

# OpenBlue Services

## Tailored Service Solutions for Chillers

Digitally Infused Maintenance Package





# Empowering new ways of delivering services enabled by technology and data

## The evolution of Planned Service Agreements

### Five key activities and new capabilities

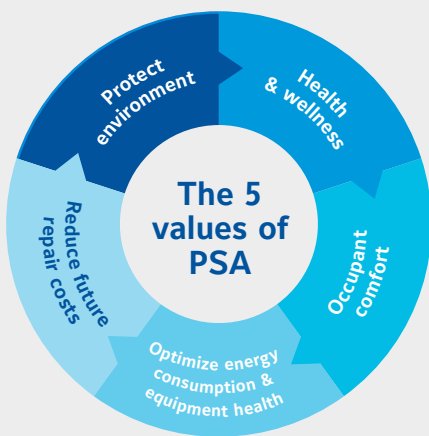
Johnson Controls never stands still. As a customer-centric business, we are always searching for new technologies, solutions, and methods to deliver services to our partners. These are some of the new capabilities we evolved in our Digital Infused Service to drive our market-leading YORK® chillers to optimum levels of performance and uptime.

Activities	Technology	Outcomes
<b>Connected Maintenance</b>	Continuous chiller fault detection and diagnostics enabled by IoT connectivity with cloud-based platform powered by advanced AI engines.	Round-the-clock early fault detection and notification to mitigate unplanned and costly downtime while improving efficiency.
<b>On-Site Maintenance</b>	Pre-visit condition-based report review to customize on-site work according to fault detection and diagnostic findings.	Trusted expert technicians powered by comprehensive chiller service report and condition assessment with actionable insights.
<b>On-Site Condition-Based Maintenance</b>	Field data acquisition enabled by non-intrusive diagnostic technologies and trending analytics to identify abnormal performance and accelerated aging.	Longer life and augmented efficiency with actionable expert insights enabled by regular and proactive mission-critical systems diagnostic.
<b>Remote Assistance</b>	Round-the-clock remote support and on-site assistance enabled by centrally monitored real-time data and KPIs.	Superior peace of mind for your operational teams assisted by best-in-class subject matter experts.
<b>Budgeting/Planning Support</b>	Chiller performance assessments to help with budget planning.	Data-enhanced decision support to reduce total cost of ownership.

# Technology powers people. And people power success.

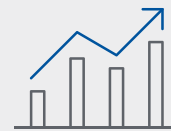
Our leading services portfolio combines innovative technology and the expertise of our people to enhance delivery. We utilize data-driven insights, AI, and analytics capabilities to facilitate effective decision-making.

## Our Planned Service Agreement (PSA) philosophy



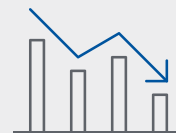
### Five core values to guide our business

- Safeguard health and wellness for building occupants
- Improve occupant comfort
- Optimize energy consumption and equipment health
- Reduce future repair costs
- Protect the environment



### What goes up

- Working life of equipment
- Efficiency levels
- Occupant comfort
- Owner peace of mind



### What goes down

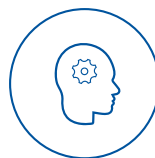
- Operating costs
- Carbon footprint
- Unplanned downtime
- Total cost of ownership

## Tailored Service Solutions powered by OpenBlue



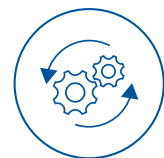
### Essential

Fault Detection and Diagnostics (FDD) supported by on-site manufacturer service, which leads to increased equipment uptime.



### Enhanced

Enhanced monitoring and condition-based diagnostics lead to improved equipment uptime and sustainability.



### Expert

Intensive supervision by subject matter experts and comprehensive on-site condition-based diagnostics provide reduced lifecycle operational costs and better budget control.

# Tailored Service Solutions for Chillers

	Essential	Enhanced	Expert
<b>Asset Management Features</b>			
Powered by <b>OpenBlue</b>			
<b>Connected Maintenance</b>			
• Customer-facing application (real-time operating data, trending, dashboards)	✓	✓	✓
• SME discreet remote supervision	✓	✓	✓
• Planned health-check reports (FDD/operational alarms)	✓	✓	✓
• Planned remote inspection (comprehensive report - CPI index)	✓	✓	✓
• Consultative advisory calls	✓	✓	✓
• 24/7 monitoring and notifications (alert + alarms)		✓	✓
<b>On-Site Preventative Maintenance</b>			
• Major planned visit	✓	✓	✓
• Minor planned visit	✓	✓	✓
• Proactive software updates for water-cooled chiller	N/A		
<b>On-Site Condition-Based Maintenance</b>			
• Compressor mechanics condition (oil)		✓	✓
• Compressor mechanics condition (vibrations)			✓
• Energy performance (thermography + EER/COP + refrigerant)			✓

Level of service offered    Included    Optional add-on (not included in base price)

## Ask about our additional services

### On-Site Preventative Maintenance

- On-site planned inspection
- Condenser cleaning (water-cooled chiller only)
- Coil cleaning (air-cooled chiller only)

### On-Site Condition-Based Maintenance

- Heat-exchangers condition (endoscopy + water)
- Heat-exchangers condition (eddy current)
- Motor condition (insulation resistance + current/voltage)

# Tailored Service Solutions for Chillers

	Essential	Enhanced	Expert
<b>Asset Management Features</b>			
Powered by <b>OpenBlue</b>			
<b>On-Site Corrective Maintenance</b>			
• Parts - preferred access and discounts	✓	✓	✓
• Labor - preferred access and discounts	✓	✓	✓
• Chiller labor "call-out" limited	✓	✓	✓
• Chiller labor "call-out" unlimited		✓	✓
<b>Remote Assistance</b>			
• Q&A SME assistance and technical literature (normal business hours)	✓	✓	✓
• Walkthrough plant discovery (new site customer only)	✓	✓	✓
• 24/7 emergency SME remote assistance	✓	✓	✓
• Annual report assesement (customer needs review)		✓	✓

