

## Data Release 16

Data Release 16 is the 3rd official Data Release for Preventance. It consists of 583 component data sets, which include 36 new component types and 3 updates of earlier versions.

Of the 36 new component types, 28 represent a new type of data set that omits the PM TIPS, and some of the summary fields describing PM tasks and component level information. Nevertheless, these “Basic” data sets still provide all the information necessary to develop and optimize PM strategies in the usual way, including the PM Task Contents. Basic component types are most likely to be used to create Functional Equipment Groups that will enable users to build variants of a larger assembly.

The 3 updates are very complete updates for check valves:

- Valve - Check - Piston - Lift\_V4
- Valve - Check - Swing\_V4
- Valve - Check - Tilting Disc\_V4

The 8 new traditional component types are:

- Motor - Low Voltage - 115\_230V Horizontal TE - Rolling Element Grease Lubed\_V0
- Motor - Low Voltage - 230\_600V Horizontal TE - Rolling Element Grease Lubed\_V0
- Valve - Ball\_V0
- Valve - Butterfly\_V0
- Valve - Check - Double Disc\_V0
- Valve - Check - In-Line\_V0
- Valve - Gate\_V0
- Valve - Globe\_V0

The 28 Basic component types are:

- Accumulator - Hydraulic - Bladder Type\_V0
- Bearing - Rolling Element - Grease\_V0
- Bearing - Rolling Element - Oil\_V0
- Cylinder\_Hydraulic\_V0
- Hydraulic Hose\_V0
- Scale - Load Cell\_V0
- Structure - Metal\_1\_V0
- Switch - Large Mechanical Limit Type\_V0
- Bumper - Hydraulic\_V0
- Bumper - Solid\_V0
- Bumper - Spring\_V0
- Crane - Hoist Cable - Wire Rope\_V0
- Crane - J Hook - Riveted\_V0
- Crane - Sheave with Bearing\_V0
- Crane - Status Lights\_V0
- Crane - Wheels - Bridge and Trolley\_V0
- Crane - Window\_V0
- Crane Break - Electro-Mechanical\_V0
- Crane Control - Resistive\_V0
- Crane Control Resistors or Load Banks\_V0
- Crane Control with No Resistors or Load Banks\_V0
- Crane Drum - Grooved Surface with Bull Gear\_V0
- Crane Rails - Trolley and Bridge\_V0
- Gearbox\_Worm - Crane Hoist\_V0
- Magnet - Lifting\_V0

Power Track - Flexible Cable and Hose Carrier\_V0  
Packaged Air Conditioning Unit\_V0  
Valve - 4-Way Hydraulic\_V0

## Data Release 15

Data Release 15 is the 2nd official Data Release for Preventance.

Data Release 15 consists of 544 component data sets, which include 31 entirely new data sets.

Data Release 15 is the first release where 11 previously released components have been removed.

These 11 components have been replaced by better differentiated versions that more accurately represent specific component types.

The 31 new components are:

Barge Unloader Ladder Type with Fixed Cantilever Boom\_V0  
Barge Unloader Ladder Type with Movable Boom\_V0  
Material Handling - Conveyer - Belt Type with AC Gear Motor Drive\_V0  
Material Handling - Conveyer - Belt Type with AC Motor Drive\_V0  
Pulverizer Coal Feeder - Belt Type\_V0  
Pulverizer Coal Feeder - Volumetric Star or Overshot Roll Feeder\_V0  
Hydro-Turbine Governor - Electronic\_V0  
Hydro-Turbine Governor - Mechanical\_V0  
Hydro Turbine - Kaplan Type\_V0  
Vacuum Belt Filter - Flue Gas Desulfurization\_V0  
Absorber Vessel - Flue Gas Desulfurization\_V0  
FLEX - Pump - Satellite Hydraulic Drive - IT4 DPF/DOC Diesel Driven\_V0  
FLEX - Pump - Satellite Hydraulic Drive - T3 DPF/DOC Diesel Driven\_V0  
FLEX - Pump - Satellite Hydraulic Drive - T3 EGR Diesel Driven\_V0  
FLEX - Pump - Satellite Hydraulic Drive - T3 NET Diesel Driven\_V0  
FLEX - Pump - Satellite Hydraulic Drive - T4 Diesel Driven\_V0  
Fly Ash Feeder - Pressure Conveying\_V0  
Main Generator - Salient Pole - Vertical - Indirectly Cooled\_V0  
Hydro-Generator- Salient Pole - Indirectly Cooled - Vertical\_V0  
Motor - Low Voltage - 230\_600V Horizontal TEFC - Rolling Element Grease Lubed\_V0  
Motor - Low Voltage - 230\_600V Horizontal Open Drip Proof - Rolling Element Grease Lubed\_V0  
Motor - Low Voltage - 230\_600V Horizontal Open Drip Proof - Rolling Element Oil Lubed\_V0  
Motor - Low Voltage - 230\_600V Horizontal Open Drip Proof - Sleeve Bearing Oil Lubed\_V0  
Motor - Low Voltage - 230\_600V Horizontal WP with Filters - Rolling Element Grease Lubed\_V0  
Motor - Low Voltage - 230\_600V Horizontal WP with Filters - Rolling Element Oil Lubed\_V0  
Motor - Low Voltage - 230\_600V Horizontal WP with Filters - Sleeve Bearing Oil Lubed\_V0  
Motor - Low Voltage - 115\_230V Horizontal Open Drip Proof - Rolling Element Grease Lubed\_V0  
Motor - Low Voltage - 115\_230V Horizontal TEFC - Rolling Element Grease Lubed\_V0  
Motor - Low Voltage - 115\_230V Horizontal Open Drip Proof - Sleeve Oil Lubed\_V0  
Motor - Low Voltage - 115\_230V Horizontal Open Drip Proof - Bushing Oil-Impregnated\_V0  
Motor - GearMotor - Low Voltage - 120V\_600V - Horizontal - TEFC\_V0

