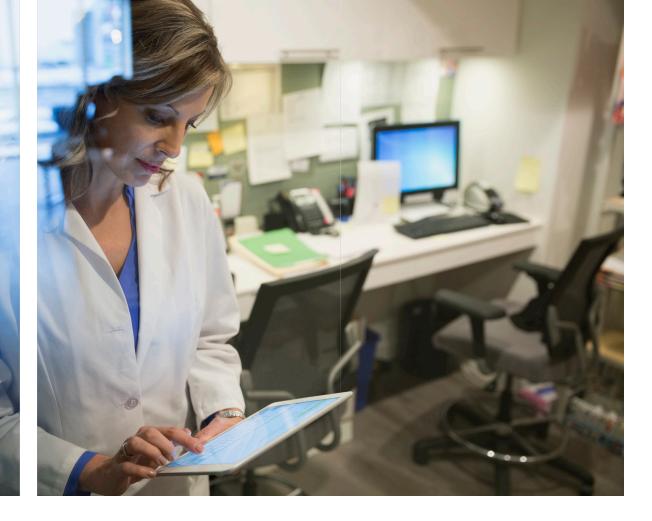
## POWER SYSTEMS for Healthcare Facilities







#### **HEALTH INFORMATION EXCHANGE**

Today, providers can access electronic health records instantly through a health information exchange (HIE). An HIE brings incredible convenience and, by providing key information quickly, can even improve outcomes during emergency situations. Yet it also increases the need to protect privacy and ensure HIPPA compliance.

#### **DATA ANALYTICS**

Big data has also become an essential part of the healthcare transformation, as hospitals and practices sort through clinical, claims and socioeconomic data to identify key trends and opportunities. Through data analytics, health systems are increasingly able to identify and target opportunities to help patients better manage chronic conditions and avoid hospital readmissions.

#### **PATIENT CONNECTIVITY**

While all this is happening behind the scenes, patients are noticing changes as well. Many are getting care from the comfort of home with telemedicine, and providers are even developing new virtual care centers to support this trend toward reaching more patients more efficiently.

It's a rapidly changing landscape, but one thread runs through it: technology. For today's Healthcare facilities, power isn't just about keeping the lights on and equipment running. It's also about keeping connected.

## **ACCESSING FACILITY NEEDS**

Given the fact that power can be a life-sustaining necessity in the hospital setting, reliable backup power is essential. To provide a "No-Break" power supply (uninterruptible power with zero service interruptions), two independent power sources provide redundancy and risk reduction, rather than depending on a single source of inbound power.

#### **POWER SUPPLY**

Redundancy is an essential design feature in a hospital setting to ensure operating rooms keep running without disruption, medications are safely preserved and environmental control systems continue to function and protect against the spread of disease. To prevent interruptions to the power supply, all components, including the emergency systems, are installed in duplicate with multiple generator sets.

#### **SECURITY**

To comply with HIPPA and other regulations, electronic medical records and other key electronic data must be protected. If servers go down, even temporarily, sensitive data could be jeopardized.

#### A CAREFULLY CONTROLLED ENVIRONMENT

To keep the healthcare environment operating in a safe manner, environmental control systems regulate indoor air quality (IAQ), temperature, humidity, airborne organisms and air pressure. These systems must be up and running at all times, which can require significantly different backup power systems for a large hospital vs. a small satellite clinic.

#### **RESPONSE TIME**

Healthcare facilities have power needs 24/7, so there's no time to wait for a response team. They need a service team that can provide timely emergency recovery no matter where the power system is installed.

## **POWER CONSIDERATIONS**

Hospitals, clinics, pharmacies and long-term care facilities are already some of the most complex places for backup power. And they're becoming even more high tech. Yet each facility has its own needs and requires a customized solution to protect the significant investments made in state-of-the-art equipment. Here are some considerations the KOHLER team looks at when discussing your facility's unique needs.

