

# GUARANTEED UP-TIME

A DATA CENTER  
FACILITY CASE STUDY



The final package provided savings in energy consumption, installed costs and maintenance. The system guaranteed up-time.

“There are only a handful of companies in North America that can deliver this kind of HVAC system, and Armstrong is among the elite group that can do it well.”

**Joe Aprile**  
Manager, North America Project Engineering

## Digital Realty Datacenter

A partnership approach to solution design is one of the key attributes that sets Armstrong apart. Armstrong Vertical In-Line pumps are an important component in this integrated, packaged solution. But for this data centre customer, satisfaction comes from a culture of listening, collaboration and co-creation.

### Background

Digital Realty (DLR) is a global datacenter developer focused on delivering modular datacenter solutions. The foundation of their value proposition is providing secure, reliable and cost-effective facilities. DLR customers include domestic and international companies in the IT, manufacturing and financial services industries. As of September 2009, DLR owned 73 of the top 100 largest datacenters in the world.

To maintain their competitive offering, DLR needed to be able to construct an entire datacenter in just 12 weeks. To achieve this they needed a turn-key cooling system that would install quickly and would provide reliable performance. Armstrong had previously supplied a similar packaged system to a DLR installation in another major US city and had gained experience from working with a commissioning agent who scrutinized the system very carefully. Based on the feedback from the commissioning agent, Armstrong made a number of design changes to suit the customer's preferences. Armstrong also met with other stakeholders from DLR to gather feedback before commencing design on the second packaged system.

Applying continuous improvement techniques, Armstrong revised the designs to raise the quality of the final package well beyond the originally specified requirements. When the system was delivered there were no issues on installation, and there was no 'punch list' for Armstrong. The commissioning agent gave Armstrong a perfect score on a very complex design and fabrication process.

DLR was extremely pleased with the quality of the solution, and the experience of working closely with customers to co-create solutions has deepened Armstrong's expertise in the area of packaged systems.

### Tech-Facts

#### HVAC equipment

The fully-enclosed double-circuit pumping packages measure 33'L x 11'W x 12'H and include a constant speed primary circuit and a variable speed secondary circuit.

CHW constant speed primary circuit:

Two 8 x 8 x 15 4300 series Vertical In-Line (VIL) pumps (1300 USgpm @ 75 ft)

CHW variable speed secondary circuit:

Two 8 x 8 x 10 4300 Design Envelope Series Intelligent Variable Speed (IVS) pumping units with integrated drives (1100 USgpm @ 58 ft)

#### Motors

30 hp/1800 rpm, ODP, NEMA premium efficiency 3/60/460V

#### Additional items

- Air purgers
- Expansion tanks
- Glycol autofill unit

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