

# Difference between switchgear and mcc

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All three contain circuit breakers. All three supply power to motors, although switchgear and PDC-fed motors are obviously higher-voltage, larger motors.

Switchgears are higher voltage than PDCs, and supply power to the transformers which feed the PDCs.

PDCs are higher voltage than MCCs, and supply power to MCCs. From what I've seen, PDC housings contain the transformer that feeds the PDC. (Is this always the case?)

Are there any other important differences/details that I've missed?

Kind of old and I apologize for resurrecting a "zombie thread", but I don't think the entire question was answered and I happen to know this very well.

Motor Control Centers are basically the same as SWB construction (they grew out of that industry in the 1950s), but are generally used to provide power to motors, not general loads. They are different from SWBs in that you have "cells" (called "buckets") that contain the control equipment so that in theory, you can disconnect power from one bucket and allow the rest of the machinery powered by that MCC to continue to run. You cannot do that with a typical SWB, if you had to remove one breaker or switch, you have to kill power to the entire SWB. There are exceptions to this rule, but conceptually, this is what it boils down to.

A Power Distribution Center (PDC) is basically just the name for a factory-built structure, a portable building, designed to HOUSE equipment such as SWG, SWBs, Transformers, PBDs, MCCs and/or other controls or instrumentation, in any combination or configuration the end user desires. There is no standard definition of what goes INTO a PDC, but there are several standards as to how they are built, depending on where they are going and what they are housing. Some must be built to withstand explosions, such as in a refinery hazardous area, some must be able to withstand extremes of weather such as high winds, crushing snow, marine salt spray etc.

"Switchgear"? I think you may mean switchboard as in the following: -

Hopefully this may account for "power distribution centre" - I'm assuming you might mean Panelboard or do you mean a PDC at a generating plant? Clearly MDC is motor distribution centre. This document furnished the drawing.

In my experience, "switchboard" refers to a board which contains circuit breakers only, with no motor contactors.

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"MCC" - motor control centre - refers to a board which includes motor contactors.

Note the distinction between circuit breakers and contactors.

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