



Custom Extension Wall Mounted Basketball Backstops

Note: These specifications were current at the time of publication but are subject to change without notice. Please confirm the accuracy of these specifications with the manufacturer and / or distributor prior to installation.

SECTION 11 65 00 GYMNASIUM AND PLAYFIELD EQUIPMENT

SPECIFIER NOTE: *This product guide specification is written according to the Construction Specifications Institute (CSI) Format, including MasterFormat, SectionFormat, and PageFormat, as contained in the CSI Manual of Practice.*

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building codes. Coordinate this section with other specification sections and the drawings.

Notes for review by specifier begin with "SPECIFIER NOTE." Optional text requiring a selection is enclosed within square brackets, e.g., "Color shall be [white] [black]." Items requiring specifier input are indicated by a blank line enclosed within square brackets, e.g., "Color: [_____]." Delete all italicized "Specifier Notes" and non-applicable optional text in final specification.

This section is based on systems manufactured by IPI by Bison, 603 "L" Street, Lincoln, NE, 68508. Toll Free 1-800-637-7968 Fax 1-800-638-0698 Web: <http://ipibybison.com> Email: sales@IPIbyBison.com. Contact the manufacturer for additional information and for assistance in editing this section for your specific application.

PART 1: GENERAL

1.1 Section Includes

SPECIFIER NOTE: *Coordinate this list with the equipment specified in Part 2 Products.*

- A. Custom Extension Wall Mounted [stationary] [side fold] [fold up] basketball backstops with [backboard] [goal] [backboard safety padding] [rim height adjusters] [_____]

1.2 Related Sections

SPECIFIER NOTE: *List sections dealing with work directly related to this section such as the following. Delete those notes not required.*

- A. Section 09 64 00 - Wood Flooring: Layout and painting of court lines to be coordinated with installation of basketball backstops.
- B. Section 09 65 00 - Resilient Flooring: Layout of court lines to be coordinated with installation of basketball backstops.
- C. Section: 09 90 00 - Painting: Field painting of factory-primed surfaces.

- D. Section 11 66 23 – Gymnasium Protection Accessories: Wall mounted protection pads at backstop locations.

1.3 Submittals

- A. Comply with Section 01 33 00 - Submittal Procedures.
- B. Product Data: Submit manufacturer's published product data, including installation instructions.
- C. Shop Drawings: Submit manufacturer's shop drawings, indicating materials, dimensions, mounting and accessories.
- D. Warranty: Submit manufacturer's standard warranty.

1.4 Quality Assurance

- A. Single Source Responsibility: All specified components including Custom Extension Wall Mounted basketball backstops, [backboards], [rims], [backboard safety padding], [rim height adjusters], [_____] shall be products of a single manufacturer.

1.5 Delivery, Storage and Handling

- A. Comply with manufacturer's recommendations for delivery, storage and handling.
- B. Deliver materials to site in manufacturer's original, unopened packaging, with labels clearly identifying product name, manufacturer, and location of installation. Upon delivery, materials shall be inspected for damage. Deficient materials shall not be used.
- C. Storage: Store materials in a clean, dry area indoors in accordance with manufacturer's instructions. Keep temporary protective coverings in place to protect from damage due to moisture and construction activities.
- D. Handling: Protect materials and finish from damage to surface and edges during handling and installation.

PART 2: PRODUCTS

2.1 Manufacturer

- A. IPI by Bison, 603 "L" Street, Lincoln, NE, 68508. Toll Free 1-800-637-7968 Fax 1-800-638-0698
Web: <http://ipibybison.com> Email: sales@IPIbyBison.com.

