



AMSYSCO
UNBONDED
POST-TENSIONING
SYSTEMS + SERVICE + ENGINEERING

Lower Cost. Higher Performance.

WHY POST-TENSIONING?

Architects, engineers, developers, contractors and owners incorporate post-tensioning systems on their projects in order to achieve economy, efficiency, quicker construction and lower lifetime cost of the structure. Why? Because post-tensioning enhances concrete strength under both compressive and tensile stresses.

THE POST-TENSIONING PROCESS

Post-tensioning tendons are installed in a parabolic profile prior to placing the concrete and later stressed to a specified concrete strength. This process introduces both compressive forces in the concrete and stresses that counter-balance service loads. The benefits are substantial.





POST-TENSIONING: ADVANTAGES AND BENEFITS

Post-tensioning (PT) frequently solves design and construction challenges that other construction methods simply cannot. Some key advantages include:

- Thinner concrete member sizes; reduction in concrete is approximately 20%
- Rebar in floor elements is reduced by 60% to 75%
- Decreased dead load reduces rebar and concrete in columns and foundations
- Longer spans and fewer columns give greater flexibility in floor layouts and better lighting in parking garages
- Reduction in building height decreases the cost of building cladding, vertical mechanical/service elements, and rebar and concrete in shear walls
- Reduced building height also results in energy savings, especially for office buildings
- Improved seismic behavior
- Reduced deflection and vibration
- Improved crack control and waterproofing properties—especially beneficial for parking garages and balconies
- Lower overall maintenance and life cycle costs of the structure
- Potential LEED® credits for Green building design and construction



COMPLETE PT SOLUTIONS FROM AMSYSCO

AMSYSCO provides cost-effective post-tensioning solutions across a wide range of structures and applications such as condominiums and apartments, office buildings, parking garages, hospitals, schools, slab-on-ground, storage tanks, stadiums, repair and restoration, barrier cable, special structures and applications.

Exceptional integration of striking architectural design with structural innovation. Unique application of post-tensioning... solving complex structural problems.

—Jury, PTI Project of the Year

PTI Project of the Year / Award of Excellence

AWARD-WINNING STRUCTURAL SOLUTIONS



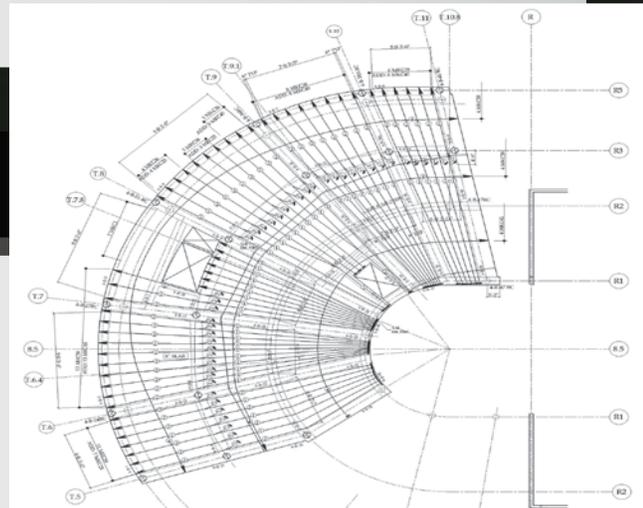
Our early involvement with structural engineers and contractors can often yield substantial results. A prime example is the new Guthrie Theatre Center in Minneapolis, a particularly complex structure with a sloping concrete slab supported by a radial/circular network of beams and cantilevered girders on five tiers. Additionally, we supplied one million feet of PT for the 1000-space parking garage. AMSYSCO's focus, passion and technical prowess paid off when the Post-Tensioning Institute awarded the structure their top honor, the Project-of-the-Year/Award of Excellence!

Whether your project is fairly straightforward or a complex design requiring out-of-the-ordinary structural advice, the AMSYSCO technical design, engineering and construction support teams will apply their decades of post-tensioning experience with the latest design tools.

“WHAT OTHERS ARE SAYING”

“Although we had not worked with AMSYSCO previously, we selected them on the basis of referrals that cited their technical strength and reliability to service field personnel.”

— Bill Scherling, Project Manager, McGough Construction
Guthrie Theatre Center



Significant Savings for Your Project

AMSYSCO **VALUE ENGINEERING** YIELDS RESULTS

AMSYSCO's value engineering is a proven solution—structural and financial—for owners, developers, engineers, architects and contractors. As you plan or pursue a design-build/bid project, or would like to reduce the cost of an already designed project, we can attend a design or pre-construction review meeting. Working with your team, we can weigh in with a practical construction solution that addresses the bottom-line financial improvements by development of an optimal concrete frame. We will then follow through with specific design and construction recommendations tailored to your project.



