

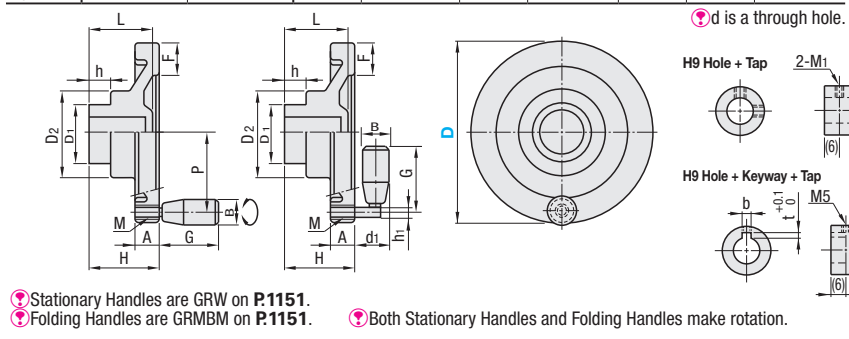
Solid Disk Handwheels / Adjusting Collars

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 AHSN	PHSFN AHSFN	FC200 AC7A	Black Oxide -	Phenol AC7A	Brass AC7A	Phenol	SUM21	Trivalent Chromate	
H9 Hole + Tap	PHSM AHSM	PHSFM AHSFM	FC200 AC7A	Black Oxide -	Phenol AC7A	Brass AC7A				
H9 Hole + Keyway + Tap	PHSK AHSK	PHSKF AHSKF	FC200 AC7A	Black Oxide -	Phenol AC7A	Brass AC7A				



Part Number		PHSM, PHSM AHSM, AHSFM		PHSK, PHSKF AHSK, AHSKF			H	A	F	D ₁	D ₂	h	L	d ₁	h ₁	M (Coarse)	P	B		G		Reference Mass (g)			
Type	D	d Selection	M ₁ (Coarse)	d	b	t												PHS AHS	PHSF AHSF	PHS AHS	PHSF AHSF	PHS	AHS	PHSF	AHSF
(Phenol) PHSM PHSK	PHSFN PHSFM PHSKF	80	10	5	10	3	1.4	35	13	15	28	36	14	30	22	8	34	20	19	40	55	181	201	200	220
		100	12		12	4	1.8	40	15	17	32	39	36	41	277	324	296					343			
		125	12, 16		44	19	39	46	38	52	405	468	428	491											
(Aluminum) AHSN AHSM AHSK	AHSFN AHSFM AHSKF	150	15, 20	6	15	5	2.3	48	18	21	48	56	15	30	14	10	64	23	22	67	104	570	729	618	777
		*175	16, 20		53			19	24	56	74	859					-					907	-		
		*200	16, 20		57			21	27	48	61	86					24					75	1017	-	1062

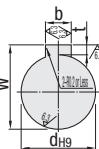
* D175 and D200 are not available for Aluminum Type.

Ordering Example: PHSN80 - d, PHSM100 - 12

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

New JIS (B1301) Keyway Dimensions

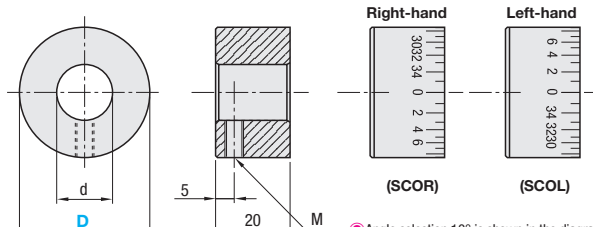
dH9	W	bJS9	t ^{0.1}
10	11.4	3	1.4
12	13.8	4	1.8
15	17.3	5	2.3
16	18.3		



Adjusting Collars

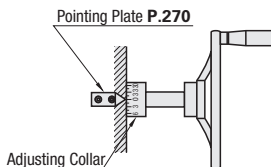


Type	Material	Surface Treatment
Right-hand / Left-hand	AS056	Black Anodize
SCOR / SCOL		



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

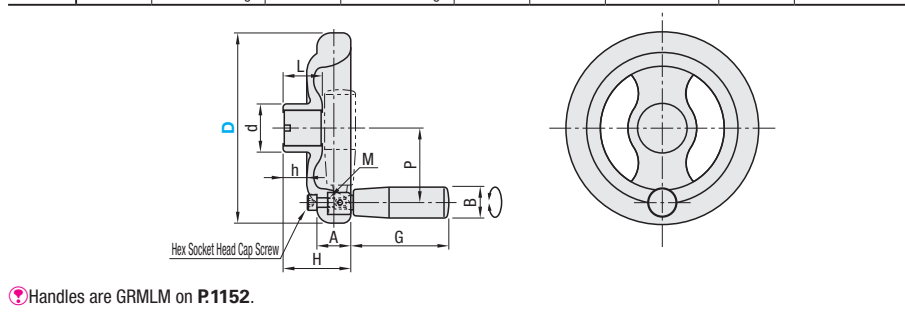
Ordering Example: SCOR35 - Angle



Spoked Handwheels - Retractable Handle



Type	Handwheel		Hub		Handle	Handle Thread		Included Screw	
	Material	Surface Treatment	Material	Surface Treatment	Material	Material	Surface Treatment	Material	Surface Treatment
PHSLN	Phenol	-	SS400	Black Oxide	Phenol	SS400	Trivalent Chromate	Structural Alloy Steel	Trivalent Chromate
AHSLN	FCD500	Chrome Plating	FCD500	Chrome Plating					