SPECIFIER NOTE: *Delete one of the following two paragraphs; coordinate with requirements of Division 1 on product options and substitutions.*

- B. Substitutions: Not permitted.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

2.2 Wall Mounted Basketball Backstop

SPECIFIER NOTE: *IPI by Bison provides three (3) types of Custom Extension Wall Mounted basketball backstops. Refer to IPI by Bison product literature for the advantages of each type and assistance in selecting the backstop most appropriate for specific project conditions. Refer to product literature for availability of options and guidelines for design, selection, and installation of basketball backstops. Select appropriate models and options from the list below. Delete those not specified.*

SPECIFIER NOTE: *Include the following article for Model IP10WB Wall Mounted Stationary Backstop. Delete section if not specified.*

A. Wall Mounted Stationary Backstop

1. Type: Model IP10WB Wall Mounted Stationary Backstop
2. Wall to Backboard Face Extension: 12" to 120" Specify []
3. Upper and Lower Backboard Extensions: 1-1/2" O.D. schedule 40 steel pipe of length required to place the face of the backboard the desired distance from wall. Steel plates shall be welded to both ends of the extensions for attachment to both the backboard and the wood wall board attachments.
4. Diagonal Bracing: 1/4" x 1-1/4" steel flat connected to extension pipes with formed steel fittings.
5. Wood Wall Attachment Boards: 2" x 8" Southern Yellow Pine with clear finish.
6. Upper Diagonal Supports: 3/16" coil proof chain with 3/8" turnbuckle for adjustments.
7. Wall Anchors: Provided by installer to suit specific wall structure requirements.

SPECIFIER NOTE: *Include the following article for Model IP12WF Wall Mounted Fold-Up Backstop. Delete section if not specified.*

A. Wall Mounted Fold-Up Backstop

1. Type: Model IP12WF Wall Mounted Fold-Up Backstop
2. Wall to Backboard Face Extension: 48" to 120" Specify []
3. Upper and Lower Backboard Extensions: 1-1/2" O.D. schedule 40 steel pipe of length required to place the face of the backboard the desired distance from wall. The extension pipes shall be spaced as required for backboard specified, cross braced with 3/8" dia. rods and welded into one assembly to minimize vibration. Formed steel fittings, provided at each end of the extension frames, shall permit folding as well as attaching extension frames to both the backboard and the wood wall attachment boards.
4. Wood Wall Attachment Boards: 2" x 8" Southern Yellow Pine with clear finish.
5. Upper Extension Frame: Supported by 3/8" coil proof chain and turnbuckles.
6. Wall Anchors: Provided by installer to suit specific wall structure requirements.

SPECIFIER NOTE: *Include the following article for manual operation of IP12WF Wall Mounted Fold Up backstops. Delete section if manual winch not specified.*

B. Manual Winch for Wall Mounted Fold-Up Backboard Systems

1. Type: Manual Safety Winch Model BA925 with hand crank as manufactured by IPI by Bison.
2. Gears: 1000 lb capacity safety worm gear winch with all gears sealed in gear housing and operating in grease.
3. Base Plate: 1/4" x 6" x 18" steel base plate.
4. Mounting Board: 2" x 10" x 20" southern yellow pine finished with clear finish.
5. Cable Drum: Grooved for even cable wrap.
6. Hoist Cable: [1/4 inch] [6 mm] diameter galvanized aircraft-type cable. Full drum capacity approx. 60'.
7. Locking Device: SAF-ARM locking device allows unit to be padlocked when not in use.
8. Molded Cover: Protects operator from all moving parts.

SPECIFIER NOTE: *Manual winches can also be operated with portable electric winch winders. Add the following paragraph to specify this option. Delete section if portable electric winch winder not specified.*

9. Portable electric winch winder: Reversible electric operator for manual winch. Model BA930 Winch Winder as manufactured by IPI by Bison.
 - a. Motor: 120 v, ¾" HP, high torque motor.
 - b. Speed Control: 335 RPM low side or 750 RPM high side.
 - c. Lockable cord attachment to eliminate unauthorized use.

SPECIFIER NOTE: Include the following article for electric operation of IP12WF Wall Mounted Fold Up basketball backstops. Delete section if electric hoist not specified.

C. Electric Hoists For Wall Mounted Fold Up Backboard Systems

- D. Type: Fully enclosed, heavy-duty worm gear, electric hoist designed to hold backstop at any position during raising and lowering. Model BA975 Electric Hoist as manufactured by IPI by Bison.
- E. Motor: [¾ HP] [1 HP], 115 v. single phase instant reversible motor.
- F. Limit switch: Rotary type limit switch controls both the raised and the lowered position.
- G. Gears: Precision machined bronze alloy worm gear and induction hardened and ground steel worm fully enclosed and factory lubricated.
- H. Hoist Cable: [1/4 inch] [6 mm] diameter galvanized aircraft-type cable. Full drum capacity approx. 60'.
- I. Full load capacity: 1000 lbs.
- J. Cable Drum: Grooved for even cable wrap.

