



### V380PTX-S-VPP Explosionproof Pan-and-Tilt Drive

- Can operate in explosive environments
- Heavy-duty
- Complies with IEC codes

Model V380PTX-S-VPP is a heavy-duty pan-and-tilt drive that carries loads up to 80 pounds (36.3 kg) when mounted upright or 75 pounds (34 kg) when inverted and can be operated in an explosive environment. The unit complies with IEC60079-0 and IEC60079-1 Zone 1 Group II C, T6 (Ex d IIC T6) requirements.

The unit tilts up and down to 90° from the horizontal and pans through 350°. Electrical leads enter the unit through a factory sealed fitting. The V380PTX-S-VPP is equipped with potentiometers that allow it to be used with an appropriate preset control. Drive motors with heavy-duty gear heads incorporating hardened steel gears and bearings provide extended operating life. Constructed of cast and plate aluminum, the V380PTX-S-VPP has spring and weight counterbalance for smooth operation. Refer to Table 1 for maximum operating distances.

The V380PTX-S-VPP operates on 120 VAC or with a 24 VAC control when the 24 VAC wiring is terminated at an appropriate relay box in a location outside of the explosive atmosphere. Working voltage from the relay box to the V380PTX-S-VPP is 120 VAC.

## Contractors' Specification

### Explosionproof Pan-and-Tilt Drive

The pan-and-tilt drive shall be an explosionproof type with a load rating of 80 lb (36.3 kg) or 75 lb (34 kg) when mounted in the inverted position. It shall be capable of continuous unattended panning. The unit shall comply with IEC60079-0 and IEC60079-1 Zone 1 Group II C, T6 (Ex d IIC T6) requirements.

The load rating shall be based on a moment-arm distance of 10 inches from the center of gravity of the load to the center of tilt rotation. Torque rating shall be 480 lb-in. (54 N-m) in the pan mode and 800 lb-in. (90.4 N-m) in the tilt mode. Maximum horizontal travel shall be 350°, and maximum vertical travel shall be ±90°. Pan speed shall be 6°/sec and tilt speed shall be 4°/sec with 60 Hz input or 5°/sec pan and 3.3°/sec tilt with 50 Hz input. The pan and tilt motors shall be impedance protected. Braking shall be minimum coast, friction disc type integral with both pan and tilt motors. Pan limit stops shall be externally adjustable.

Dimensions shall not exceed: height: 15.7 in. (399 mm); width: 10.5 in. (267 mm); depth: 6.5 in. (165 mm), 13.25 in. (337 mm) including cable fitting projection. The weight shall not exceed 50 lb (23 kg). Construction shall be of corrosion-protected steel and aluminum. Hardened steel shall be used for all gears, and bearings shall be heavy-duty roller type on all rotating parts, factory lubricated for life. All seals shall be either quad ring or gasket type for all-weather environmental protection. Teflon wear surfaces are used for rotating seals. The operating ambient temperature range shall be -30 to 140° F or -34 to +60° C.

The unit shall operate from 120 V, 50/60 Hz. Maximum power consumption shall not exceed 90 W nor maximum operating current exceed 0.8 A with pan and tilt functions operating simultaneously. Limit and reversing switches shall have 5 A, 10-million cycle rating.

The explosionproof pan-and-tilt drive shall be Vicon model V380PTX-S-VPP.

# Technical Information

## ELECTRICAL

- Input Voltage:** 120 V, 50/60 Hz.
- Power Consumption:** Pan: 45 W maximum.  
Tilt: 45 W maximum.
- Heat Equivalent:** 5.1 btu/min (1.3 kg-cal/min).  
Note: These figures represent the conversion of 100% of all the electrical energy to heat. Actual percentage of the heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.
- Normal Operating Current:** Pan: 0.4 A.  
Tilt: 0.4 A.
- Overload Protection:** Motors impedance protected.
- Limit Switches:** 5 A, 10-million cycle rating. Switch protection both directions.
- Connector:** Explosionproof 1/2-in. presealed conduit fitting supplied with 6 feet of coiled cable.
- Cable Requirements:** 11-conductor, unshielded.
- IEC Standard:** IEC60079-0 and IEC60079-1 Zone 1 Group IIC, T6 (Exd IIC T6).

## OPERATIONAL

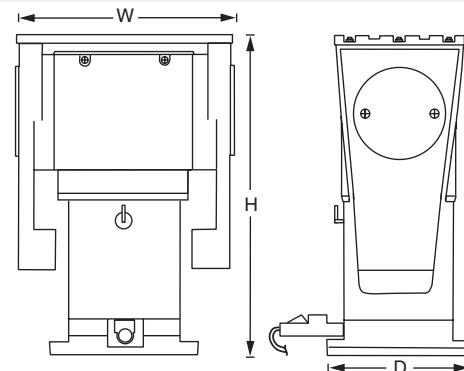
- Angular Travel:** Pan: 350° maximum.  
Tilt: ±90° maximum.
- Maximum Operating Distance:** See Table 1.
- Limit Stops:** Externally adjustable.
- Speed:** Pan: 6°/sec at 60 Hz.  
5°/sec at 50 Hz.  
Tilt: 4°/sec at 60 Hz.  
3.3° at 50 Hz.
- Reversing:** Instantaneous.
- Duty Cycle:** Intermittent.
- Torque:** Pan 480 lb-in. (54 N-m).  
Tilt: 800 lb-in. (90.4 N-m).
- Load Rating:** Upright: 80 lb (36.3 kg).  
Inverted: 75 lb (34.0 kg).  
Based on C.G. to center of tilt rotation distance of 10 in. or 254 mm.
- Braking:** Friction brake in pan-and-tilt for minimum coast.
- Overload Protection:** Motors may be stalled without danger of thermal overload.

## MECHANICAL

- Dimensions:** Height (H): 15.7 in. (399 mm).  
Width (W): 10.5 in. (267 mm).  
Depth (D): 7.0 in. (178 mm);  
13.25 in. (337 mm) including cable fitting projection.
- Weight:** Approximately 50 lb (23 kg).
- Construction:** Cast aluminum housing. All parts corrosion-protected steel or aluminum.
- Finish:** Light gray enamel.
- Bearings:** Heavy-duty roller bearings on all rotating parts.
- Gears:** Hardened steel.
- Seals:** Quad ring and gasket seals for all-weather environmental protection.
- Mounting:** Four (4) mounting holes provided for 3/8 bolts.
- Shipping Dimensions:** Height: 10.5 in. (267 mm).  
Width: 19.25 in. (489 mm).  
Length: 22.5 in. (572 mm).
- Shipping Weight:** 53.5 in. (24.2 kg).
- Shipping Volume:** 2.6 ft<sup>3</sup> (0.07 m<sup>3</sup>).

## ENVIRONMENTAL

- Ambient Temperature Range:** -30 to 120° F (-34 to 49° C).
- Storage Temperature Range:** -40 to 150° F (-40 to 65° C).
- Storage Humidity:** Up to 90% relative, noncondensing.



Control	Relay Box	Wire Size (AWG) Annealed Copper	Maximum Distance ft (m)
Any appropriate 120 VAC output control or receiver	—	20	830 (250)*
		18	1300 (400)*
		16	2200 (670)*
		14	3400 (1000)*
Any appropriate 120 VAC output control or receiver	V181RM-1	22	6,000 (1,800)**
		20	10,000 (3,000)**

\* Distance from control to pan-and-tilt (no relay box).

\*\* Distance from control to relay box. Distance from relay box to pan-and-tilt is the same as distance from control to pan-and-tilt without relay box.

**Table 1: Maximum Operating Distances**