

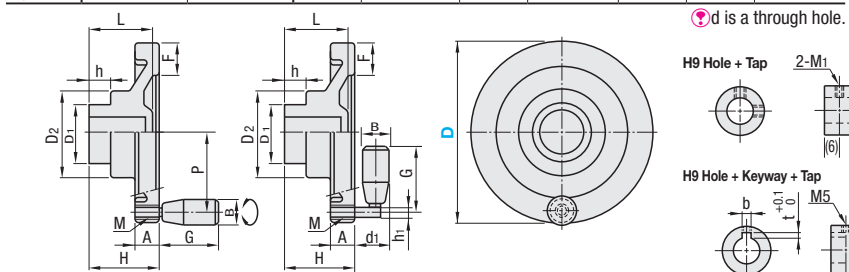
Solid Disk Handwheels / Adjusting Collars

Spoked Handwheels - Retractable Handle / No Handle

Solid Disk Handwheels



Shaft Bore Config.	Type		Hub		Handwheel		Handle		Handle Thread	
	Stationary Handles	Folding Handle	Material	Surface Treatment	Material	Material	Material	Material	Material	Surface Treatment
No Hole	PHSN	PHSFN	EN-JL 1030 Equiv.	Black Oxide	Phenol	Brass	Phenol	EN 1.0711 Equiv.	Trivalent Chromate	
H9 Hole + Tap	AHSN	AHSFN	Aluminum Alloy	-	Aluminum Alloy	Aluminum Alloy				
H9 Hole + Keyway + Tap	PHSM	PHSFM	EN-JL 1030 Equiv.	Black Oxide	Phenol	Brass				
	AHSM	AHSFM	Aluminum Alloy	-	Aluminum Alloy	Aluminum Alloy				
	PHSK	PHSKF	EN-JL 1030 Equiv.	Black Oxide	Phenol	Brass				
	AHSK	AHSKF	Aluminum Alloy	-	Aluminum Alloy	Aluminum Alloy				



Stationary Handles are GRW on P.1151.
Folding Handles are GRMBM on P.1151.
Both Stationary Handles and Folding Handles make rotation.

Part Number		PHSM, PHSFM AHSM, AHSFM		PHSK, PHSKF AHSK, AHSKF																			B		G		Reference Mass (g)			
Type	D	d Selection	M ₁ (Coarse)	d	b	t	H	A	F	D ₁	D ₂	h	L	d ₁	h ₁	M ₁ (Coarse)	P	PHS AHS	PHSF AHSF	PHS AHS	PHSF AHSF	PHS	AHS	PHSF	AHSF					
(Phenol)	80	10	5	10	3	1.4	35	13	15	28	36	14	30	24	9	8	34					40	55	181	201	200	220			
PHSN	100	12		12	4	1.8	40		15	17	32	39		36			41	20	20					277	324	296	343			
PHSM	125	12, 16					44		19	21	39	46		38			52					55	81	405	468	428	491			
PHSK	150	15, 20	6	15			48	18	21		39	46	15				64						470	729	618	777				
(Aluminum)				16	5	2.3	53	19	24		48	56		31	11	10	74	23	23			67	104	859	-	907	-			
AHSN	*175	16, 20					57	21	27		48	61		43			86	23				75		1017	-	1062	-			
AHSM	*200	16, 20																												
AHSK																														

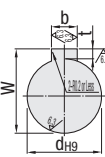
* D175 and D200 are not available for Aluminum Type.

Ordering Example: PHSN80 - d

D	Unit Price									
	PHSN	PHSFN	PHSM	PHSFM	PHSK	PHSKF	AHSN	AHSFN	AHSM	AHSFM
80										
100										
125										
150										
175										
200										

New JIS (B1301) Keyway Dimensions

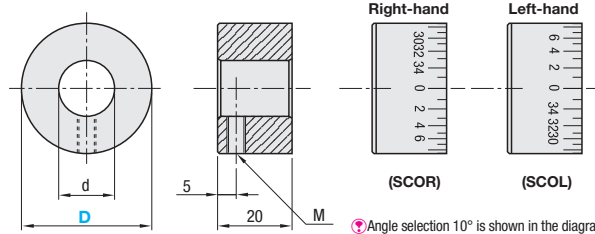
dH9	W	bJS9	t ^{-0.1}
10	11.4	3	1.4
12	13.8	4	1.8
15	17.3	5	2.3
16	18.3		



Adjusting Collars



Type	Material	Surface Treatment
Right-hand / Left-hand	EN AW-5056 Equiv.	Black Anodize
SCOR / SCOL		

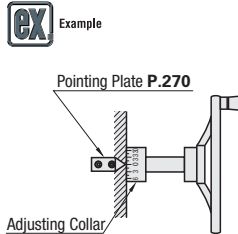


The scale engraving angle can be selected from either 10° or 15°.