## **THINKING BEYOND HOSPITALS**

Kohler makes it easy. From planning to post-installation, our team will take care of you every step of the way—with a power solution customized to your needs.

#### **TOTAL SYSTEM INTEGRATION**

A power system is only as good as the parts that define it. That's why we engineer every detail down to the last bolt. This isn't your typical power system. It's a KOHLER® industrial power system—which means it's designed and manufactured with KOHLER components—including generators, transfer switches, paralleling switchgear and controllers. But the best part? We customize every power system to your specs. So no matter how large or complex your job, everything will work together seamlessly.

#### **UPTIME AND RELIABILITY**

Designing power systems that meet requirements for the highest levels of uptime requires expert attention to system architecture and equipment redundancy. Getting the right combination of uninterrupted power supply and generator sets is crucial to meet your facility's needs. Kohler power systems enable your facility to comply with NEC and NFPA requirements and meet Joint Commission (JCAHO) accreditation and certification.

#### PERFORMANCE

A reliable power system plays a major role in helping wastewater facilities prevent environmental and health disasters.

#### REDUNDANCY

Redundancy is an essential design feature built into healthcare facilities of all sizes, with essential components duplicated in the event that one component fails. While a facility might install a single large generator to meet its power needs, paralleling two or more generators with paralleling switchgear offers practical benefits and advantages over a single-generator system.

Generator sets should start providing backup power within seconds of a break in utility power supply, and transfer switches should provide seamless automatic switching between the electrical power from the utility and the backup power system.

#### **KOHLER Generator Sets**

- Generators meet tough industry testing and quality standards.
- PMG alternators provide advanced short-circuit capabilities.
- Diesel generators feature superior load factor, reliability and availability, and they offer one-step load acceptance.
- IBC and HCAI (OSHPD) designs available.

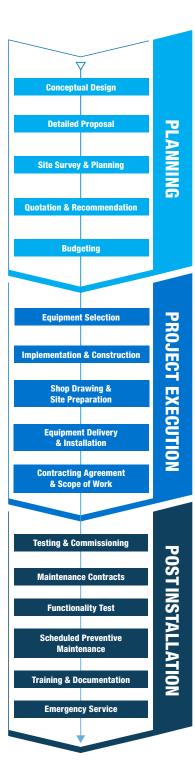
#### KOHLER Automatic Transfer Switches (ATSs)

- Built and tested in Kohler, Wisconsin.
- Part of a fully integrated solution.
- Include standard, bypass-isolation and service-entrance configurations.
- CSA and IBC certification available.

#### **KOHLER Switchgear**

- Built and tested in Kohler, Wisconsin.
- Part of a fully integrated solution.
- Simple and complex solutions available.
- IBC designs available.

# THE KOHLER DIFFERENCE TOTAL SYSTEM INTEGRATION



As a single-source provider, you can be confident that every power system is loaded with designed and manufactured components from Kohler. **TOTAL SYSTEM INTEGRATION** assures you that no matter how large or complex the project, everything works together seamlessly-from generators and transfer switches to paralleling switchgear and controllers. That's the KOHLER<sub>®</sub> difference.

#### **End-to-End Management**

From planning the design and selecting the equipment to testing and commissioning, we're focused on delivering reliable, custom-designed power systems tailored to your specifications. Agile manufacturing, rigorous testing and careful commissioning assure you of a solution that fits your business-and your budget.

#### **Customized Solutions**

Your KOHLER power system is customized, built and tested by a dedicated team of experienced applications engineers. They've designed power systems for hundreds of data centers and combine industry experience with Kohler's agile manufacturing process to deliver your purpose-built solution.

#### Local Service:

#### **Nationwide or Around the World**

A single call assures you of expert support and problem resolution day or night. Kohler's worldwide dealer and distributor network has access to complete inventories of KOHLER genuine parts and provides factory-trained service technicians who are fully vetted and thoroughly tested.

