

BORG

Series 2003

Parts Catalog

NOTE: This is a supplement to the Japanese version of the Borg Series 2003 catalog, which contains detailed photographs of each product. The heading on each page of this document indicates the corresponding page of the Japanese version, e.g., "Page 1 – Helical Focusers". To obtain a copy of the Japanese version, contact Hutech Corp. Additional information for certain parts can also be found at Hutech's website, <http://www.hutech.com>.

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Page 1 – Helical Focusers

4317 Helical Focuser S (Rotating) 40.00

Borg's most economical helical focuser and the only one with a rotating movement, model 4317 is useful as a supplemental visual focuser that provides fine adjustment for a coarse rack-and-pinion focuser, or eliminates the image shift common with standard SCT focusers. This focuser attaches in front via a metric M36.4 P1.0 male thread or M35.8 P0.75 female thread, but inserts directly into a 1.25" eyepiece sleeve when used with Borg adapter 7316 (which includes threads for 1.25" eyepiece filters).

Index	none
Length	38 to 52 mm
Travel	14 mm
Weight	60 g
A	31.7 mm (1.25") sleeve
B	M36.4 P1.0 Male

7315 Helical Focuser S (Non-rotating) 80.00

The deluxe version of model 4317, this non-rotating helical focuser includes index marks on the outside of the barrel, which greatly facilitate focusing when switching between CCD camera and eyepiece. In addition to visual use, this focuser also works well for fine focusing of CCD cameras, digital still cameras and video cameras. The front attachment is a metric M36.4 P1.0 male thread, or a 1.25" eyepiece interface when used with adapter 7316 (which includes threads for 1.25" eyepiece filters). The rear attachment includes a T-thread for direct connection to SBIG CCD cameras.

Index	50 microns
Length	50 to 60 mm
Travel	10 mm travel
Weight	80 g
A	31.7 mm (1.25") sleeve, M42 P0.75 Male
B	M36.4 P1.0 Male

7757 Low Profile M57 Helical Focuser S 149.00

Borg's shortest helical focuser, model 7757 works with a variety of adapters for a wide range of interface options. Its short length is useful in accommodating accessories with long focus requirements, such as diagonals and binoviewers. This model is recommended for visual use only as its short length does not permit a focus lock screw.

Index	None
Length	22 to 32 mm
Travel	10 mm
Weight	50 g
A	M57 P0.75 Female
B	M57 P0.75 Male

7857 M57 Helical Focuser 126.00

A versatile front end interface (M57 P0.75 male) allows this focuser to be connected to a wide variety of Borg accessories, including adapters (7901, 7910, 7911 and 7912) for third-party scopes, such as Vixen and Takahashi focuser sections. The internal diameter (47 mm) is wide enough to cover 35 mm format film.

Index	100 microns
Length	49 to 65 mm
Travel	16 mm
Weight	165 g
A	M57 P0.75 Female, M60 P0.75 Male
B	M57 P0.75 Male

7835 Helical Focuser M 189.00

This focuser is provided as standard with Series 80 scopes. Borg adapter 7428 allows this focuser to be attached to an SCT.

Index	80 microns
Length	63 to 82 mm
Travel	19 mm
Weight	320 g
A	M60 P0.75 Male, M57 P0.75 Female
B	M68.8 P0.75 Male

7837 Helical Focuser MDX 263.00

A heavy-duty version of the 7835 focuser. It has three locking screws and operation is smoother even when supporting the attachment of heavy accessories such as cameras or binoviewers.

Index	80 microns
Length	63 to 82 mm
Travel	19 mm
Weight	320 g
A	M60 P0.75 Male, M57 P0.75 Female
B	M68.8 P0.75 Male

8167 Medium Format Helical Focuser 363.00

This is the largest focuser in the Borg helical focuser family, fully covering up to a 6x9 format film frame. It is recommended for use with Series 115 and 140 scopes.

Index	80 microns
Length	115 to 146 mm
Travel	31 mm
Weight	830 g
A	M89 P1.0 Male
B	M95 P1.0 Female

Page 2 – M42 Helical Focuser System

Borg's M42 helical focusers let you use an M42 screw-mount lens as a macro lens with a 35mm SLR camera body. With additional parts, you can also use Nikkor EL and Leica L-mount lenses. Complete systems are detailed in the chart at the end of this document.

Focusers

These focusers are for an M42 screw-mount lens and a Pentax screw-mount camera body. For use with other lenses/camera bodies, additional parts are required (see chart).

7841 M42 Helical Focuser L 126.00

Long travel (27-47mm) makes this focuser great for extreme close-ups, or for long focal length lenses such as Leica L (requires adapter 7844).

Length	27-47 mm
Travel	20 mm
Weight	110 g
A	M42 P1.0 Female
B	M42 P1.0 Male

7842 M42 Helical Focuser 91.00

Same as focuser 7841 but shorter travel.

Length	15-25 mm
Travel	10 mm
Weight	80 g
A	M42 P1.0 Female
B	M42 P1.0 Male

Adapters

7843 M42P1 to M49.8 AD 29.00

Connects 7841/7842 to Borg camera mounts 5001-5009 (page 3).

Light path	1.5 mm
A	M49.8 P0.75 Male
B	M42 P1.0 Female

7844 M42P1 to M39 AD 29.00

Connects Leica L-mount lenses or EL Nikkor enlarger lens to 7841/7842.

Light path	1.5 mm
A	M39 P1.0 Female, M42 P1.0 Male
B	M42 P1.0 Male

7526 M42 to C-Mount AD 29.00

Connects a C-mount camera to an M42 lens via focuser 7841/7842 or a Borg telescope.

Light path	6 mm
A	C mount Male
B	M42 P1.0 Female

7527 C-Mount to M42 AD 32.00

Allows you to use a C-mount lens (normally used with a video camera) with an M42P1 camera body.

