SECTION 11 12 00

PARKING CONTROL EQUIPMENT

PART 1 – GENERAL

1.1 PURPOSE

A. This guideline is intended to provide useful information to the Professional Service Provider (PSP) to establish a basis of design. PSP is to apply the principles of this section such that the University of Texas at Arlington (UTA) may achieve a level of quality and consistency in the design and construction of their facilities. Deviations from these guidelines must be approved by UTA and may require justification through Life Cycle Cost (LCC) analysis and submitted to UTA for approval.

1.2 LESSONS LEARNED AND DESIGN CONSIDERATIONS

A. Refer to UTA's Parking Department for further information.

1.3 SECTION INCLUDES

A. Parking gate access and exit devices, controllers, and barriers.
B. Maintenance.

1.4 RELATED REQUIREMENTS

A. Section 03 30 00 – Cast-in-Place Concrete: Placement of anchors and components to be embedded in concrete.
B. Section 26 27 17 – Equipment Wiring: Electrical characteristics and wiring connections.

1.5 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; current edition.
B. NEMA MG 1 - Motors and Generators; current edition.
C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
D. UL (DIR) - Online Certifications Directory; current listings at www.database.ul.com.

1.6 SUBMITTALS

A. See Division 01 for submittal procedures.
B. Shop Drawings: Indicate plan layout of mounting bolt dimensions, conduit and outlet locations, power requirements, and wiring diagrams.
C. Product Data: Provide data on operating equipment, characteristics and limitations, operating temperature ranges.
D. Project Record Documents: Record actual locations of concealed conduit.
E. Operation Data: Provide operating data for the operating equipment.
F. Maintenance Data: Provide lubrication and periodic maintenance requirement schedules.
G. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.7 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than ten years of documented experience.
B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.8 REGULATORY REQUIREMENTS

A. Conform to applicable code for emergency vehicle access.
B. Conform to applicable code for paint finish and marking on gate arm.
C. Products Requiring Electrical Connection: Listed and classified by 1 as suitable for the purpose specified and indicated.

1.9 WARRANTY

A. See Division 01 for additional warranty requirements.
B. Correct defective Work within a five year period after Date of Substantial Completion.
C. Provide five year manufacturer warranty for operating equipment.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Parking Control Equipment:
   1). Amano McGann Parking Solutions, AGP-1700 Series.
   2). Substitutions: Not permitted.

2.2 PARKING CONTROL EQUIPMENT

A. Parking Control: Automatic operation at entrance and automatic operation at exit.
   1). Design: Protect against interference or damage by lightning or other electrical influence; include fuse, over-voltage protection, flash-over protection, and line filter.
   2). Entry: Automatic gate electrically operated upon insertion of coded card. Activate automatic arm reversing switch if an obstacle is sensed in the down motion.
   3). Exit: Automatic gate electrically operated upon detection of vehicle by sensing loop buried in pavement. Activate automatic arm reversing switch if an obstacle is sensed in the down motion.

2.3 MATERIALS

A. Steel: Hot-dipped galvanized steel sheet, 1, with G90/Z275 coating.

2.4 GATE ARM AND SUPPORT

A. Gate Arm: Aluminum, one piece, internal counterbalance, 11 ft. extension, with safety rubber bottom edge, with automatic arm reversing switch. Provide break line in arm.
B. Finish: Two coat enamel with reflective black and yellow diagonal stripes both sides of arm.
C. Arm Clamp: Cast metal, quick change clamp and hub bracket, to permit rapid replacement of arm without fitting or drilling.

2.5 AUTOMATIC GATE

A. Cabinet: 0.075 inch thick steel cabinet, weather tight seams; thermally insulated to permit heater to maintain cabinet temperature to equipment operating minimum, flush access doors and panels, tamper proof hardware, weather tight gaskets, master keyed locks. Conceal mounting bolts inside units.
B. Arm Control: Mechanism to raise and lower arm by instant reversing electric motor, enclosed speed reducer operated by self-contained, plug-in replaceable controller. Design mechanism with slip clutch to prevent breakage if arm is forced, and to permit manual operation if required. Arm movement to stop and start at reduced speed. Components of cadmium coated steel.
C. Electrical Components: Self-contained, plug-in, replaceable components. Include wiring for control units, zinc plated connection box, grounded convenience outlet, switch for automatic or manual operation, switch to disconnect power unit, thermostatically controlled minimum 250 Watt heater strip, and thermal protection disconnect for motor.

2.6 ELECTRICAL CHARACTERISTICS AND COMPONENTS

A. Electrical Characteristics:
   1). 1/3 hp.
   2). 6.22 running amperes.
   3). 120 volts, single phase, 60 Hz.
B. Motor: NEMA MG 1.
C. Controls: Microprocessor-based logic and functionality.
D. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Enclose terminal lugs in terminal box sized to NFPA 70.
E. Disconnect Switch: Factory mount disconnect switch in control panel.

2.7 CARD CONTROL

A. Control Unit: To activate gate arm by use of pass key.
B. Cabinet: 0.075 inch steel, weather tight seams; thermally insulated to permit heater to maintain cabinet temperature to equipment operating minimum, flush access doors and panels, tamper proof hardware, weathertight gaskets, master keyed locks. Conceal mounting bolts inside units.

2.8 VEHICLE DETECTION
A. Vehicle Detection: For use in temperature range of minus 40 to 160 degrees F; consisting of detection unit in conjunction with sensing loop to activate parking revenue control device or access control device when vehicle enters or exits.
B. Loop Wire: 14 gage, 0.0641 inch, XHWN or THWN copper; loop size of 48 x 72 inches.
C. Loop Groove Fill: Cold poured rubberized asphalt loop sealant.

