PW 4
	5	M 5×0.8	2.4	18	2.3		0.8	1.5	0.8	1.3	PW 5
	6	M 6×1	2.7	20	2.5	2.5	1	2	1	2.5	PW 6
	8	M 8×1.25	3.5	22	3	3	1.4	2.5	1.2	6	PW 8
	10	M10×1.5	4			3.5		3	1.6	9	PW10
	12	M12×1.75	6	28	4	5	2	4	2	16	PW12
	16	M16×2	7.5	32	5	6	2.5	5	2.5	35	PW16
	20	M20×2.5	10	40	7	8	3	6		67	PW20
	24	M24×3	12	52	10	10		8		123	PW24

ZIP PL PLH (Steel Body with Steel Nose)

Light Force		Heavy Force		Extra Heavy Force	
Part Number	Force (N) Initial - Final	Part Number	Force (N) Initial - Final	Part Number	Force (N) Initial - Final
-	-	PL 3	0.5~ 3	-	-
ZP 4	2~ 7	PL 4	5 ~ 16	-	-
ZP 5	3~10	PL 5	6 ~ 20	PLH 5	11~ 29
ZP 6	3~ 9	PL 6	7 ~ 20	PLH 6	14~ 37
ZP 8	4~16	PL 8	9 ~ 35	PLH 8	22~ 65
ZP10		PL10		PLH10	19~ 70
ZP12	5~27	PL12	10 ~ 55	PLH12	25~ 85
ZP16	20~45	PL16	45 ~100	PLH16	60~150
-	-	PL20	60 ~120	PLH20	75~190
-	-	PL24	80 ~160	PLH24	95~240

ZN PLN (Steel, Nylon Nose)

Light Force		Heavy Force	
Part Number	Force (N) Initial - Final	Part Number	Force (N) Initial - Final
-	-	PLN 3	0.5~ 3
ZN 4	2~ 7	PLN 4	5 ~ 16
ZN 5	3~10	PLN 5	6 ~ 20
ZN 6	3~ 9	PLN 6	7 ~ 20
ZN 8	4~16	PLN 8	9 ~ 35
ZN10		PLN10	
ZN12	5~27	PLN12	10 ~ 55
ZN16	20~45	PLN16	45 ~100

PL-SUS PLH-SUS (S. Steel, S. Steel Nose)

Heavy Force		Extra Heavy Force	
Part Number	Force (N) Initial - Final	Part Number	Force (N) Initial - Final
PL 3-SUS	0.5~ 3	-	-
PL 4-SUS	5 ~ 16	-	-
PL 5-SUS	5 ~ 17	PLH 5-SUS	9~26
PL 6-SUS	6 ~ 17	PLH 6-SUS	11~35
PL 8-SUS	7 ~ 29	PLH 8-SUS	15~48
PL10-SUS	8 ~ 31	PLH10-SUS	15~58
PL12-SUS	10 ~ 47	PLH12-SUS	19~74
PL16-SUS	45 ~100	-	-

PLN-SUS (S. Steel, Nylon Nose)

Heavy Force	
Part Number	Force (N) Initial - Final
PLN 3-SUS	0.5~ 3
PLN 4-SUS	5 ~ 16
PLN 5-SUS	5 ~ 17
PLN 6-SUS	6 ~ 17
PLN 8-SUS	7 ~ 29
PLN10-SUS	8 ~ 31
PLN12-SUS	10 ~ 47
PLN16-SUS	45 ~100

Features:

Identification lines are marked at the back end :
 one for **ZN** and **ZP** type and
 two for **PLH** and **PLH-SUS** type.

Technical Information

Heat resistance : **ZIP PL PLH** 100℃
ZN PLN PLN-SUS 90℃
PL-SUS PLH-SUS 180℃

How To Use

- Plunger wrenches **PW** are available for installing Spring Plungers from the back-end side.