Light path	7 mm
A	C mount Female
B	M42 P1.0 Male

7848	M42P1 to M34.5 AD	33.00
	Connects a reversed Nikkor EL 50/4 lens to focuser 7841/7842. (A reversed EL enlarger lens can be used as a high-resolution macro lens.)	
	A M34.5 P0.75 Male B M42 P1.0 Male	
7849	M34.5 to M40.5 AD	17.00
	Connects a reversed Nikkor EL lens (such as 40/4, 50/2.8, or 63/2.8) to focuser 7841/7842. Should be used with adapter 7848 (M42P1 to M34.5AD).	
	A M34.5 P0.75 Female B M40.5 P0.75 Male	
7850	M39 to 31.7 AD	34.00
	Allows you to attach Leica or Nikkor EL lenses to eyepiece focusers such as 4317 and 7315.	
	A M39 P0.75 Female B 1.25" (31.7mm) sleeve	
7851	M36.4 to M42P1 AD	39.00
	Converts front end of eyepiece focusers 4317 and 7315 to M42 P1.0 male thread.	
	A M36.4 P1 Female B M42 P1.0 Male	
7852	M42P1 to M39 AD-II	32.00
	Allows Leica L-mount camera body to be attached to M42 lenses.	
	A M42 P1.0 Female B M39 P1.0 Male	

Extension Tubes

7845	M42 Extension Tube SS	29.00
	Short extension tube for M42 helical focuser 7841/7842.	
	Length 10 mm A M42 P1.0 Female B M42 P1.0 Male	
7846	M42 Extension Tube S	34.00
	Medium extension tube for M42 helical focuser 7841/7842.	
	Length 20 mm A M42 P1.0 Female B M42 P1.0 Male	
7847	M42 Extension Tube M	40.00
	Long extension tube for M42 helical focuser 7841/7842.	
	Length 40 mm A M42 P1.0 Female B M42 P1.0 Male	

Page 3 – Camera Mounts

7000 35mm Camera Mount Holder 14.00

Connects 35mm Camera Mounts 5001-5009 to Borg telescopes.
Requires Camera Mount Holder 5000 when mounted behind turret
eyepiece holder 1401 (page 8).

- A M49.8 P0.74 Male
- B M57 P0.75 Male, M47 P0.75 Female

7267 Multi 6x7 Camera Mount 96.00

Allows you to use a Pentax 6x7 body with most Borg telescopes.
Built-in camera rotating function. The front end can also be reversed.

- A M70 P0.75 Female
- B M60 P0.75 Male, M57 P0.75 Female,
M60 P0.75 Female (reversed)

8567 Pentax 6x7 Camera Mount 147.00

Used to attach a Pentax 6x7 body to medium-format Helical Focuser
8167. Has internal thread for M70 adapters such as 8267 and 8645.

- A Pentax 6x7 bayonet, M70 P0.75 Female
- B M95 taper, M89 P1 Female

8569 -Discontinued-

8645 Mamiya 645 Camera Mount 77.00

Allows you to attach a Mamiya 645 camera body to a Borg
telescope. Must be used with camera mount 7267 or 8567.

- A M70 P0.75 Male
- B Mamiya bayonet, M60 P0.75 Female

5001-5009* 35mm SLR Camera Mount 23.00

Wider internal diameter than standard T-ring minimizes vignetting.

<u>*Item No.</u>	<u>Camera Type</u>
5001	Pentax S
5002	Pentax K
5003	Nikon
5004	Canon FD
5005	Canon EOS
5006	Minolta MD
5007	Minolta Alpha
5008	Olympus
5009	Yashica & Contax

Pages 4-5 – Digital Camera/Scope Systems

7410	SD-1X 1.25" Eyepiece Projection Adapter This versatile adapter lets you attach a digital still camera, digital SLR camera, digital video camera, or film-based SLR camera to a Borg scope. It consists of two sections: the "A" section that holds the eyepiece, and the "B" section that connects to the camera (via an adapter ring, 7401-7408). Special features include: <ul style="list-style-type: none"> • Two-piece construction allows easy switching between visual observing and imaging • Rotating design allows adjustment of camera orientation • Adjustable overall length (18mm total travel) lets you vary the eyepiece-camera distance during afocal (eyepiece projection) imaging, and provides enlarging capability when using an SLR (without a camera lens). • Supports a wide range of telescopes and cameras (using optional Borg accessories) • Can hold long eyepieces with optional extension tube Length: 66 to 84mm Outer diam.: 65mm Inner diam.: 53mm Weight: 220g	89.00
74101	Section A of SD-1X (eyepiece holder) With multiple 74101s, you can quickly switch a camera from one telescope to another.	32.00
74102	Section B of SD-1X (camera adapter) With multiple 74102s, you can quickly switch between multiple cameras on one telescope.	64.00
7395	SD-2X 2" Eyepiece Projection Adapter 2" version of the SD-1X adapter. Length: 87 to 111 mm Outer diam.: 85 mm Inner diam.: 72 mm Weight: 440g	179.00
73951	Section A of SD-2X (eyepiece holder) With multiple 73951s, you can quickly switch a camera from one telescopes to another	50.00
73952	Section B of SD-2X (camera adapter) With multiple 73952s, you can quickly switch between multiple cameras on one telescope.	134.00
7398	Extension Tube for SD-2X Allows you to use SD-2X with eyepieces that have a wide "head."	27.00
Adapter Rings for Digital Camera/Video		
7401	M57 to M28AD Adapter Nikon Coolpix800, 900, 910, 990, 4500 Coolpix 880 with Nikon UR-E2 Coolpix 885 with Nikon UR-E4 Coolpix 5000 with Nikon UR-E6	20.00
7402	M57 to M30AD Adapter Sony PC1/2/3/5 Sony TRV-8K/10	21.00