Angle selection 10° is shown in the diagram.

Part Number		Angle Selection		d		M		Mass (g)		Unit Price	
Type	D										
SCOL (Left)	22	10	15	8		M4		20			
SCOR (Right)	27			12		M4		25			
	35			15		M5		40			
	45			16		M5		72			

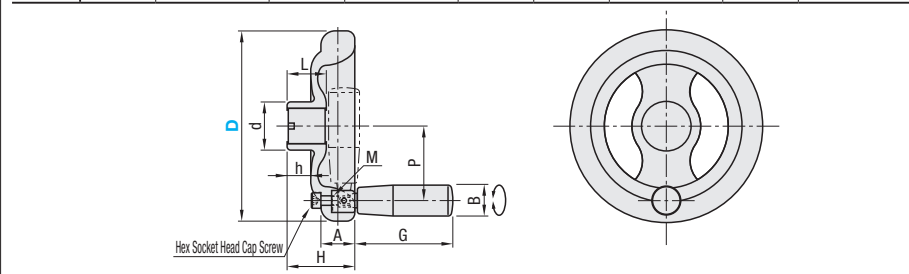
Ordering Example: SCOR35 - Angle



Spoked Handwheels - Retractable Handle



Type	Handwheel	Hub	Handle	Handle Thread	Included Screw
PHSLN	Phenol	Material	Material	Material	Material
AHSLN	EN-JS 1050 Equiv.	Surface Treatment	Surface Treatment	Surface Treatment	Surface Treatment



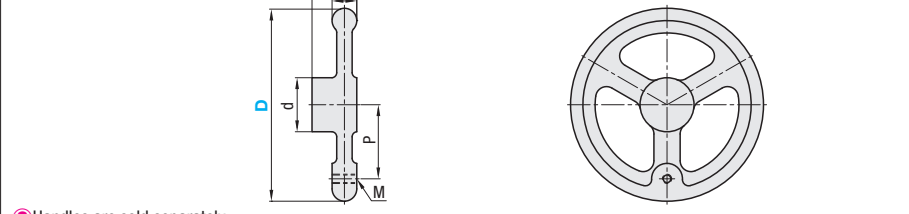
Handles are GRMLM on P.1152.

Part Number		H	A	d	L		h	M (Coarse)	P		B	G	Mass (g)		Unit Price	
Type	D				PHSLN	AHSLN			PHSLN	AHSLN			PHSLN	AHSLN		
PHSLN (Phenol Resin)	80	34.2	20	20.5	16.5	16.5	10	5	30	29	18	42	161	410		
	100	37.5	20	25.2	18.5	18.5	12.2	5	39	38	18	42	214	640		
AHSLN (EN-JS 1050 Equiv.)	125	48	25.5	32	26	26	15.7	6	50.5	48.5	23	67.5	473	1250		
	140	50.5	25.5	36	29	28.5	17.5	6	54		23	67.5	524	1670		
	160	56.9	28.5	40.5	33	33	19.9	8	62.7		26	82.5	757	2500		

Spoked Handwheels - No Handle



Type	Handwheel
AHNF	Material
	Surface Treatment



Handles are sold separately.

Part Number		D	H	A	d	M	P	Reference Mass (g)	Unit Price	Applicable Handle
Type										
AHNF	80	24	14	25	5	26.5	386			GRMK13
	100	25	15	30	5	37	618			
	125	29	16	35	6	48	985			GRMK16
	140	30	17			55	1287			
	160	33	18			62.5	1735			GRMK20
	180	35	20			71.5	2313			
	200	37	22	40	10	78.5	3511			GRMK25

Ordering Example: PHSN80 - d

Alterations: PHSN125 - SC10, AHSLN160 - KC20, AHNF80 - HC10

No alterations are available to handles with D=180 or 200 in AHNF.
No KC alteration is available to the handle with D=80 in PHSLN.

Alterations	H8 Hole + Tapped Hole Machining		H8 Hole + Keyway + Tapped Hole Machining		Square Bore Machining	
	HC		KC		SC	
Spec.	Adds an H8 hole at hub center, and two tapped setscrew holes. HC=1mm Increment		Adds an H8 hole at hub center, a key groove and its tapped hole. KC=1mm Increment		Adds a square bore at hub center. SC=1mm Increment	
	Ordering Code: HC16		Ordering Code: KC15		Ordering Code: SC12	

No satin nickel chrome plating alteration is available to PHSLN80.