### **FACILITIES THAT PUT THEIR TRUST IN KOHLER**

HOSPITALS AND CLINICS	COUNTRY	QTY	kW/kVA
Hôpital Militaire de Ain Naadja	Algeria	1	2200 kVA
Largest hospital in Western Australia	Australia	2	1100 kVA
Hospital in Mackay, Queensland	Australia	2	1500 kVA
Integrated cancer hospital	Australia	1	1100 kVA
Public hospital in Queensland	Australia	3	2200 kVA
Public teaching hospital in Sydney	Australia	1	500 kVA
Dhaka National Hospital	Bangladesh	1	630 kVA
Karamtola Christian Hospital	Bangladesh	2	44-110 kVA
Khulna BNSB Eye Hospital	Bangladesh	1	60 kVA
Lohagara City Hospital	Bangladesh	1	66 kVA
Mukti Hospital	Bangladesh	1	150 kVA
Nibedita Hospital	Bangladesh	1	66 kVA
Pioneer Hospital (Sylhet)	Bangladesh	2	165-375 kVA
Frust Medical Services Ltd	Bangladesh	1	270 kVA
Grey Bruce Health Services	Canada	2	600 kW
Kelowna General Hospital	Canada	2	1600 kW
		4	
London Health Sciences Centre	Canada		1600 kW
Saint Thomas Elgin General Hospital	Canada	1	700 kW
Foronto Western Hospital	Canada	2	1600 kW
Aalborg University Hospital	Denmark	1	1100 kVA
Aarhus University Hospital Skejby	Denmark	4	2500 kVA
lôpital Skejby	Denmark	1	1540 kVA
Iniversity of Copenhagen Panum Complex	Denmark	1	2500 kVA
Centre Hospitalier de Bar-le-Duc	France	1	1250 kVA
Centre Hospitalier de Béziers	France	2	700-3100 kVA
Centre Hospitalier de Brive	France	1	2200 kVA
Centre Hospitalier de Carcassonne	France	1	1900 kVA
Centre Hospitalier de Martigues	France	2	220-1850 kVA
Centre Hospitalier de Niort	France	2	1000-1850 kVA
Centre Hospitalier de Wattrelos	France	3	165 kVA
Centre Hospitalier des Vals d'Ardeche	France	3	800 kVA
Centre Hospitalier Hôpitaux Civils de Colmar	France	1	1400 kVA
Centre Hospitalier Hopitaux Du Sud Charente	France	1	550 kVA
Centre Hospitalier Jacques Coeur	France	3	2000 kVA
Centre Hospitalier Libourne	France	7	2000 kVA
Centre Hospitalier Marc Jacquet de Melun	France	2	200-2000 kVA
Centre Hospitalier Marc Jacquet Melun	France	2	1650 kVA
Clinique Jeanne d'Arc	France	- 1	440 kVA
lôpital de Hautepierre	France	2	1000-1500 kVA
lôpital de Houdan	France	3	440 kVA
		4	
Hôpital Lapeyronie Hôpitaux de Lannemezan	France France	4	2000 kVA 650 kVA
•	France	4	
lôpitaux du Léman			130-2200 kVA
lôpitaux Universitaires de Strasbourg	France	1	2000 kVA
Polyclinique de l'Atlantique	France	2	650-1650 kVA
Centre Hospitalier Andrée Rosemon	French Guiana	3	2200 kVA
lôpital Libreville	Gabon	1	700 kVA
Medical Centre	Hong Kong	3	1500-1800 kVA
Jahra Hospital	Kuwait	1	1600 kW
Bio Science Hospital	Malaysia	1	1000 kVA
lospital of a leading healthcare service provider in Malaysia	Malaysia	1	1000 kVA
Shwe La Min Hospital	Myanmar	1	318 kVA
JHC Hospital	Myanmar	2	500 kVA
Baxter Healthcare Medical Laboratory	New Zealand	1	500 kVA
Burwood Hospital	New Zealand	1	700 kVA
Dunstan Hospital	New Zealand	1	165 kVA
Palmerston North Hospital	New Zealand	1	700 kVA
	Réunion	1	2500 kVA
Centre Hospitalier Félix Guyon	neumon		
Centre Hospitalier Félix Guyon Alawi Tunsi Hospital–Abhur	Saudi Arabia	2	1250 kW