SPECIFIER NOTE: Standard control for electric hoist is 3 position key switch. Optional control options include remote wireless system or keyless programmable operating system. Select only one of the three (3) optional controls.

SPECIFIER NOTE: Use the following paragraph to specify 3 position key switch. Delete if electric hoist not specified above.

- C. Controls: Provide key lock, 3 position, momentary contact wall control switch to lower, raise, and stop backstop.
 - a. Provide two keys.
 - b. Provide stainless steel cover plate with up/down markings.
 - c. Key switches operating basketball backstops, rim height adjusters and gymnasium dividers shall be furnished from a single source.

SPECIFIER NOTE: Use the following paragraph to specify keyless programmable operating system for gymnasiums. Delete if electric hoist not specified above.

- C. Controls: Provide Model IPGCS Gym Command System keyless programmable operating system for gymnasium as manufactured by IPI by Bison.
 - a. Base Control Unit: Wall mounted touch pad programmable controller with a LCD display.
 - b. Remote Relay Box: Can control up to 256 combinations of gym components and 15 amp auxiliary equipment.
 - c. Provide engraved wall mountable legend plate.

SPECIFIER NOTE: Use the following to specify GoalTender Wireless Remote Control System for gymnasiums. Model IPGT27 controls 27 units. Model IPGT9 controls 9 units. Delete if electric hoist not specified above.

- C. Controls: Provide GoalTender Wireless Remote System as manufactured by IPI by Bison.
- a. Transmitter: [Model IPGT27 to operate up to 27 separate devices] [Model IPGT9 to operate up to 9 separate devices]
 - b. Receivers: 24 Volt Model IPGT1 GoalTender Receiver. One for each electric hoist.

SPECIFIER NOTE: *Include the following article for Model IP15WSF Wall Mounted Side-Fold Backstop. Delete section if not specified.*

A. Wall Mounted Side Fold Backstop

1. Type: Model IP15WSF Wall Mounted Side-Fold Backstop
2. Wall to Backboard Face Extension 48" to 120" Specify []
3. Upper and Lower Backboard Extensions: 1-1/2" O.D. schedule 40 steel pipe of length required to place the face of the backboard the desired distance from wall. Formed steel fittings provided at each to permit folding. All pivot points shall operate on precision bronze oil less type bearings.
4. Diagonal Bracing: 1-1/4" x 1-1/4" steel bars, connected to pipe frame with formed steel fittings.
5. Wood Wall Attachment Boards: 2" x 8" Southern Yellow Pine with clear finish.
6. Upper Extension Frame: Supported by 3/8" coil proof chain and turnbuckles.
7. Wall Anchors: Provided by installer to suit specific wall structure requirements.

2.3 Backboard

SPECIFIER NOTE: *IPI by Bison provides four (4) types of backboards. Not all types are appropriate for all backstops. All rectangular glass backboards meet NCAA and NFHS regulations. Refer to manufacturer's product literature and the following listing for available options.*

SPECIFIER NOTE: *Include the following article for Model BA42XL Unbreakable 42" x 72" Rectangular Glass Backboard. Delete section if not specified.*

- A. Type: Model BA42XL Unbreakable 42" x 72" Rectangular Glass Backboard as fabricated in USA by IPI by Bison.
1. Backboard: 42" x 72" rectangular 1/2" thick tempered glass
 2. Official white shooter's square and border with 5" x 4" goal mounting pattern.
 3. Construction : Frame shall be aluminum extrusion held together in the top corners by means of corner brackets that provide for the industry standard 36" x 62" short board corner mounting pattern. A fabricated rectangular tubular steel rim support structure shall extend the full 72" width of the bottom of the backboard and be mounted to the aluminum framework in no less than ten (10) places. Steel spacers shall protrude through large holes in the glass to allow the rim to be isolated from the glass.
 4. Regulatory Requirements: Meets NCAA and NFHS standards.
 5. Padding: Backboard predrilled to allow mounting of Model BA68U DuraSkin backboard padding.
 6. Warranty: Unconditional lifetime warranty against breakage during normal play.

