




FIVE STAR

XP 230

Epoxy Grout

**How can you stay on top of
the increasing demand for
wind energy?**

Well, let's start at the bottom.



**The demand for energy keeps going up.
Here's why you need to look in the
opposite direction.**



FIVE STAR

XP 230

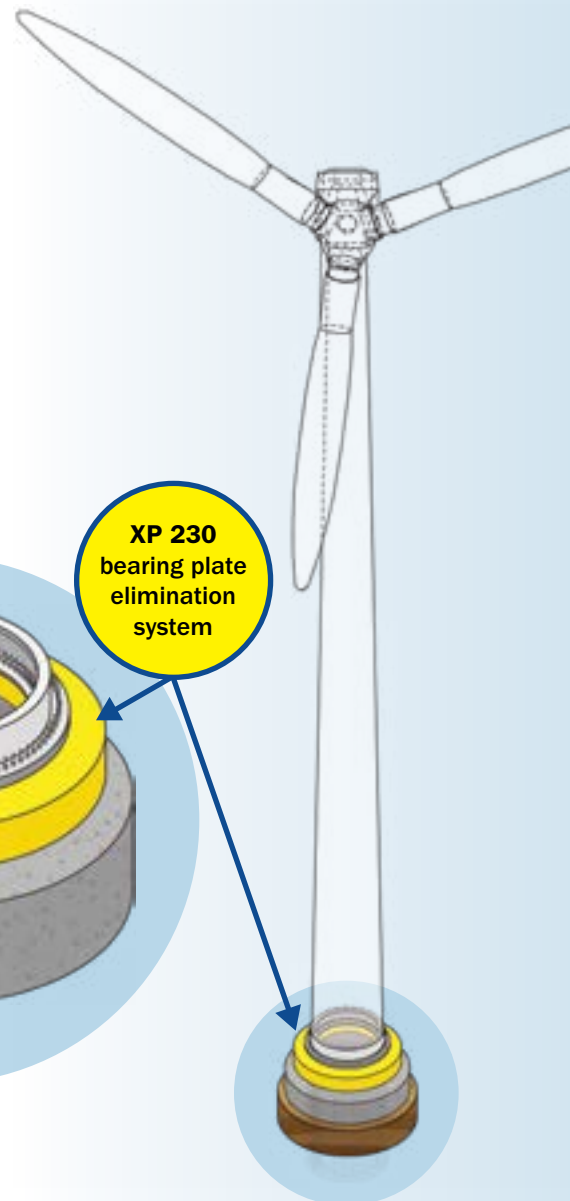
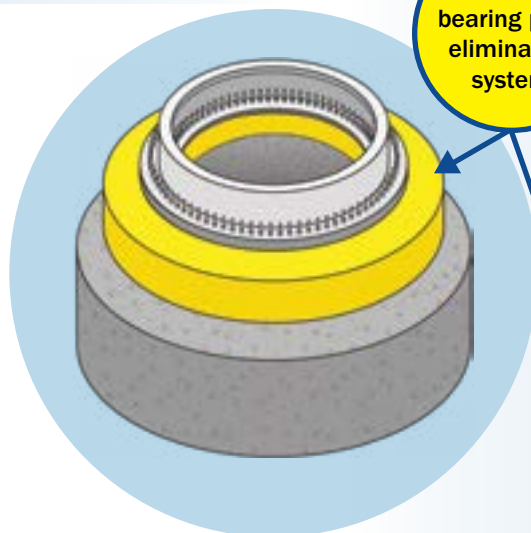
Epoxy Grout

Change continues to define the dynamic world of wind energy production. Adapting to the demand for more and more energy requires new designs and better ideas. Turbines must become bigger and more powerful; towers must grow taller; blades must get longer—it all points to one thing: **To support this new breed of wind turbines, you need a stronger base.**

Introducing XP 230.