“ WHAT OTHERS ARE SAYING ”

“AMSYSCO's early involvement in the design and construction solution saved \$1.6 million on the Louisville Arena Project.”

—Tom Bond, RA, LEED, Senior Preconstruction Manager, Mortenson Construction
Louisville Arena and Garage





“With a particularly strict production schedule, AMSYSCO met every single delivery, exceeding our every expectation on this challenging project. They are now our ‘go-to’ PT supplier.”

—Jason King, Project Manager, Wilhelm Construction
Indianapolis Airport

AMSYSCO supplied 4.6 million feet of PT tendons for this project.



Seasoned PT Experience on Every Job

EXCEPTIONAL PROJECT MANAGEMENT

AMSYSCO post-tensioning systems can be found on a wide range of prestigious projects nationwide. Regardless of the structural or construction challenges involved, customers value us for delivering on our promise of dependable client service and high level of technical expertise. Each project receives attention from the officers/principals of the company. In the end, our responsibility—on each and every project—is to assure exceptional product quality, competitive prices and timely delivery that culminates in the BEST VALUE.

Listening, honest communication and delivering on every promise is our standard operating procedure. This straightforward ethical approach and commitment to excellent service helps us enjoy a high level of repeat business from our many customers.

For fast-track projects, our team's extensive engineering knowledge and consistent product quality backed by our plant's high production capacity gives the single point-of-contact necessary to respond quickly and reliably to project demands.



Annual Capacity: 110 Million Feet

PTI-CERTIFIED PLANT

AMSYSCO's state-of-the-art manufacturing facilities (partially shown here) are unrivaled. The entire procurement, manufacturing and testing processes of AMSYSCO's distinctive Green PT System is produced under the Post-Tensioning Institute's most rigorous plant certification program.



As a standard practice, our trained specialists service and calibrate the equipment necessary to execute your PT stressing successfully.





A Passion for Quality and Service

THE **CUSTOMER FIRST**—OUR SINGLE FOCUS

Our clients benefit from our laser-like focus on engineering support, customer service and product quality on unbonded post-tensioning projects. Our business philosophy is to invest up-front in quality to prevent problems on the job site. You benefit from a results-oriented organization driven to provide exceptional quality at competitive prices. Some examples include:

- Two high-quality PT solutions unrivaled in the industry, AMSYSCO Monostrand PT System and AMSYSCO Encapsulated PT System
- Premium-grade high-density plastic sheathing manufactured using an advanced extrusion process
- Utilization of more PT coating (grease) than required by specifications
- Distinctive green tendons contrast with the PT coating and thereby draw attention to the quality of our product in both the plant and field
- Proprietary packaging of finished tendons to protect the sheathing during manufacturing, shipping and handling
- Fabrication list of backup and support bars and min/max range of elongations are shown on the shop drawings
- Using special tie instead of metal tie wire—which can cut through the sheathing
- Using longer sleeves for an encapsulated system helps protect the strand in the event more plastic sheathing is cut in the field

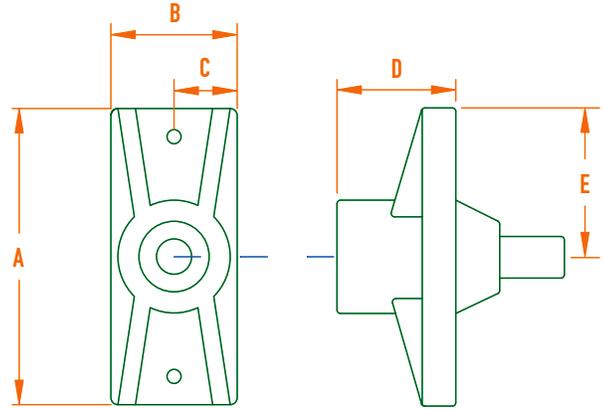
“WHAT OTHERS ARE SAYING”

“During every project phase of this exciting challenge, AMSYSCO worked with the rest of the construction team to help solve complicated constructability issues.”