Level of service offered  
 Included  
 Optional add-on (not included in base price)

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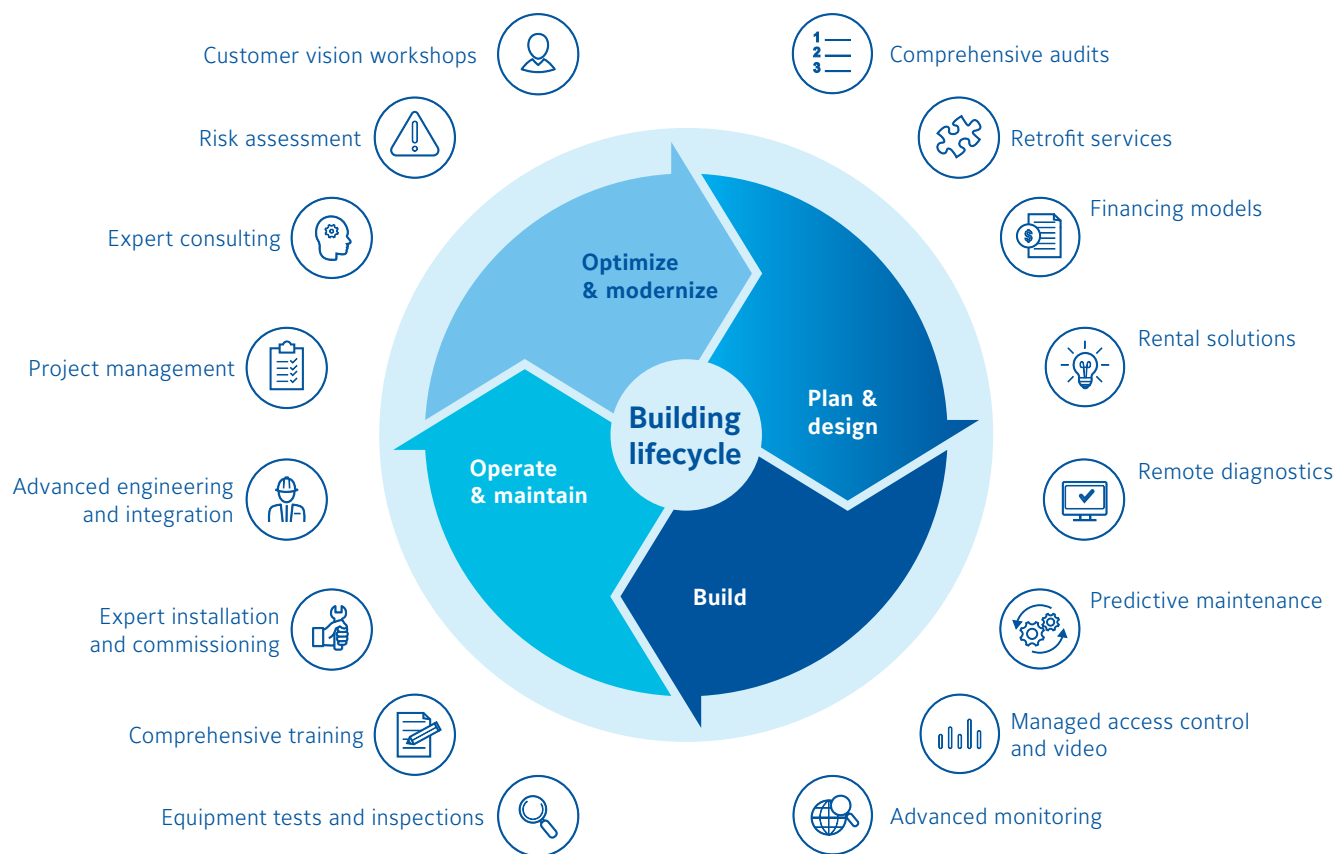
### Energy Management Features

- Energy advisor – chiller room walkthrough audit (inspection – non intrusive)

### Operate Management Features

- Operate and manage – on-site operator implant (normal business hours)

# Powering innovative and highly tailored service solutions across the full building life cycle



## The Johnson Controls difference



### Deep subject matter experts

Highly experienced service specialists at your fingertips. Providing best-in-class service is in our DNA.



### OpenBlue technology

OpenBlue AI enables you to manage your operations more systematically for greater visibility, enhanced performance, proactive planning, and overall building optimization.



### Tailored and flexible offerings

We offer highly flexible and tailored approaches across a comprehensive range of HVAC, fire protection, and security services, delivering the services you want, the way you want them.

# OpenBlue

OpenBlue is a complete suite of connected solutions that serves industries from workplaces to schools, hospitals to campuses, and beyond. This platform includes tailored, AI-infused service solutions such as remote diagnostics, predictive maintenance, compliance monitoring, advanced risk assessments, and more. A dynamic new space from Johnson Controls, OpenBlue is how buildings come alive.





### **About Johnson Controls**

At Johnson Controls, we transform the environments where people live, work, learn and play. From optimizing building performance to improving safety and enhancing comfort, we drive the outcomes that matter most. We deliver our promise in industries such as healthcare, education, data centers, and manufacturing. With a global team of over 100,000 experts in more than 150 countries and over 130 years of innovation experience, we are the power behind our customers' mission. Our leading portfolio of building technology and solutions includes some of the most trusted names in the industry, such as Tyco®, YORK®, Metasys®, Ruskin®, Titus®, Frick®, PENN®, Sabroe®, Simplex® and Grinnell®.

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