

# ELECTRICAL HOIST OPTIONS

## Y80 – 800 SERIES SINGLE & DOUBLE REEVED

### EXPLOSION PROOF CONTROL OPTIONS FOR HAZARDOUS ENVIRONMENTS

Y80 and 800 Series Hoist and Trolleys can be provided to operate in most hazardous environments. Following in this electrical options section are price adds for motors, brakes, limit switches, pendant stations and control enclosures required to operate in hazardous environments.

Before pricing out the required options you must know the Class, Group and Division of Hazardous environment, as defined by the National Electrical Code. Below are definitions and example sheets to aid in the determination of the environment the hoist will operate in.

### DEFINITIONS

Class	
<b>Class I</b>	Locations: Are those in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.
<b>Class II</b>	Locations: Are those which are hazardous due to the presence of combustible dust.
<b>Class III</b>	Locations: Are those which are hazardous due to the presence of easily ignitable fibers or flyings, but in which such fibers or flyings are not likely to be in suspension in the air in quantities to produce ignitable mixtures.

Division	
<b>Division I</b>	Locations in which hazardous concentrations in the air exist continuously, intermittently, or periodically under normal operating conditions.
<b>Division II</b>	Locations in which hazardous concentrations are handled, processed, or used but are normally within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown.

Group		
CLASS I	<b>Group A</b>	Atmospheres containing acetylene. (not available on Shaw-Box products)
	<b>Group B</b>	Atmospheres containing hydrogen, or gases or vapors of equivalent hazard, such as manufactured gas. (not available in Division 1 design)
	<b>Group C</b>	Atmospheres containing ethyl-ether vapors, ethylene or cyclo propane.
	<b>Group D</b>	Atmospheres containing gasoline, hexane, naphtha, benzine, butane, alcohol, acetone, benzol, lacquer solvent vapors, or natural gas.
CLASS II	<b>Group E</b>	Atmospheres containing metal dust, including aluminum, magnesium and their commercial alloys and other metals of similarly hazardous characteristics.
	<b>Group F</b>	Atmospheres containing carbon black, coal or coke dust.
	<b>Group G</b>	Atmospheres containing flour, starch, or grain dust.

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### EXPLOSION PROOF CONTROL OPTIONS FOR HAZARDOUS ENVIRONMENTS

Below is a chart detailing the motors, enclosures and electrical modifications provided by the price adders in this section for the various classes, groups and divisions of hazardous environments the Y80 and 800 series are available for.

### HAZARDOUS LOCATIONS ELECTRICAL STANDARDS\*

Hazardous Location Equipment	Class I Group C & D	Class I Group B, C & D	Class II, Div. 1 Group E, F & G	Class II, Div 2 Group F & G
	Division 1	Division 2		
Motors	"Explosion-Proof" approved for Class I, Group C or D (as applicable)	TENV or TEFC squirrel cage only	"Dust-Ignition-Proof", approved for Class II	TENV or TEFC dust-tight, squirrel cage, B insulation rise
	With TAS	No TAS	With TAS	With TAS
Brakes	Approved for Class I, Group C or D (as applicable)	Enclosed STD. disc type	Approved for Class II & applicable group	Enclosed dust-tight disc type
Control Enclosure	NEMA type 7	NEMA type 7	NEMA type 9	NEMA type 4/12
Limit Switch Enclosures	NEMA type 7 or ISR	NEMA type 7 or ISR	NEMA type 9 or ISR	NEMA type 4/12
PB Station Enclosures	NEMA type 7 or ISR	NEMA type 7 or ISR	NEMA type 9 or ISR	NEMA type 4/12
Main Disconnect Device	Circuit breaker only in NEMA type 7 enclosure	Circuit breaker only in NEMA type 7 enclosure	Circuit breaker only in NEMA type 9 enclosure	Circuit breaker or fusible switch in NEMA type 4/12 enclosure
Runway & Cross Conductors	Cable Reel	Cable Reel	Cable Reel	Cable Reel

\*NOTE: The National Electric Code does not refer to Spark Resistant features. These must be user specified.