SPECIFIER NOTE: *Include the following article for Model BA455 42" x 72" Rectangular Fiberglass Backboard. Delete section if not specified.*

A. Type: Model BA455 42" x 72" Rectangular Fiberglass Backboard as fabricated for IPI by Bison.

1. Backboard: 42" x 72" rectangular fiberglass.
2. Official orange shooter's square and border shall be permanently molded into the playing surface. Silk screened or vinyl adhesive applied border and shooter's square shall not be acceptable substitutions.
3. Construction: The front and rear shell shall be gel coated fiberglass that is a minimum of 1/8" thick. The front and rear shall be permanently bonded together around a solid fiber core to create a solid backboard with an overall thickness of 1-1/2". Sixteen (16) threaded steel inserts are molded into the rear shell to facilitate mounting. These inserts shall permit mounting to all 36" x 62" and 20" x 35" support structures. The front and back of the backboard shall be white fiberglass. Backboard shall accept rims with a 5" x 4" hole pattern.
4. Warranty: 10-year limited warranty.

SPECIFIER NOTE: *Include the following article for Model BA465 Fan-Shaped Fiberglass Front Mount Backboard. Delete section if not specified.*

A. Type: Model BA465 Fan-Shaped Fiberglass Front Mount Backboard as fabricated for IPI by Bison.

1. Backboard: 54" x 39" fan-shaped fiberglass.
2. Official orange shooter's square and border permanently molded into the surface.
3. Construction: The front and rear shell shall be gel coated fiberglass that is a minimum of 1/8" thick and permanently bonded together around a solid fiber core to create a solid backboard with an overall thickness of 1-1/2". Eight (8) threaded steel inserts shall be molded into the rear shell to facilitate mounting to common 20" x 35" support structure. The front and back shall be white. Backboard shall accept rims with a 5" x 5" hole pattern.
4. Warranty: 10-year limited warranty.

SPECIFIER NOTE: *Include the following article for Model BA495 Fan-Shaped Steel Front Mount Backboard. Delete section if not specified.*

A. Type: Model BA495 Fan-Shaped Steel Front Mount Backboard as fabricated in USA by IPI by Bison.

1. Backboard: 54" x 39" fan-shaped formed and welded steel designed for front mount rim applications.
2. Finish: White polyester powder coat.
3. Official orange shooter's square and border.
4. Accepts goals with 5" x 5" mounting pattern.
5. Construction: Skin shall be 12 ga. mild steel and support structure shall be 7 ga. and 10 ga. All skin edges shall be formed to create a 1-1/2" lip to add strength.
6. Warranty: 10-year limited warranty.

2.4 Goal

SPECIFIER NOTE: *IPI by Bison provides five (5) types of gymnasium goals. Not all types are appropriate for all backstops or backboards. Refer to manufacturer's product literature and the following listing for available options.*

SPECIFIER NOTE: Include the following article for Model BA3180S 180° Breakaway Goal. Specify this goal for front mount backboards with 5" x 4" goal mounting hole pattern. Delete section if not specified.

A. Type: BA3180S 180° Breakaway Goal as fabricated in the USA by IPI by Bison.

1. Construction: Goal shall be designed and constructed so that when downward pressure exceeding the release pressure setting is applied at any location within 90° either to the left or to the right of the point on the ring farthest from the backboard, the entire ring assembly will pivot downward. The release pressure setting shall be field adjustable and be designed with a detent style positive lock mechanism so that the ring cannot be released until the setting pressure is exceeded. Ring shall be constructed of 5/8" diameter high carbon steel. Tubular segments shall be spaced and welded a full 360° around the lower surface of the 5/8" ring to allow the goal net to be securely attached without fasteners by means of a single cord. All steel components that come in contact with other steel components during release of the ring assembly shall be heat treated to a minimum depth of 0.020" and hardness of 50 on the Rockwell "C" scale. Release mechanism shall be isolated from player contact and pinch point risk by means of a steel cover plate.
2. Regulatory Requirements: Meets NCAA, FIBA and NFHS standards.
3. Net: Anti-whip white nylon.
4. Hardware: Zinc plated grade 5 mounting hardware, two (2) net attachment cords.
5. Weight (approximate): 39 lbs
6. Finish: Goal shall have an orange powder coated finish.
7. Warranty: 3-year limited warranty.