The 11 older components that have been replaced by better differentiated versions that more accurately represent specific component types are:

Motor - Direct Current  
Motor - Low Voltage - 120V\_600V - Horizontal 25HP and Below

Motor - Low Voltage - 600V - Horizontal >25HP - Grease Lubed  
Motor - Low Voltage - 600V  
Motor - Low Voltage - 600V - Horizontal >25HP - Oil Lubed  
Motor - Medium Voltage <15kV  
Pump - Horizontal - Multistage - Barrel Type  
Pump - Horizontal - Multistage - Split Case  
Pump - Horizontal - Single Stage - Double Suction  
Pump - Horizontal - Single Stage - Single Suction  
Switchgear - Medium Voltage - 1kV to 7kV

Note: The FLEX Component Types, first introduced in Data Release 13, are intended for use only in extreme regional emergencies. They mostly consist of combinations of a diesel engine driver and a driven component arranged as a skid on a trailer so they can be moved from site to site. Their distinguishing characteristic, apart from mobility, is their long term standby maintenance program suitable for equipment that will be operated only very infrequently, apart from maintenance and testing or occasional special application.

## **Data Release 14**

Data Release 14 is the first official Data Release for Preventance.

Data Release 14 consists of 524 component data sets which include 21 entirely new data sets, and 2 updates

The 2 regular updates were fairly complete revisions of prior versions:

I&C - Signal Conditioner\_V3

I&C - Analog Electronic Controller\_V3

The 21 new components are:

FLEX or FLEX SUPPORT - Air Compressor - Rotary Screw - T4 Diesel Driven\_V0

FLEX or FLEX SUPPORT - Air Compressor - Rotary Screw - T3 NET Diesel Driven\_V0

FLEX or FLEX SUPPORT - Air Compressor - Rotary Screw - T3 EGR Diesel Driven\_V0

FLEX or FLEX SUPPORT - Air Compressor - Rotary Screw - T3 DPF/DOC Diesel Driven\_V0

FLEX or FLEX SUPPORT - Air Compressor - Rotary Screw - IT4 DPF/DOC Diesel Driven\_V0