***The most exciting new product
in the world of wind turbines.***

New Xtreme Performance XP 230 is a 23,000 psi (158.5 MPa) compressive strength epoxy grout that forms a stronger connection between the dynamic tower and its static foundation than the bearing plate. Precision XP 230 Epoxy Grout spreads the load between the tower and the foundation in one step, eliminating the need for a separate steel bearing plate. XP 230 also helps form a strong, full-contact, weathertight **essential connection** between the tower flange and foundation.





To build a monument like this, you need a proper foundation.

As the wind power industry expands to meet ever-growing demand, builders of these majestic towers that take energy from the sky must respond with more powerful turbines, longer blades, and taller towers. That calls for a stronger support system at the base.

With the introduction of new XP 230 Xtreme Performance Epoxy Grout, you can trust that the connection between the tower and foundation is stronger than ever.

What's innovative about XP 230?

- Provides the industry's only 23,000 psi (158.5 MPa) compressive strength epoxy grout, specifically developed for towers taller than 105 meters
- Simplifies design by eliminating the need for a steel bearing plate
- Simplifies installation by securely spreading the load in one step
- Helps keep the weather out and helps prevent water ingress by forming an impenetrable connection

Five Star Products' XP 230 Epoxy Grout provides the **essential connection** between tower and foundation to give you the ability to build bigger and help meet the demand for more energy.

Let Five Star Products' grout make the essential connection in your wind farm's success.

With our new XP 230 Epoxy Grout, you get a stronger base and a bigger bottom line.

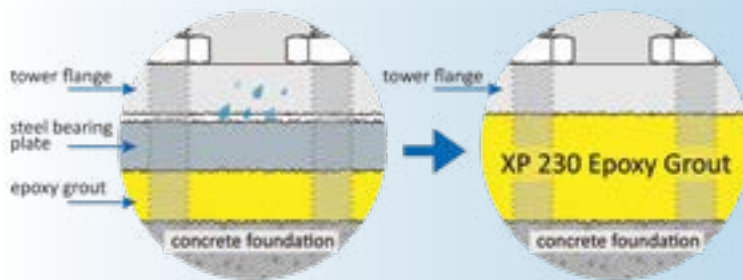
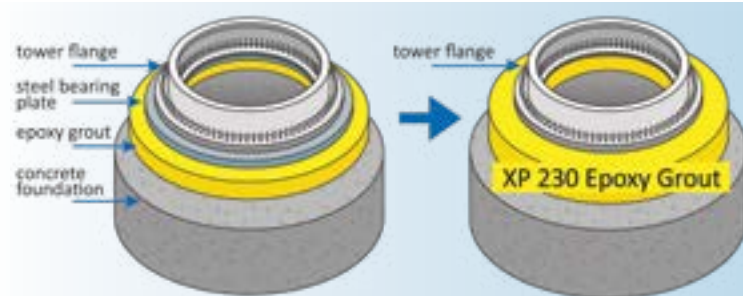
By removing the need for a bearing plate, you reduce both the cost and complexity of installation. This **bearing plate elimination system** means more certainty in budgeting, scheduling, and meeting deadlines. Drive down your costs and simplify the installation at the same time.

How strong is XP 230?

Typical epoxy grouts offer compressive strength of up to 18,000 psi (124 MPa). Innovative, lab-tested, field-tested XP 230 provides 23,000 psi (158.5 MPa) and is specifically designed to support larger turbines and tower heights of 105 meters or more.

Eliminate the plate, Simplify the process.

Using XP 230 is the same process as the grout you use now, except that it's much stronger, and you can pour depths of up to 18 in. (457 mm) in a single lift. And because it's flowable, XP 230 fills every surface imperfection to form a solid connection between the tower flange and foundation.



Be Ready. Make the Essential Connection.

Make **XP 230** part of your designs to meet the ever-increasing energy demand. Be there, be ready, at the forefront of innovation in renewable, clean energy supply with Five Star Products' newest advancement: **Xtreme Performance, XP 230.**

Call Five Star Products at 203.336.7900.