7403	M57 to M37AD Adapter Sony DSC-S50/S30 Sony DCR/TRV Series (TRV8K/10: 7402, TRV900: 7405) Panasonic NV-GX7K Panasonic NV-GS5K with Kenko 30.5mm to 37mm AD JVC GR-DVL7/DVL700 Sharp VL-MR1 Canon Powershot 350 with a ring of 21mm to 37mm	21.00
7404	M57 to M43AD Adapter Olympus CAMEDIA series with Olympus CLA-1 Olympus 1000L/1400L/1400XL/2500L Casio QV2800SX/8000SX Casio QV-2300UX/2400UX with Casio LU-8A Canon G2 with Hakuba 46.5mm to 43mm adapter Panasonic NV-DJ100	22.00
7408	M57 to M49AD Adapter Olympus E-100RS, C-2100UZ Minolta Dimage 7/7i/7Hi	23.00
7405	M57 to M52AD Adapter Sony VX-1/700/1000/9000, TRV900, Sony TR1000/2000/3000/3300 Olympus C-2100UZ/E-100 with Kenko 49mm to 52mm AD Canon Powershot A40 with Canon LA-DC52B	23.00
7406	M57 to M55AD Adapter Fuji FinePix 4900Z/6900Z with Fuji AR-FX9	23.00
7407	M57 to M58 Adapter Canon Powershot G1 Casio QV-3500EX, QV4000 with Casio LU-35A	23.00

Telescope Adapters

7424	SCT to M57/60 Adapter Meade LX200, LX90; Nexstar 4GT, 5, 8, 11; C-5, -8, -9, -11, etc.	32.00
7910	M47 to M57/60 Adapter Takahashi FC50, 60	40.00
7911	M56 to M57/60 Adapter Takahashi FC76, FS78	43.00
7912	M72 to M57/60 Adapter Takahashi FC100, 125N, FS102, 128N	51.00
7901	M60 to M57/60 Adapter Takahashi MT160, 200, Vixen ED, FL, Visac, RS200SS, etc.	32.00
7360	M43P0.75 to M57/60 Adapter Other Takahashi scopes: such as Sky 90; MT100, 130; TS160, TS80, 90	32.00
7362	M36.4 to M57/60 Adapter Other telescopes such as Mizar, Kenko, etc.	30.00
7425	2" Nosepiece Adapter (2" to M57/60) Any telescope which has 2" opening	32.00

Pages 6-7 – Borg Telescope Accessories

M57/60 Extension Tube

7601	Extension Tube SS - 12mm (wt. 14g)	16.00
7602	Extension Tube S - 20mm (wt. 20g)	17.00
7603	Extension Tube M - 40mm (wt. 40g)	23.00
7604	Extension Tube L - 60mm (wt. 50g)	24.00

53mm internal diameter. Light weight minimizes need to rebalance telescope.

A: M57 P0.75 Female, M60 P0.75 Male

B: M57 P0.75 Male

2" Eyepiece Holder

7501	Eyepiece Holder SSII - 10mm long (wt. 35g)	24.00
7504	Eyepiece Holder SII - 20mm long (wt. 70g)	25.00

Unthreaded back end makes these good for heavy accessories such as 2" diagonals.

A (B on 7504): M57 P0.75 Male

B (A on 7504): 2" sleeve with two set screws

2" Eyepiece Holder with Extension Tube

7506	10mm length (wt. 30g)	20.00
7508*	20mm length (wt. 60g)	21.00
7505	40mm length (wt. 100g)	26.00
7509*	60mm length (wt. 140g)	28.00

Extension tube allows attachment to Borg M57 accessories. 52mm filter thread at the front end.

*Comes standard with Series 80 tube assembly 6000.

A: M57 P0.75 Female, 2" sleeve w/two set screws

B: M57 P0.75 Male, 52mm filter thread

Adapters for 3rd Party Scopes to Borg M57/60 Accessories

7901	Vixen ED, FL, VMC200L, R200SS, etc.	32.00
	Light path 3mm	
	Weight 10g	
	A: M57 P0.75 Female, M60 P0.75 Male	
	B: M57 P0.75 Female, M60 P0.75 Male	
7910	Takahashi FC50, FC60	40.00
	Light path 8mm	
	Weight 30g	
	A: M47 P0.75 Female	
	B: M57 P0.75 Female, M60 P0.75 Male	
7911	Takahashi FC76, FS78, etc.	43.00
	Light path 7mm	
	Weight 15g	
	A: M56 P0.75 Female	
	B: M57 P0.75 Female, M60 P0.75 Male	
7912	Takahashi FC100, -100N, -125N; FS102, -128, etc.	51.00
	Light path 4mm	
	Weight 40g	
	A: M57 P0.75 Female, M60 P0.75 Male	
	B: M72 P1 Male, 58mm filter thread	

7913	Takahashi FS102, -128; FC100, etc.	51.00
	For use with Borg helical focuser 7835/7837. Internal diameter is 12mm larger than 7912 for reduced vignetting.	
	Light path 5mm	
	Weight 18g	
	A: M68.8 P0.75 Female	
	B: M72 P1 Male	

SCT Adapters

7428	SCT to Helical Focuser 7835/7837	40.00
	Allows you to attach Borg helical focuser 7835/7837 to an SCT with a 2" threaded opening. This eliminates the mirror shift exhibited by the SCT focuser, for more reliable and accurate focusing.	
	Light path 29m	
	Weight 60g	
	A: 2" Female	
	B: M68.8 P0.75 Female	
7424	SCT to Borg M57/60	32.00
	Allows you to attach Borg's wide variety of M57/60 accessories to an SCT with a 2" threaded opening.	
	Light path 11mm	
	Weight 70g	
	A: 2" Female	
	B: M57 P0.75 Female M60 P0.75 Male	

Borg Adapters: M57/60, M42, M68.8, etc.

7362	M57/60 to M36.4 Adapter	30.00
	Connects Borg parts to telescopes having 36.4mm thread only.	
	Light path 10mm	
	A: M36.4 P1 Male	
	B: M57 P0.75 Female, M60 P0.75	
7364	M57 to M36.4 Adapter	21.00
	Converts M57 to M36.4. Light path is 5mm shorter than 7522, allowing greater travel on inside of focus. Threaded for 52mm filters.	
	Light path 4mm	
	A: M36.4 P1 Female	
	B: M57 P0.75 Male, 52mm filter thread	
7522	M57 to M36.4/M42 (T-thread) Adapter	21.00
	Converts M57 to M36.4 and M42P0.75 (T-thread). Lets you connect popular T-ring or T-thread accessories to Borg scopes. Threaded for 52mm filters. Included with Series 80 tube assembly 6000.	
	Light path 9mm	
	B: M57 P0.75 Male, 52mm filter thread	
	A: M36.4 P1 Female, M42 P0.75 Male	
7523	M57 to M42P1 Adapter	23.00
	Converts M57 to M42P1. Use to connect M42 helical focuser 7315 to M57 accessories. Threaded for 52mm filters.	
	Light path 9mm	
	A: M42 P1 Male, M36.4 P1 Female	
	B: M57 P0.75 Male, 52mm filter thread	