SPECIFIER NOTE: Include the following article for Model BA35S Competition Breakaway Goal. Specify this goal only with front mount backboards with 5" x 4" goal mounting hole pattern. Delete section if not specified.

A. Type: BA35S Competition Breakaway Goal as fabricated in USA by IPI by Bison.

1. Construction: Goal shall be constructed using 5/8" diameter steel ring with continuous wire netlocks. All backplate components shall be constructed of 3/16" thick steel. The mounting plate shall be punched with hole patterns for mounting to any competition front mount fan or rectangular backboard. The rim support brace shall be 1/4" x 1-1/2" steel and provide continuous support for 180 degrees of the circumference of the 5/8" ring. The breakaway mechanism shall be of the positive lock design, factory preset. An automatic return shall be provided by means of two return springs which shall also cushion the breakaway action when the pressure release setting has been exceeded. Two hardened steel balls shall be contained in a tubular assembly with each being forced outward with equal pressure by a single spring. The balls shall nest on each side of the rim/backplate assembly in a hardened detent. Said ball/detent mechanism shall provide proper breakaway pressure. All pinch points shall be eliminated for player safety.
2. Regulatory Requirements: Meets NCAA and NFHS standards.
3. Net: Anti-whip white nylon.
4. Hardware: Zinc plated grade 5 mounting hardware, two (2) net attachment cords.
5. Weight (approximate): 23 lbs
6. Finish: Goal shall have an orange powder coated finish.
7. Warranty: Unconditional 3-year warranty.

SPECIFIER NOTE: Include the following article for Model BA35 Competition Breakaway Goal. Specify this goal only with front mount backboards with 5" x 5" goal mounting hole pattern. Delete section if not specified.

B. Type: BA35 Competition Breakaway Goal as fabricated in USA by IPI by Bison.

1. Construction: Goal shall be constructed using 5/8" diameter steel ring with continuous wire netlocks. All backplate components shall be constructed of 3/16" thick steel. The mounting plate shall be punched with hole patterns for mounting to any competition front mount fan or rectangular backboard. The rim support brace shall be 1/4" x 1-1/2" steel and provide continuous support for 180 degrees of the circumference of the 5/8" ring. The breakaway mechanism shall be of the positive lock design, factory preset. An automatic return shall be provided by means of two return springs which shall also cushion the breakaway action when the pressure release setting has been exceeded. Two hardened steel balls shall be contained in a tubular assembly with each being forced outward with equal pressure by a single spring. The balls shall nest on each side of the rim/backplate assembly in a hardened detent. Said ball/detent mechanism shall provide proper breakaway pressure. All pinch points shall be eliminated for player safety.
2. Regulatory Requirements: Meets NCAA and NFHS standards.
3. Net: Anti-whip white nylon.
4. Hardware: Zinc plated grade 5 mounting hardware, two (2) net attachment cords.
5. Weight (approximate): 23 lbs
6. Finish: Goal shall have an orange powder coated finish.
7. Warranty: Unconditional 3-year warranty.

SPECIFIER NOTE: *Include the following article for Model BA27 Standard Front Mount Goal. Specify for use on front mount backboards with 5" x 5" or 5" x 4" goal mounting holes. Delete section if not specified.*

A. Type: Model BA27 Standard Front Mount Goal as fabricated in USA by IPI by Bison.

1. Construction: Goal shall be constructed of an official size high carbon 5/8" diameter ring with continuous wire formed netlocks. Backplate shall be a minimum 3/16" thick. Ring shall be supported by a 1/2" diameter steel brace.
2. Net: White nylon.
3. Weight (approximate): 12 lbs.
4. Finish: Goal shall have an orange powder coated finish.
5. Warranty: 1-year limited warranty.