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) AHSLN (FCD500)	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		
	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
	FC200	Chrome Plating

Handwheel dimensions: H, A, d, L, PHSLN, AHSLN, h, M (Coarse), PHSLN, AHSLN, B, G, Mass (g), Unit Price, PHSLN, AHSLN.

Handwheel mounting hole dimensions: Hex Socket Head Cap Screw, H, G, B, A, d_{H9}.

Handwheel dimensions: H, A, d, L, PHSLN, AHSLN, h, M (Coarse), PHSLN, AHSLN, B, G, Mass (g), Unit Price, PHSLN, AHSLN.

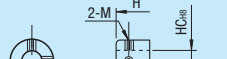
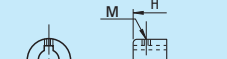
Handwheel dimensions: H, A, d, L, PHSLN, AHSLN, h, M (Coarse), PHSLN, AHSLN, B, G, Mass (g), Unit Price, PHSLN, AHSLN.

Part Number	Type	D	H	A	d	M	P	Reference Mass (g)	Unit Price	Applicable Handle
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	38	8	62.5	1735			GRMK20
180		35	20			71.5	2313			
200		37	22	40	10	78.5	3511			GRMK25

Ordering Example: PHSN80, PHSM100, AHSN100, AHSFN100, AHSK100, AHSKF100

Alterations: PHSN125 - SC10, AHSN160 - KC20, AHSN180 - KC10, AHSN200 - KC10

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 PHSN.

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																																																																																													
																																																																																																								
Code	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					Ordering Code					Ordering Code																																																																																													
	HC16					KC15					SC12																																																																																													
	<table><tr><th>D</th><th>HC(H8)</th><th>h</th><th>HC(H8)</th><th>M (Coarse)</th></tr><tr><td>80</td><td>6-10</td><td>6</td><td>6-9</td><td>4</td></tr><tr><td>100</td><td>6-13</td><td>7</td><td>10-16</td><td>5</td></tr><tr><td>125</td><td>6-14</td><td>7</td><td>17-19</td><td>6</td></tr><tr><td>140</td><td>6-22</td><td>8</td><td>20-23</td><td>8</td></tr><tr><td>160</td><td>6-23</td><td>8</td><td></td><td></td></tr></table>					D	HC(H8)	h	HC(H8)	M (Coarse)	80	6-10	6	6-9	4	100	6-13	7	10-16	5	125	6-14	7	17-19	6	140	6-22	8	20-23	8	160	6-23	8			<table><tr><th>D</th><th>KC(H8)</th><th>M</th><th>h</th><th>KC(H8)</th><th>b</th><th>t</th></tr><tr><td>80</td><td>10</td><td>5</td><td>6</td><td>8-10</td><td>3</td><td>±0.0125</td></tr><tr><td>100</td><td>10</td><td>5</td><td>7</td><td>11, 12</td><td>4</td><td>±0.015</td></tr><tr><td>125</td><td>10-12</td><td>5</td><td>7</td><td>13-17</td><td>5</td><td>±0.015</td></tr><tr><td>140</td><td>10-17</td><td>5</td><td>8</td><td>18-20</td><td>6</td><td>±0.015</td></tr><tr><td>160</td><td>10-20</td><td>6</td><td>8</td><td></td><td></td><td></td></tr></table>					D	KC(H8)	M	h	KC(H8)	b	t	80	10	5	6	8-10	3	±0.0125	100	10	5	7	11, 12	4	±0.015	125	10-12	5	7	13-17	5	±0.015	140	10-17	5	8	18-20	6	±0.015	160	10-20	6	8				<table><tr><th>D</th><th>SC</th><th>Tolerance</th></tr><tr><td>80</td><td>10</td><td>10-14 +0.1</td></tr><tr><td>100</td><td>10</td><td>15-16 +0.3</td></tr><tr><td>125</td><td>10</td><td></td><td></td></tr><tr><td>140</td><td>10-12</td><td></td><td></td></tr><tr><td>160</td><td>10-14</td><td></td><td></td></tr></table>	D	SC	Tolerance	80	10	10-14 +0.1	100	10	15-16 +0.3	125	10			140	10-12			160	10-14		
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No cerium nickel chrome plating alteration is available to DMC1																																																																																																								

No satin nickel chrome plating alteration is available to PHSN80.