7431	M57 to M43 (Vixen) Adapter Converts M57 to M43P1 (Vixen accessories). Threaded for 52mm filters. A: M43 P1 Female B: M57 P0.75 Male, 52mm filter thread	23.00
7430	M57 to M43 (Takahashi) Adapter Converts M57 to M43P0.75 (Takahashi accessories). Threaded for 49mm filters. A: M43 P0.75 Female B: M57 P0.75 Male, 49mm filter thread	21.00
7524	M42 to M57/M60 Adapter Allows you to connect M57/M60 parts behind M42 helical focusers such as 7841 and 7842. Light path 5mm A: M57 P0.75 Female, M60 P0.75 Male B: M42 P1 Female	32.00
7525	M42 to M36.4 Adapter Allows you to connect M36.4 parts behind M42 helical focusers such as 7841 and 7842. Light path 6mm A: M36.4 P1 Female, M42 P1 Male B: M42 P1 Female	29.00
7502	M57 to 2" Male Adapter Allows you to connect SCT accessories to Borg M57/M60 parts. Threaded for 52mm filters. Light path 5mm A: 2" Male B: M57 P0.75 Male, 52mm filter thread	31.00
7507	M68.8 to M57 Adapter Allows you to connect M57 parts directly to a drawtube without needing a helical focuser such as model M (7835) or MDX (7837). Light path 7mm A: M57 P0.75 Female B: M68.8 P0.75 Male	32.00
7510	M60 to M57 Adapter Allows you to convert from M60 to M57 and vice versa. Threaded for 52mm and 55mm filters. Light path 5mm A: M57 P0.75 Male, 52mm filter thread B: M60 P0.75 Male, 55mm filter thread	17.00
7360	M43P0.75 (Takahashi) to M57/60 Adapter Allows you to attach M43 P0.75 thread (Takahashi) accessories to Borg M57/60 parts. Light path 8mm A: M43 P0.75 Male B: M57 P0.75 Female, M60 P0.75 Male	32.00
7460	M60 to M60 Adapter Used to connect two M60 parts. A: M60 P0.75 Female B: M60 P0.75 Female	32.00

7351 M57 Rotating Ring 66.00

Rotating ring with M57 threads and 47mm internal diameter.

Light path 19mm

Weight 60g

A: M57 P0.75 Male

B: M57 P0.75 Female, M60 P0.75 Male

7200 Super Image Shift 184.00

Allows you to locate a guide star while the guide scope is fixed. 50mm diameter field of view. 4 lock screws. Threaded for 52mm filters.

Light path 26mm

Weight 550g

A: M57 P0.75 Female

B: M57 P0.75 Male, 52mm filter thread

Page 8 – Eyepieces and Accessories

Eyepieces

4013	WO13.5 – 13.5mm Wide Ortho (fully coated) 1.25" O.D., 70° apparent field of view. Included in SWII Ultra-light System. Weighs 40g.	25.00
4022	SWK22 – 22mm Super-Wide Kellner (fully coated) 1.25" O.D., 64° apparent field of view. Included in SWII set. Weighs 40g.	20.00
4050	H50 – 50mm Huygens (monocoated) 2" O.D., 45° apparent field of view. Included in SWII set. Weighs 50g.	22.00

Accessories

7201	Mini Drawtube Mini-size drawtube can attach to M57 parts. Has 48mm filter thread. Length: 30-80mm Travel: 50 mm Weight: 130 g A: M57 P0.75 Male, 48mm filter thread B: M57 P0.75 Female	43.00
7320	RF-1 Focuser Base Plate Base plate for home-made telescopes. Has two set screws and four adjustment screws to adjust the tilt of the plate. Can be used with Helical Focusers M (7835) and MDX (7837). Dimensions: 98mm × 75mm Light Path: 10mm Weight: 100 g	87.00

Adapters

7396	2" to 1.25" ADII – 2" to 1.25" Low Profile Adapter 2" to 1.25" adapter with very low profile (2mm height). Holds eyepiece in place by compression/friction instead of a set screw. The 2" end is threaded for 48mm filters.	49.00
7397	2" to 1.25" AD – 2" to 1.25" Adapter 2" to 1.25" adapter with two set screws to hold eyepiece in place. 7mm light path.	39.00

Diagonals and Mounts

7317	1.25" Eyepiece Mount Holds eyepiece firmly using two set screws. 20mm long. A: 1.25" sleeve B: M36.4 P1 Male	19.00
7318	1.25" Prism Diagonal	46.00
7314	1.25" Low Profile Eyepiece Mount Shorter version of 7317 eyepiece holder. 8mm long.	17.00

1401	Turret Eyepiece Mount	57.00
	A real time-saver for visual observing, this eyepiece mount has a rotating, click-stop turret with four 1.25" eyepiece holders, and a rear-mounted 2"/1.25" holder. Lightweight construction minimizes weight on the back of the OTA, yet has plenty of stiffness to support the eyepieces. Eyepieces fit snugly in friction mounts in the turret, and in the rear by set screws. The internal mirror (for viewing with turret-mounted eyepieces) flips up for viewing through the rear holder, where a low-power eyepiece allows the scope to be used as its own finder. Requires 7836 for use with Helical Focuser M (7835). 200g.	
4603	Metal Compact Extender	66.00
	2.2x barlow lens. Fully multi-coated, with two lenses in one group. 1.25" and 0.965" thread allows barlow to screw directly into eyepiece like a filter.	
	A: 1.25" sleeve B: 1.25" filter thread, 0.965" filter thread Weight: 50g	
4604	Metal Extension Tube	17.00
	A: 1.25" sleeve B: 1.25" filter thread Length: 28mm Weight: 50g	
4605	1.25" to .965" (31.7mm to 24.5mm) Adapter	12.00
7316	1.25" (31.7mm) to M36.4 Adapter	17.00
	A: M36.4 P1 Female B: 1.25" sleeve with 1.25" filter thread	
7425	2" Nosepiece Adapter (2" to M57/60)	32.00
	A: M60 P0.75 Male, M57 P0.75 Female B: 48mm filter thread, 2" sleeve	
7511	1.25" (31.7mm) to C Mount Adapter	32.00
	A: C-mount Male B: 1.25" sleeve with 1.25" filter thread	
7836	Helical Focuser M to Turret Mount Adapter	40.00
	Allows turret eyepiece mount 1401 to be used with Helical Focuser M (7835), by providing M60 P0.75 female thread in front. Attaches to the mount using the set screws on the mount.	
4801	Erecting Prism	103.00
	Roof prism design. Requires 55mm back focus. Light path diameter 18mm.	