SPECIFIER NOTE: *Include the following article for Model BA27A Front Mount Super Goal. Specify for use on front mount backboard with 5" x 5" or 5" x 4" goal mounting holes. Delete section if not specified.*

A. Type: Model BA27A Front Mount Super Goal as fabricated in USA by IPI by Bison.

1. Construction: Rim shall consist of an official size 5/8" diameter carbon steel ring welded to a 1/4" thick backplate punched to fit all front mount backboards. A 5/8" diameter ring support shall support the ring. To be considered as an equal to this specification, an additional 6" long 5/8" diameter formed bar must be positioned at the bottom side of the joint between the backplate and the ring and welded full length on both sides. Mounting hardware shall be included. Goal shall have continuous wire formed netlocks to accept nylon net.
2. Net: White nylon.
3. Weight (approximate): 17 lbs
4. Finish: Goal shall have an orange powder coated finish.
5. Warranty: 2-year limited warranty.

2.5 Backboard Padding

SPECIFIER NOTE: *Specify BA68U for all types of 72" rectangular backboards and BA68F for all types of fan shaped backboards. Backboard padding required by NCAA and NFHS for competition play and is*

strongly recommended by IPI by Bison for all glass backboards for all levels of play. Contact the manufacturer for assistance. Delete section if backboard padding not specified.

- A. Type: Duraskin bolt-on backboard padding for bottom edge and corners of backboard to provide safety protection to meet NCAA and NFHS requirements. Model [BA68U] [BA68F] padding as manufactured by IPI by Bison.
- B. Construction: Padding shall be cellular construction with a skin of an average minimum thickness of .060". The skin shall be produced integral to the cushion using a self-skinning molding process. A steel track molded into the padding shall provide rigidity and strength to the mounting system.
- C. Tear Strength: Minimum 125 psi.
- D. Hardware: Provided for glass backboard installation (customer supplied for other backboards)
- E. Warranty: [10 years for BA68U] [5 years for BA68F]

SPECIFIER NOTE: Specify one of the following colors for Model BA68U. Delete section if not specified.

- F. Color: [gray] [royal] [navy] [columbia blue] [scarlet] [orange] [gold] [kelly green] [forest green] [black] [maroon] [purple] [vegas gold] [cardinal] [brown] [burnt orange]

SPECIFIER NOTE: Specify one of the following colors for Model BA68F. Delete section if not specified.

- F. Color: [gray] [royal] [scarlet] [black]

2.6 Goal Height Adjuster

SPECIFIER NOTE: All backstops can be equipped with height adjusters allowing backboard to be positioned such that goal is between 8 and 10 feet (2438 to 3048 mm) above court floor. Manual and motorized height adjusters may be specified. Consult manufacturer for assistance in selecting appropriate model

- A. Type: Mechanism for [manually] [electrically] adjusting height of [fan shaped] [short rectangular] manual backboard and goal; Model [BA980F, Manual Wall Mount Fan Board], [BA980RS, Manual Wall Mount, 42" x 72" Rectangular Board], [IPH120YE Motorized with Adapter for Wall Mounted, Fan or Rectangular], Height Adjuster as manufactured by IPI by Bison.
- B. Adjustment range: Goal position from [8 to 10 feet] [2438 to 3048 mm] above court floor.
- C. Construction: Powder coated steel.
- D. Operation: [7/8" dia Acme Lead screw with thrust bearing and hand crank for manual operation] [1/10 HP reversible linear actuator with built-in limit switches for motorized operation].
- E. Motorized Operation Control: [Portable Operating Wand], [Key Lock, 3 Position Momentary Contact Wall Control Switch with Coverplate], [Goal Tender Wireless Remote], [Gym Command Wall Mount Touch Pad Programmable Controller].

PART 3: EXECUTION

3.1 Installation

- A. Install Custom Extension Wall Mounted Basketball backstops in accordance with approved shop drawings and manufacturer's instructions at locations indicated on drawings.
- B. Install backstops, backboards and goals plumb, level, and rigid.

3.2 Cleaning

- A. Remove construction debris from project site in accordance with provisions outlined in Division 1.
- B. Remove protective wrappings and labels, wash surfaces, and attach nets.
- C. Do not use harsh cleaning materials or methods that would damage finish.

- D. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- E. Remove and replace damaged components that cannot be successfully repaired, as determined by Architect.

3.6 Demonstration

- A. Demonstrate to Owner's designated representative complete operation and required maintenance for Custom Extension Wall Mounted Basketball Backstops.
- B. Submit operation and maintenance manuals in accordance with Section 01770 - Closeout Procedures.

END OF SECTION