HOSPITALS AND CLINICS	COUNTRY	QTY	kW/kVA
Ministry Of Health Al-Qassim	Saudi Arabia	3	800 kW
Severance Hospital	South Korea	2	3250 kW
Torsby Kommun Hospital	Sweden	3	1400 kVA
Geneva University Hospital	Switzerland	3	1000-1250 kVA
Hôpital de Morges	Switzerland	1	630 kVA
Hospital in the Chia Yi county	Taiwan	4	1563 kVA
Hospital in the Hsinchu region	Taiwan	2	1563 kVA
Hospital in the Xinian area	Taiwan	2	1875 kVA
Allegan General Hospital	United States	3	300 kW
Baylor Scott & White Medical Center–McKinney	United States	3	800 kW
Davita Dialysis	United States	25 locations	125-500 kW
Florida Hospital Orlando	United States	1	350 kW
Fresenius Medical Care	United States	152 locations	80-400 kW
Gateway Regional Medical Center	United States	2	400 kW
Indu and Raj Soin Medical Center	United States	2	1750 kW
Jefferson Barracks VA Medical Center	United States	2	2500 kW
Jerry L. Pettis Memorial VA Medical Center	United States	4	500 kW
John Muir Medical Center	United States	3	1750 kW
Medicine Hat Regional Hospital	United States	1	2500 kW
	United States	2	500 kW
Melrose-Wakefield Hospital	United States	3	2000 kW
Mercy Health-West Hospital	United States	3	2000 kW
Miami Valley Hospital Heart and Vascular Center	United States	3	2000 kW
Naval Hospital Camp Pendleton	United States	1	3250 kW
Ochsner Baptist Medical Center		2	
Scripps Memorial Hospital La Jolla	United States	4	2500 kW
Sibley Memorial Hospital	United States		1500 kW
St. Anthony Healthplex North	United States	2	400 kW
St. Anthony Healthplex South	United States	2	400 kW
St. Dominic Hospital	United States	2	2800 kW
St. Mary's Sacred Heart Hospital	United States	1	900 kW
VA Gulf Coast Veterans Health Care System	United States	2	2250 kW
Hospital in Can Tho City	Vietnam	1	1000 kVA
Hospital in Chau Doc	Vietnam	1	630 kVA
Hospital in Nghe An	Vietnam	1	275 kVA
Hospital in Tra Vinh	Vietnam	1	165 kVA
Largest private hospital in Vietnam	Vietnam	1	630 kVA
One of the largest hospitals in Vietnam	Vietnam	2	630 kVA
PHARMACEUTICAL	COUNTRY	QTY	kW/kVA
Pharmacie Familiprix St. Gabriel	Canada	1	100 kW
	Canada	1	200 kW
Al-Nahdi Pharmacies	Saudi Arabia	2	1250 kW
Al-Nahdi Pharmacies CVS Pharmacy	Saudi Arabia United States	2 3	1250 kW 200-300 kW
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy	Saudi Arabia United States United States	2 3 1	1250 kW 200-300 kW 100 kW
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts	Saudi Arabia United States United States United States	2 3 1 5	1250 kW 200-300 kW 100 kW 50-2000 kW
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts Navitus	Saudi Arabia United States United States United States United States	2 3 1 5 1	1250 kW 200-300 kW 100 kW 50-2000 kW 300 kW
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts Navitus Publix Pharmacy Fulfillment	Saudi Arabia United States United States United States United States United States	2 3 1 5 1 1 1	1250 kW 200-300 kW 100 kW 50-2000 kW 300 kW 2000 kW
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts Navitus Publix Pharmacy Fulfillment Walgreens	Saudi Arabia United States United States United States United States United States United States United States	2 3 1 5 1 1 1 8	1250 kW 200-300 kW 100 kW 50-2000 kW 300 kW 2000 kW 50-1000 kW