Page 9 – Accessories: Tubes, Lens Caps, Baffles

Tubes and Drawtubes

7129	124mm Tube for Series 80	103.00
	This Series 80 short tube is useful in applications with increased inward focus requirements, such as binoviewers, etc. Only 124mm long, making the system 81mm shorter than the regular tube does. Comes with its own special drawtube.	
	A: M75 P1.25 Female	
	B: M77.6 P0.75 Female	
	C: M68.8 P0.75 Female	
7050	50mm Tube for Series 80	40.00
	Only 50mm long, this tube can be added in front of the tube assembly (6000). Helps to minimize the pull-out of a drawtube.	
	A: M75 P1.25 Female	
	B: M75 P1.25 Male	
7130	Front Helical Focuser Adapter Set	91.00
	Lets you place a focuser (7835, 7837) in front of the tube assembly. Improves overall balance—focuser's smoothness is not affected by the weight of accessories attached at the end of the scope. Good for 50ED, 76Ach and 76ED objectives (not recommended for 100 Ach and 100ED). Requires addition of 7507 at the end of the scope. Comes with 50mm long tube, M77.6 to M60 AD and M68.8 to M75 AD.	
7754	Drawtube DX (Indexed Drawtube)	59.00
	Drawtube with index marks which are helpful for rough focusing in imaging.	
7838	Focuser M (DX) Wheel	59.00
	Fits over the focuser ring for smoother focus adjustments and easier gripping when wearing gloves.	
7801	M77.6 to M68.8 Adapter	39.00
	Allows direct attachment of helical focuser M (7835) and MDX (7837) to a tube. Makes the system more rigid and 460g lighter by removing drawtube holder. 50mm long tube (7050) or Mini Drawtube (7201) and 2" eyepiece holder may be added for proper back focus.	
	A: M68.8 P0.75 Female	
	B: M77.6 P0.75 Male	
7128	MiniBorg Objective Adapter (M77.6 to M57)	37.00
	Allows you to attach 50ED, 76Ach and 76ED objectives to Mini Borg tube. Should be used with Series 80 regular tube.	
	A: M57 P0.75 Female	
	B: M77.6 P0.75 Male	

Caps

7081	Series 80 Metal Cap	34.00
	Metal cap attaches in front of Series 80 tubes.	
	A: M75 P1.25 Male	
7361	M36.4P1 Metal Cap	14.00
	A metal cap to be attached onto M36.4 thread.	
	A: M36.4 P1 Male	

5602	End Cap for Series 80 Objective Assembly	3.00
5665	Front Cap for 65mm Objective	n/a
5676	Front Cap for 76mm <u>Objective</u>	3.00
5610	Front Cap for 100mm Objective	6.00
5612	Front Cap for 125ED Objective and 100 6x9 Hood	55.00
8069	100 6x9 Hood	183.00

100ED F4 medium format hood. Used with 125ED front cap (5612).

A: M132 P0.75 Female

B: M111 P1 Female

Baffles

4053	Visual Baffle for Helical Focuser	12.00
	Improves contrast. Mounts 25mm-32mm in front (objective side) of helical focuser M/MDX (7835/7837). For greater effect, use with 4054. Note: Shown in catalog mounted on 7835 (not included) 45mm ID, 57mm OD, 1mm thick	
4054	Visual Baffle for 2" Holder	12.00
	improves contrast. Mounts on objective side of Borg's 2" eyepiece holders. For greater effect, use with 4053. Note: Shown in catalog mounted on 7509 (not included) 36mm ID, 52mm OD, 2mm thick	
4051	Visual Baffle Set for 125ED F6.4 & 100ED/Ach(Series115)	55.00
	Consists of 1 x 4052, 1 x 4053 and 2 x 4054 (4 pieces total).	
4052	Visual Baffle for 125ED, 100Ach(Series 115) & 100ED(Series115)	23.00
	Placed in tube behind 125ED objective. Friction fits into main tube body. 86mm ID, 109mm OD, 1mm thick	
4048	Photographic Aperture Stop Insert, 100F4 to F4.8	23.00
	For medium or large format very wide-field photography, optimizes for an evenly illuminated wide field. Friction fits into main tube body. 80mm ID, 109mm OD, 2mm thick	
4049	Photographic Aperture Stop Insert, 125F4 to F5	23.00
	For medium or large format very wide-field photography, optimizes for an evenly illuminated wide field. Friction fits into main tube body. 63mm ID, 109mm OD, 2mm thick	

Miscellaneous Accessories

7100	D4 Filter 52mm	121.00
	52mm diameter D4 filter. Photographic use only.	
5403	Carrying Case P	51.00
	Carrying case with two compartments inside for separate storage of telescope and tripod. 61cm long.	