FLEX - Pump - LP - Packing Seal - Direct Drive - T4 Diesel Driven\_V0

FLEX - Pump - LP - Packing Seal - Direct Drive - T3 NET Diesel Driven\_V0

FLEX - Pump - LP - Packing Seal - Direct Drive - T3 EGR Diesel Driven\_V0

FLEX - Pump - LP - Packing Seal - Direct Drive - T3 DPF/DOC Diesel Driven\_V0

FLEX - Pump - LP - Packing Seal - Direct Drive - IT4 DPF/DOC Diesel Driven\_V0

FLEX - Pump - LP - Packing Seal - Clutch Drive - T4 Diesel Driven\_V0

FLEX - Pump - LP - Packing Seal - Clutch Drive - T3 NET Diesel Driven\_V0

FLEX - Pump - LP - Packing Seal - Clutch Drive - T3 EGR Diesel Driven\_V0

FLEX - Pump - LP - Packing Seal - Clutch Drive - T3 DPF/DOC Diesel Driven\_V0

FLEX - Pump - LP - Packing Seal - Clutch Drive - IT4 DPF/DOC Diesel Driven\_V0

FLEX - Pump - Horizontal - Packing Seal - T4 Diesel Driven\_V0  
FLEX - Pump - Horizontal - Oil Bath Mechanical Seal - T4 Diesel Driven\_V0  
FLEX - Pump - Horizontal - Mechanical Seal Non-Oil Bath - T4 Diesel Driven\_V0  
FLEX - Pump - Horizontal - Axial Split Case\_Packing Seal - LV Motor Driven\_V0  
FLEX - Pump - Horizontal - Axial Split Case\_Mechanical Seal - LV Motor Driven\_V0  
FLEX - Generator - 1MW or Less - T4 Diesel Driven\_V0

## Data Release 13

Data Release 13 includes 25 new and 4 updated component types:

The 25 new component types are:

FLEX - Generator - 750KW or Less - IT4 DPF/DOC Diesel Driven\_V0  
FLEX - Generator - 750KW or Less - T3 Diesel Driven No Emission Control\_V0  
FLEX - Generator - 750KW or Less - T3 DPF/DOC Diesel Driven\_V0  
FLEX - Generator - 750KW or Less - T3 EGR Diesel Driven\_V0  
FLEX - Pump - Horizontal - Mechanical Seal Non-Oil bath - IT4 DPF/DOC Diesel Driven\_V0  
FLEX - Pump - Horizontal - Mechanical Seal Non-Oil Bath - Tier 3 Diesel Driven No Emission Control\_V0  
FLEX - Pump - Horizontal - Mechanical Seal Non-Oil Bath - Tier 3 Diesel Driven\_V0  
FLEX - Pump - Horizontal - Mechanical Seal Non-Oil Bath - Tier 3 EGR Diesel Driven\_V0  
FLEX - Pump - Horizontal - Oil Bath Mechanical Seal - IT4 DPF/DOC Diesel Driven\_V0  
FLEX - Pump - Horizontal - Oil Bath Mechanical Seal - Tier 3 Diesel Driven No Emission Control\_V0  
FLEX - Pump - Horizontal - Oil Bath Mechanical Seal - Tier 3 Diesel Driven\_V0  
FLEX - Pump - Horizontal - Oil Bath Mechanical Seal - Tier 3 EGR Diesel Driven\_V0  
FLEX - Pump - Horizontal - Packing Seal - IT4 DPF/DOC Diesel Driven\_V0  
FLEX - Pump - Horizontal - Packing Seal - Tier 3 Diesel Driven No Emission Control\_V0  
FLEX - Pump - Horizontal - Packing Seal - Tier 3 Diesel Driven\_V0  
FLEX - Pump - Horizontal - Packing Seal - Tier 3 EGR Diesel Driven\_V0  
Gas Turbine - HRSG - Ammonia Vaporization System\_V0  
Gas Turbine - HRSG - Duct Burner - Gas Pressure Control Valve\_V0  
Gas Turbine - HRSG - Duct Burner - Main Gas Isolation Valve and Actuator\_V0  
Gas Turbine - HRSG - Duct Burner - Runner Type\_V0  
Gas Turbine - HRSG - Selective Catalytic Reduction System - SCR Reactor\_V0  
Hydro Turbine - Pumped Storage - Reversible Francis Type\_V0  
I&C - Temperature Switch - Electronic Types\_V0  
Valve - Hydraulic Operated - Isolation - Piston Type\_V0  
Valve - Motor Operated - MOV\_AC\_Rotork\_NA & A-Range\_V0

The 4 updated component types are:

I&C - Pressure Switch\_V4  
I&C - Temperature Switch - Non-Electronic Types\_V4  
Valve - Motor Operated - MOV\_AC\_Limitorque\_V3  
Valve - Motor Operated - MOV\_DC\_Limitorque\_V1

## Data Release 12

Data Release 12 includes 58 new and 6 updated component types:  
The 58 new component types are:

Ammonia Vaporization System\_V0  
Selective Catalytic Reduction System - SCR Reactor\_V0  
Unloading Station - Anhydrous Ammonia\_V0  
Main Generator - 3600RPM - Smooth Rotor - Air Cooled\_V0  
Main Generator - 3600RPM - Smooth Rotor - Water Air Cooled\_V0  
Switchgear - Medium Voltage - 1kV to 15kV - Vacuum Bottle Type\_V0  
Switchgear - Motor Management Relay\_V0  
Switchgear - Panel - Freeze Protection Heat Trace\_Chromolox\_V0  
Switchgear - Panel - Process Heat Trace\_Chromolox\_V0  
Switchgear - Variable Frequency Drive - 600V (VFD)\_V0  
Transformer - General Purpose - Liquid Filled - Solid Bushings - Fan Cooled\_V0  
Gas Turbine - Combustor - Can-Annular- Dry Low Nox\_V0  
Gas Turbine - Compressor - Single Stage\_V0  
Gas Turbine - Enclosures - Forced Ventilation - Heated\_V0  
Gas Turbine - Fuel Gas - Emergency Shutdown Valve and Actuator\_V0  
Gas Turbine - Fuel Gas - Filter Separator Coalescer\_V0  
Gas Turbine - Fuel Gas - Flow Meter\_V0  
Gas Turbine - Fuel Gas - Gas Control Valve and Actuator\_V0  
Gas Turbine - Fuel Gas - Gas Purge Valve and Actuator\_V0  
Gas Turbine - Fuel Gas - Gas Splitter Valve and Actuator\_V0  
Gas Turbine - Fuel Gas - Performance Heater - Shell & Tube\_V0  
Turbine - Fuel Gas - Pressure Reducing Station\_V0  
Gas Turbine - Fuel Gas - Startup Heater - Electric\_V0  
Gas Turbine - Hot Section - Turbine - Bolted Rotor - Tilt Pad and Midspan Journal Bearings\_V0  
Gas Turbine - Hot Section - Turbine - Bolted Rotor - Tilt Pad Bearing Only\_V0  
Gas Turbine - HRSG - Attemperator\_V0  
Gas Turbine - HRSG - Deaerator\_V0  
Gas Turbine - HRSG - Horizontal - Intake - Exhaust and Structures\_V0  
Gas Turbine - HRSG - HP Section - Horizontal 3 Stage\_V0

Gas Turbine - HRSG - IP & Reheat Section - Horizontal 3 Stage\_V0  
Gas Turbine - HRSG - LP Section - Horizontal 3 Stage\_V0  
Gas Turbine - Inlet Air and Filtration\_V0  
Gas Turbine - Lube Oil - AC & DC Seal Oil Pump\_V0  
Gas Turbine - Lube Oil - AC Oil Pump\_V0  
Gas Turbine - Lube Oil - Cleaner - Electrostatic Precipitator\_V0  
Gas Turbine - Lube Oil - DC Oil Pump\_V0  
Gas Turbine - Lube Oil - Heat Exchanger - Plate and Frame\_V0  
Gas Turbine - Lube Oil - Oil Supply\_V0  
Gas Turbine - Static Starter - Disconnect Switch (Generator & Neutral)\_V0  
Gas Turbine - Static Starter - Isolation Transformer (Dry Type)\_V0  
Gas Turbine - Static Starter - Isolation Transformer (Oil Filled)\_V0  
Gas Turbine - Static Starter - Load Commutating Inverter (LCI)\_V0  
Gas Turbine - Static Starter - Micro-Processor Control\_V0  
Gas Turbine - Static Starter - Static Frequency Converter (SFC)\_V0  
Gas Turbine - Turning Gear\_V0  
Valve - Steam Turbine - Combined Steam Stop & Control Valve with Unbalanced Stop Valve using a Double-Acting Control Valve Actuator\_V0  
Valve - Steam Turbine - Combined Steam Stop & Control Valve with Unbalanced Stop Valve using a Single-Acting Control Valve Actuator\_V0  
Valve - Steam Turbine - Steam Control Valve Balanced Type using a Single-Acting Actuator\_V0  
Valve - Steam Turbine - Steam Stop Valve Balanced Type using a Single-Acting Actuator\_V0  
Valve Actuator - Steam Turbine - Control Valve Actuator - Double Acting\_V0  
Valve Actuator - Steam Turbine - Steam Control Valve - Single Acting with Bellville Spring\_V0  
Valve Actuator - Steam Turbine - Steam Stop Valve - Single Acting with Bellville Spring\_V0  
Valve Actuator - Steam Turbine Steam Stop Valve - Single Acting with Coil Spring\_V0  
Valve - SOV - Process - Direct Acting\_V0  
Valve - SOV - Process - Piloted Type - Hard Seat\_V0  
Valve - SOV - Process - Piloted Type - Soft Seat\_V0  
Valve - Weir Type - Air Operated\_V0  
Valve - Weir Type - Manual\_V0

The 6 updated component types are:

Cooling Tower - Mechanical Draft - Counter Flow\_V1  
Cooling Tower - Mechanical Draft - Cross Flow\_V1  
Cooling Tower - Natural Draft - Counter Flow\_V1  
Cooling Tower - Natural Draft - Cross Flow\_V1  
Turbine - Main Feedwater Type with EHC Controls\_V1  
Turbine - Main Feedwater Type with MHC Controls\_V2

## **Data Release 11**

Release 11 includes 18 new and 13 updated component types:

### 18 New Component Types:

Cooling Tower - Mechanical Draft - Counter Flow\_V0  
Cooling Tower - Mechanical Draft - Cross Flow\_V0  
Cooling Tower - Natural Draft - Counter Flow\_V0  
Cooling Tower - Natural Draft - Cross Flow\_V0  
Pump - Horizontal - Single Stage - Double Suction - Axially Split Case - Mechanical Seal - Sleeve Bearings\_Oil Lubed\_V0  
Pump - Horizontal - Single Stage - Double Suction - Axially Split Case - Mechanical Seal - Rolling Element Bearings\_Oil Lubed\_V0  
Pump - Horizontal - Single Stage - Double Suction - Axially Split Case - Mechanical Seal - Rolling Element Bearings\_Grease Lubed\_V0  
Pump - Horizontal - Single Stage - Double Suction - Axially Split Case - Mechanical Seal - Rolling Element\_Sleeve Bearings\_Oil Lubed\_V0  
Pump - Horizontal - Single Stage - Double Suction - Axially Split Case - Packing Seal - Sleeve Bearings\_Oil Lubed\_V0  
Pump - Horizontal - Single Stage - Double Suction - Axially Split Case - Packing Seal - Rolling Element Bearings\_Oil Lubed\_V0  
Pump - Horizontal - Single Stage - Double Suction - Axially Split Case - Packing Seal - Rolling Element Bearings\_Grease Lubed\_V0  
Pump - Horizontal - Single Stage - Double Suction - Axially Split Case - Packing Seal - Rolling Element\_Sleeve Bearings\_Oil Lubed\_V0  
Pump - Horizontal - Single Stage - Single Suction - Volute Casing Type - Mechanical Seal - Rolling Element Bearings - Oil Lubed\_V0  
Pump - Horizontal - Single Stage - Single Suction - Volute Casing Type - Mechanical Seal - Rolling Element Bearings - Grease Lubed\_V0  
Pump - Horizontal - Single Stage - Single Suction - Volute Casing Type - Packing Seal - Rolling Element Bearings - Oil Lubed\_V0  
Pump - Horizontal - Single Stage - Single Suction - Volute Casing Type - Packing Seal - Rolling Element Bearings - Grease Lubed\_V0  
Pump - Horizontal - Single Stage - Single Suction - Close Couple End Suction Type - Mechanical Seal\_V0  
Pump - Horizontal - Single Stage - Single Suction - Close Couple End Suction Type - Packing Seal\_V0

### 13 Updated Component Types:

Motor - Medium Voltage <15kV\_V2  
Motor - Medium Voltage <15Kv - Horizontal - Filters - Rolling Element - Grease Lubed\_V2  
Motor - Medium Voltage <15Kv - Horizontal - Filters - Rolling Element - Oil Lubed\_V2  
Motor - Medium Voltage <15Kv - Horizontal - Filters - Sleeve Bearing - Oil Lubed\_V2  
Motor - Medium Voltage <15Kv - Horizontal - TEFC - Rolling Element - Grease Lubed\_V2  
Motor - Medium Voltage <15Kv - Horizontal - TEFC - Rolling Element - Oil Lubed\_V2  
Motor - Medium Voltage <15Kv - Horizontal - TEFC - Sleeve Bearing - Oil Lubed\_V2  
Motor - Medium Voltage <15Kv - Vertical - Hollow Shaft - Rolling Element - Oil/Grease Lubed\_V2

Motor - Medium Voltage <15Kv - Vertical - Hollow Shaft - Rolling Element - Oil Lubed\_V2  
Motor - Medium Voltage <15Kv - Vertical - Solid Shaft - Rolling Element - Oil/Grease Lubed\_V2  
Motor - Medium Voltage <15Kv - Vertical - Solid Shaft - Rolling Element - Oil Lubed\_V2  
Motor - Medium Voltage <15Kv - Vertical - Solid Shaft - Tilt Pad- Ball Guide - Oil Lubed\_V2  
Motor - Medium Voltage <15Kv - Vertical - Solid Shaft - Tilt Pad - Sleeve Guide - Oil Lubed\_V2