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts Navitus Publix Pharmacy Fulfillment Walgreens West-Ward Pharmaceuticals	Saudi Arabia United States United States United States United States United States United States United States United States	2 3 1 5 1 1 8 2	1250 kW 200-300 kW 100 kW 50-2000 kW 300 kW 2000 kW 50-1000 kW 80-2000 kW
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts Vavitus Publix Pharmacy Fulfillment Walgreens West-Ward Pharmaceuticals RETIREMENT AND ASSISTED LIVING	Saudi Arabia United States United States United States United States United States United States United States United States COUNTRY	2 3 1 5 1 1 8 2 2 QTY	1250 kW 200-300 kW 100 kW 50-2000 kW 2000 kW 50-1000 kW 80-2000 kW kW/kVA
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts Navitus Publix Pharmacy Fulfillment Walgreens West-Ward Pharmaceuticals RETIREMENT AND ASSISTED LIVING	Saudi Arabia United States United States United States United States United States United States United States United States	2 3 1 5 1 1 8 2 <b>QTY</b> 3	1250 kW 200-300 kW 100 kW 50-2000 kW 300 kW 2000 kW 50-1000 kW 80-2000 kW
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts Navitus Publix Pharmacy Fulfillment Walgreens West-Ward Pharmaceuticals RETIREMENT AND ASSISTED LIVING Maison de retraite Briec-de-l'odet EHPAD	Saudi Arabia United States United States United States United States United States United States United States United States COUNTRY	2 3 1 5 1 1 8 2 <b>QTY</b> 3 1	1250 kW 200-300 kW 100 kW 50-2000 kW 2000 kW 50-1000 kW 80-2000 kW kW/kVA
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts Navitus Publix Pharmacy Fulfillment Walgreens West-Ward Pharmaceuticals RETIREMENT AND ASSISTED LIVING Maison de retraite Briec-de-l'odet EHPAD Maison de Retraite Debrou	Saudi Arabia United States United States United States United States United States United States United States COUNTRY France	2 3 1 5 1 1 8 2 <b>QTY</b> 3	1250 kW 200-300 kW 100 kW 50-2000 kW 2000 kW 50-1000 kW 80-2000 kW <u>kW/kVA</u> 165 kVA
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts Navitus Publix Pharmacy Fulfillment Walgreens West-Ward Pharmaceuticals RETIREMENT AND ASSISTED LIVING Maison de retraite Briec-de-l'odet EHPAD Maison de Retraite Debrou Maison de Retraite Frontignan	Saudi Arabia United States United States United States United States United States United States United States COUNTRY France France	2 3 1 5 1 1 8 2 <b>QTY</b> 3 1	1250 kW 200-300 kW 100 kW 50-2000 kW 2000 kW 50-1000 kW 80-2000 kW kW/kVA 165 kVA 630 kVA
Al-Nahdi Pharmacies CVS Pharmacy ExactCare Pharmacy Express Scripts Navitus Publix Pharmacy Fulfillment Walgreens West-Ward Pharmaceuticals RETIREMENT AND ASSISTED LIVING Maison de retraite Briec-de-l'odet EHPAD Maison de Retraite Debrou Maison de Retraite Frontignan Résidence Saint-François	Saudi Arabia United States United States United States United States United States United States United States COUNTRY France France France	2 3 1 5 1 1 8 2 <b>QTY</b> 3 1 1 1	1250 kW 200-300 kW 100 kW 50-2000 kW 2000 kW 50-1000 kW 80-2000 kW <u>kW/kVA</u> 165 kVA 630 kVA 220 kVA
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