Page 10 – Accessories: Teleconverters, Mounting Rings

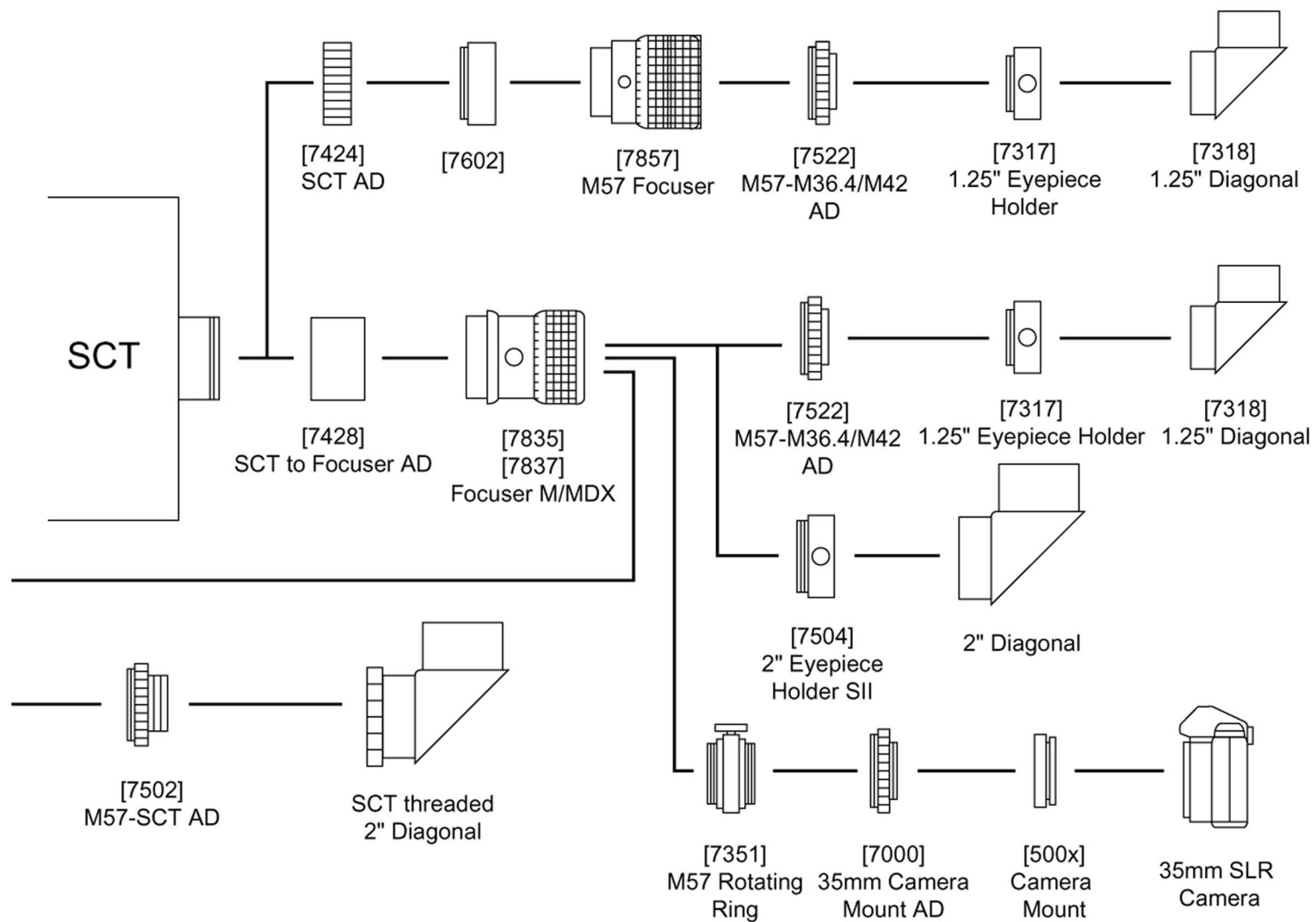
7014	1.4x Teleconverter	208.00
	Extends focal length 1.4x, while at the same time correcting image quality at frame edges. Specially designed to minimize internal reflections. Optically fits 400–1000mm focal length telescopes. Two fully multi-coated elements in one group. 70mm long. 230g.	
	A: M60 P0.75 Male M57 P0.75 Male M49 P0.75 Male M42 P0.75 Female	
	B: M57 P0.75 Female M60 P0.75 Male	
8014	1.4x Teleconverter 69T	363.00
	Medium format 1.4x teleconverter for Borg 125ED and 150ED reduces coma aberration at edges. Adjusts to fit telescopes with 800–1000mm focal length. Two fully multi-coated elements in two groups. 160mm long. 670g.	
	A: M89 P1	
	B: 67mm filter thread	
8045	6x7 Super Reducer Set	1,390.00
	0.625x reducer lens for Borg 125ED F6.4 and 150ED F6.6. Allows shorter exposures and reduces coma aberration. Four fully multi-coated elements in four groups; two of these groups install in front of the focuser, the other two in the rear of the focuser. Tube: 155mm diam., 208mm long. 2kg.	
8020	2x Teleconverter 67T	303.00
	2x teleconverter for Borg 50ED, 76, 76ED, 76EDL, 100 and 100ED. Useful for enlarging lunar and solar images and close-up daytime shots. Lens adjustment function allows use of 3 rd -party telescopes with 400–640mm focal length. Two fully multi-coated elements in two groups. 103mm long and 250g.	
	A: M68.8 P0.75 Female	
	B: M57 P0.75 Male	
8670	6x7 Multi-flattener	363.00
	6x7-format field flattener lens for Pentax 6x7 camera mount 8567. Corrects optical aberrations out to image corners. Configurable for objective focal length. Fully multi-coated. 400g.	
	A: M85 P0.75 Female	
	B: M85 P0.75 Male	
7784	35mm 1.04x Multi-flattener	247.00
	35mm format field flattener reduces coma aberration. For use with 450–1200mm focal length scopes. Fully multi-coated. 300g.	
	A: M57 P0.75 Male M60 P0.75 Male	
	B: M49.8 P0.75 Male	
7785	35mm 0.85x Reducer	247.00
	Reduces focal length by 0.85x for faster F ratio. Improves image quality in corners, shortens exposure times. For 500–800mm focal length scopes, including 3 rd party refractors. Maintains 75–80% illumination, even in 35mm frame corners. Fully multi-coated. 110g.	
	A: M49.8 P0.75 Male	
	B: M57 P0.75 Male	