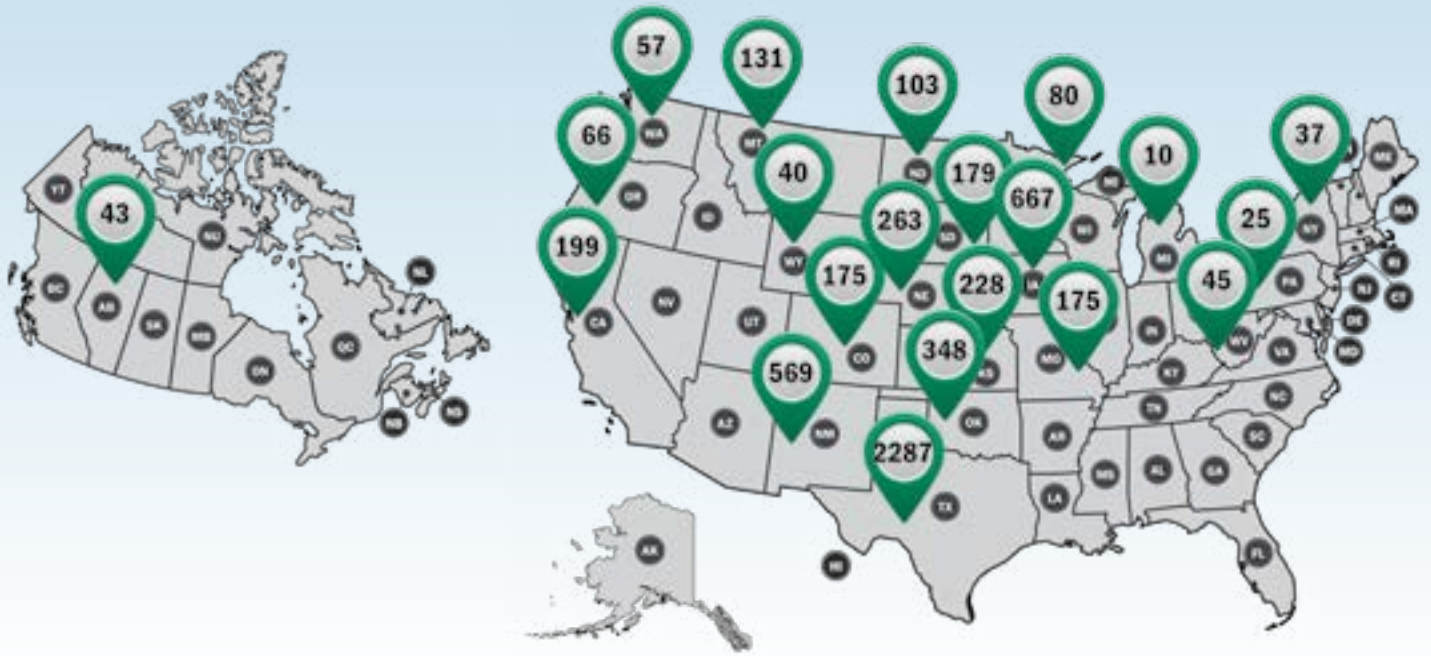
Learn more at fivestarproducts.com/xp230.html.



XP 230 product specifications were developed in collaboration with RRC Power & Energy, LLC (RRC), one of the leading onshore industrial-scale wind turbine foundation designers in the United States. RRC has also been verified to have on-site material testing capabilities to accurately test this ultra-high strength epoxy grout. Contact RRC at www.RRCcompanies.com for more information about their engineering and material testing services for this product.

Experience Matters

Presently installed beneath 5,500 wind towers in the US and Canada,
Five Star® Epoxy Grout Systems have a proven history of success!



Five Star Industrial Market Segments



Five Star Products formulates and manufactures high-performance cement grouts, epoxy grouts, and concrete repair products specifically developed for challenging applications and environments. We proudly provide unparalleled technical support at the engineering, plant, and contractor levels, which includes driving specifications and providing expert guidance to engineers and specifiers worldwide.

Five Star Product Technologies

Epoxy Grouts
Adhesives
Coatings & Sealants

Cementitious Grouts
Crack Repair
Waterproofing

Concrete Repair
Marine
Nuclear Safety Related



FIVE STAR

Over 65 years of specialized material science expertise

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