2.9 FINISHES
A. Gate Posts and Cabinets: Baked enamel on steel, color as selected by Architect.

PART 3 – EXECUTION

3.1 EXAMINATION
A. Verify that anchor bolts are ready to receive work and dimensions are as indicated on shop drawings.
B. Verify that electric connections are correctly located and of the correct characteristics.

3.2 INSTALLATION
A. Install parking control system and components in accordance with manufacturer's instructions.
B. Cut grooves in pavement surface, install vehicle detection loops and lead-in wires, and fill grooves with loop filler.
C. Install internal electrical wiring, conduit, junction boxes, transformers, circuit breakers, and auxiliary components required.

3.3 ADJUSTING
A. Adjust system components for smooth operation.

3.4 MAINTENANCE
A. Provide service and maintenance of operating equipment for a period of one year from Date of Substantial Completion.

PART 4 – APPENDIX

4.1 PRODUCT DATA
A. Amano McGann, Parking Gate AGP-1700 Series

END OF SECTION

AMANO McGANN PARKING SOLUTIONS

AGP-1700

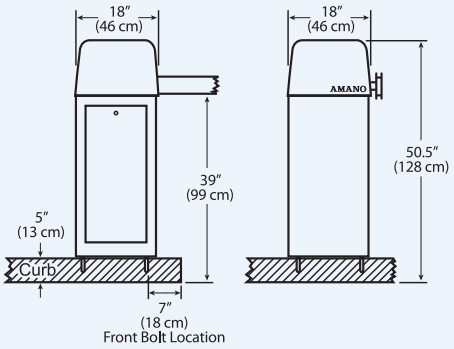
Series

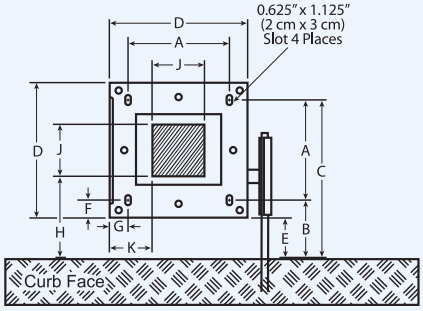
Parking Gate

Amano McGann's AGP-1700 Series Revenue Parking Gate is designed to meet all your parking control needs. The microprocessor-based logic and functionality provides the ultimate in reliability, performance, and safety, as well as the flexibility to accommodate four different modes of operation.

Parking Gate

AGP-1700





CONFINE RIGID CONDUIT NO MORE THAN 2″ (5 cm) HIGH IN THIS AREA.

A = 11¾″ (30 cm)	F = 2⅛″ (5 cm)
B = 7″ (18 cm)	G = 2⅛″ (5 cm)
C = 18¾″ (48 cm)	H = 9⅞″ (25 cm)
D = 16″ (41 cm)	J = 6″ (15 cm)
E = 4⅞″ (12 cm)	K = 5″ (13 cm)

FEATURES

- *Large, cabinet-style design*
- *Four selectable modes of operation*
- *Direct replacement footprint for other brand gates*
- *Pre-installed detector harness*
- *Access door can be located on any side of pedestal*
- *Microprocessor-based logic and functionality*
- *Standard "extra sensory" safety feature*
- *Instant reversing motor*
- *Heavy-duty polyethylene cover will not crack or peel*
- *1/3 horsepower motor with sealed gear reducer*
- *Internal thermal/overload protection*
- *Thermostat-controlled heater*
- *12´ standard or lighted gate arm, and 11´ standard folding gate arm configurations available*

SPECIFICATIONS

ELECTRICAL

120V AC, 60 Hz	
220/240V AC, 50/60 Hz	
Service amps:	19.6A (120V) Lighted gate: 20A (100V 120V) 10A (240V)
Connections:	• Four utility power outlets • DIN rail terminal blocks including logic • Main power breakers
Field wiring:	• Removable terminal block assembly • Dry contact input, output • 12V DC unregulated

MOTOR CHARACTERISTICS

Horsepower:	1/3 single-phase instantly reversing motor
Speed:	1625 RPM
Starting amps:	10A (120V) maximum
Running amps:	4.5A (120V)
Heavy-duty V-belt to drive speed reducer	
Internal thermal/overload protection	

ENVIRONMENT

Temperature:	-15°F ~130°F (-26°C ~ 54°C) Automatic thermostat-controlled heater included
Humidity:	10% ~ 90% (non-condensing)

HOUSING

Heavy-duty, 14-gauge all-weather steel construction with high-density polyethylene cover	
Direct replacement footprint for other brand gates	
Dimensions:	45-1/2″H x 18″W x 18″D (116 cm x 46 cm x 46 cm)
Weight:	166 lbs. (75 kg)
Access:	Removable cover on drive mechanism (360° access) Removable door (access to electrical connections and control box)
Finish (Std):	White (RAL#9010); custom color available

GATE ARM

Height:	34″ (86 cm) in down position
Length:	AL12: 12´ (365 cm)— aluminum
	AL20: 11´ (323 cm) folding gate arm — aluminum
	A10: 10´ (304 cm)— wood
Illumination kit:	Available for AL12 gate arm (AGP-0515/A623)
Optional sonic alert:	Audible alarm kit (AGP-0517/A627)

MICROPROCESSOR-BASED CONTROLLER

Quick, plug-in installation	
Gate up/normal/down switch (internal manual override)	
Operation modes:	One way pay
	Bi-directional lane
	Free direction
	Input/output lane controller
Switch selectable features:	"Extra sensory" timer
	Backout timer
	Closing loop safety "auto stop"
Built-in detector harness will accept single channel (AGP-0134) or dual channel (AGP-0234) vehicle detectors	

Specifications are approximate and are subject to change without notice.
UL approval does not apply to 220/240V AC, 50/60 Hz

c UL us

REPRESENTED BY:

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