7786	3x Teleconverter High quality 3x teleconverter. Useful for lunar or solar shots, etc. Reduces coma aberration at each corner. 40g. A: M52 P0.75 Male B: M36.4 P1 Male M42 P0.75 Male	158.00
5501	80mm Plastic Tube Holder Plastic tube holder attaches Series 80 telescopes to camera tripod, etc. 1/4"-20 female thread at the bottom and male at the top. 120g.	40.00
5503	80mm Plastic Tube Holder + Adapter E Plastic tube holder for Series 80 scopes with Borg fork mount 3101. 1/4"-20 female thread at the bottom and male at the top. 140g.	49.00
5502	Adapter E Additional part to convert 5501 to 5503. It is user-installable.	10.00
5504	Takahashi Mount Screw Set Set of four screws to attach 5501 onto Takahashi mount.	6.00
7080	Tube Band M Metal pair of tube rings to hold Series 80 telescopes. 420g. A: TBD camera thread, M6 P0.8 B: M6 P1 bolt	77.00

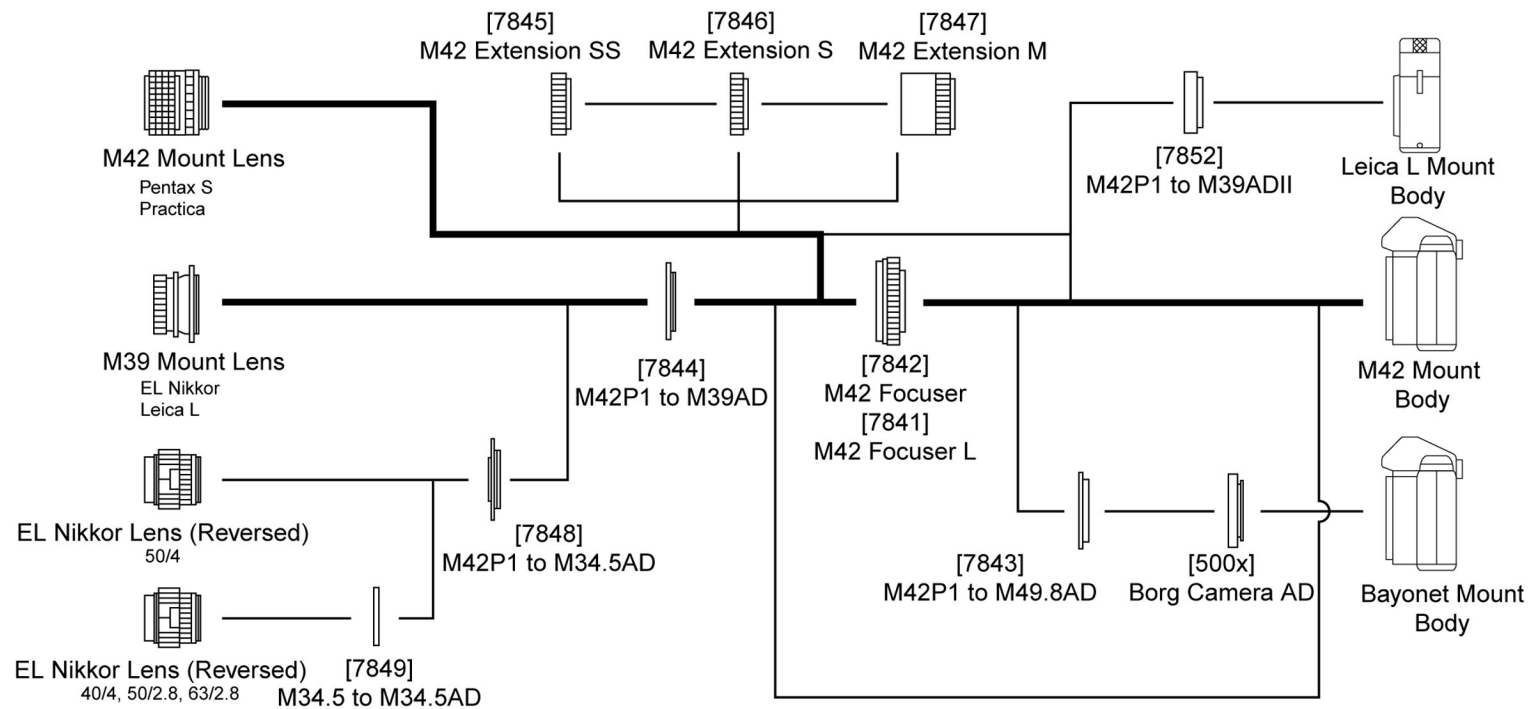
Page 11 – Accessories: Fork Mounts, Adapters, Tubes

7750	7x50 Finder with Mount Holder	158.00
	Finder scope with 7x magnification and 50mm aperture. 6 degree actual field of view with cross-hair. Focus is adjustable at eyepiece.	
7752	7x50 Finder: Scope only	116.00
7751	7x50 Finder: Bracket only	55.00
0034	6x30 Finder	49.00
	Finder scope with 6x magnification and 30mm aperture. 7 degree actual field of view with cross-hair. Focus adjustable at the objective.	
3101	Fork Mount	229.00
	Fork mount with 3/8"-16 thread hole at the bottom. Used with 5503 or 3102. Single-arm compact fork mount head may be used in alt-az or equatorial orientation with lightweight scopes such as Borg Series 80 or Mini Borg scopes. Use the Series 80 tube holder and adapter E set (5503) or universal attachment block (3102) for direct attachment of a scope with 1/4"-20 screws or Takahashi tube holders.	
	The provided 3/8"-16 hole allows mounting on standard photographic tripods. The fork head may also be mounted on Borg's ultra-light SWII tripod using a special adapter, as well as on 1/4"-20 tripods using a 3rd-party adapter available at camera stores.	
	The mount may be moved rapidly by releasing the light gray clutch knobs or by turning the dark gray slow motion knobs. The slow motion shafts also allow the attachment of user-supplied flex shafts.	
	When used in equatorial orientation, a latitude scale aids in setting the fork tilt.	
	Dimensions 3"x3"x6"	
	Weight 1.5 lbs.	
3102	Fork Mount Universal Attachment Block	39.00
	This universal tube-holder adapter plate allows use of a Borg lightweight single-arm fork mount (3101) with a Mini Borg, Takahashi tube holders, camera ball head and cameras. Includes center hole for a 1/4"-20 standard camera screw as well as metric M8 threaded holes spaced 35mm apart to accommodate Takahashi tube holders.	
8317	Visual Draw Tube	120.00
	Allows quick and wide focus adjustment for Series 115 and 140 scopes. Helical focuser M/MDX can be attached. Has 77mm focus travel. Extra light path is 20mm. 380g.	
	A: M68.8 P0.75 Female	
	B: M89 P1 Male	
8116	M111 to M68.8 Adapter	105.00
	Connects helical focuser M/MDX directly to Series 115 tubes. Extra light path is 5mm. Creates 60mm additional back focus. Useful with accessories that need plenty of back focus (binoviewer, etc.). 100g.	
	A: M68.8 P0.75 Female	
	B: M111 P1 Male	

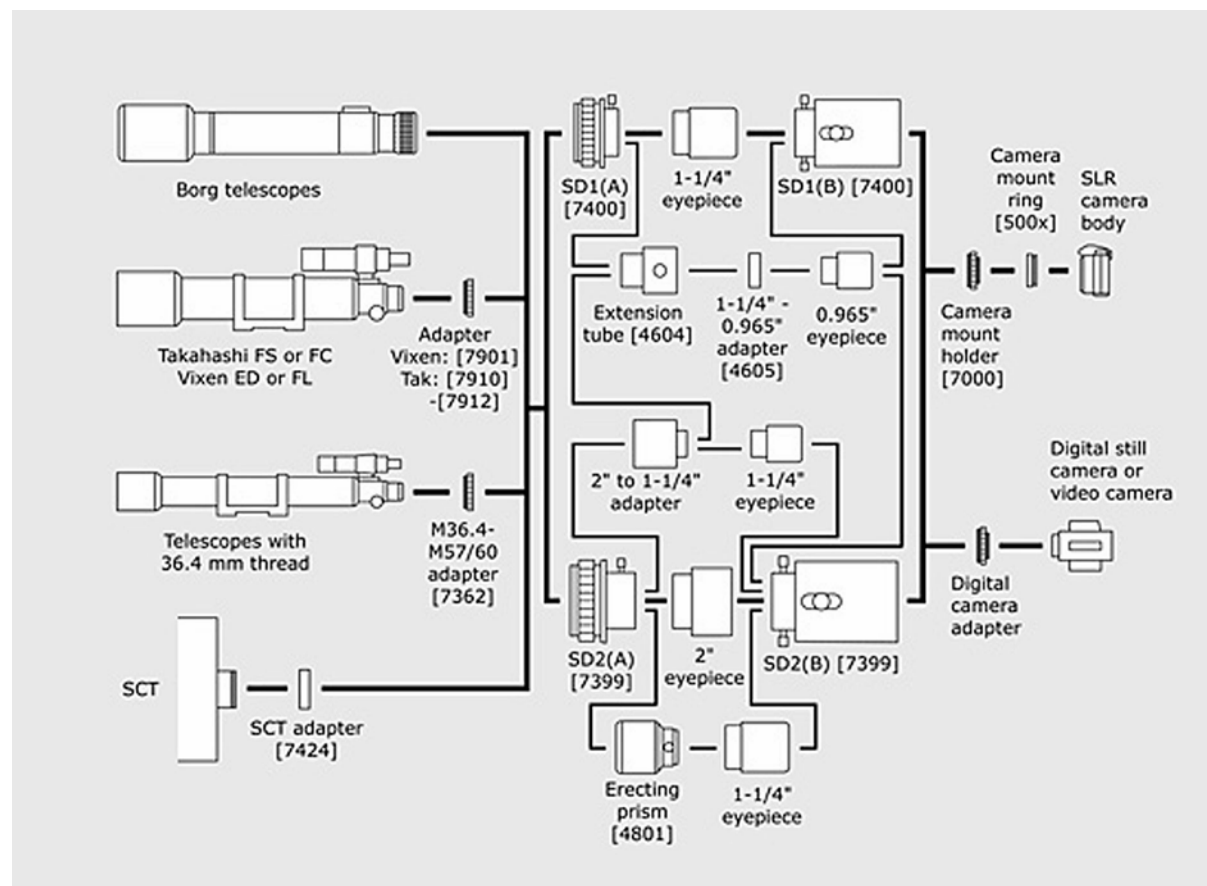
8119	M111 to M89 Adapter	105.00
	Connects medium format focuser 8167 and visual drawtube 8317, etc., directly to a Series 115 tube. Creates 30mm additional back focus. 90g.	
	A: M89 P1 Female	
	B: M111 P1 Male	
8035	35mm Camera AD II	60.00
	Connects M57/M60 parts to medium-format helical focuser 8167. Extra light path 8mm. 120g.	
	A: M57 P0.75 Female	
	M60 P0.75 Male	
	B: 58mm filter thread	
8267	6x7 Multi Adapter	33.00
	Connects M57/60 parts behind Pentax 6x7 camera mount 8567 and multi 6x7 camera mount 7267.	
	A: M57 P0.75 Female	
	M60 P0.75 Male	
	B: M70 P0.75 Male	
8782	Filter Ring 72-82mm	46.00
	Attaches 72mm and 82mm filter onto multi flattener 8670.	
	A: M72 P0.75 Female	
	M82 P0.75 Female	
	B: M85 P0.75 Male	
8916	Visual Draw Tube Attachment	33.00
	Attaches visual drawtube 8317 behind medium-format helical focuser 8167.	
	A: M89 P1 Female	
8750	115 Tube Finder Base	108.00
	Series 115 and 140 finder base tube to hold Borg 7x50 finder 7750 and Takahashi 7x50. Extra light path 35mm. 410g.	
	A: M111 P1 Male	
	M95 P1 Female	
	B: M89 P1 Female	
8004	115 Tube 208mm	220.00
	Borg 125ED F4 tube. 208mm long.	
8149	115 Tube 149mm	341.00
	Borg 100ED (101ED) F4 tube. 149 long.	
8335	115 Tube 335mm	226.00
	Borg 100ED (101ED) F6.4 tube. 335mm long.	
8380	115 Tube 380mm	238.00
	Borg 125ED F6.4 tube. 380mm long.	



Schmidt-Cassegrain System Chart



M42 Helical Focuser System



Eyepiece Projection System Diagram