— Dennis Poulos, Senior Superintendent, Power Construction
Parkview Tower and Underground Garage



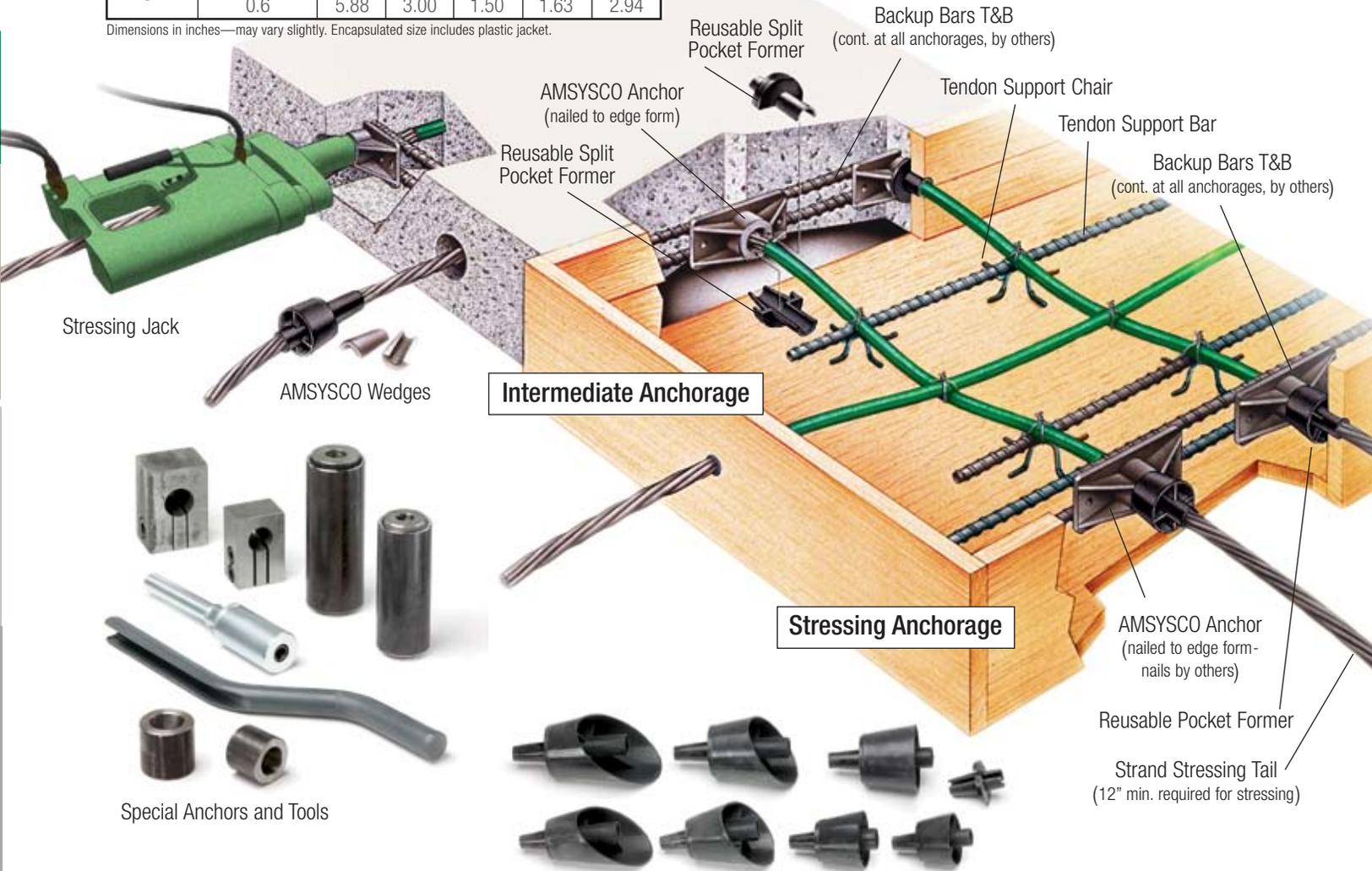
AMSYSCO MONOSTRAND PT SYSTEM



TENDON ANCHOR

SYSTEM	ANCHOR SIZE	A	B	C	D	E
Encapsulated	0.5	5.25	2.50	1.25	1.50	2.63
	0.6	6.13	3.38	1.68	1.75	3.06
Regular	0.5	5.00	2.25	1.13	1.50	2.50
	0.6	5.88	3.00	1.50	1.63	2.94

Dimensions in inches—may vary slightly. Encapsulated size includes plastic jacket.



PRESTRESSING STEEL PROPERTIES

SYSTEM	Diameter (inches)	Cross Sectional Area (inches ²)	Weight (lbs./ft.)	Modulus of Elasticity	Ultimate Strength (f_{pu} - ksi)	Prestressing Force (kips)			
						Ultimate Strength f_{pu}	Force at Stressing 80% of f_{pu}	Jacking Force 70% of f_{pu}	Final Effective Force F_e
STRAND	0.5	0.153	0.525	28.5x10 ⁶	270	41.3	33.0	28.9	26 to 27.5
	0.6	0.217	0.74	28.5x10 ⁶	270	58.6	46.9	41.0	37 to 39

ASTM - A416 allows variation in modulus of elasticity and a very small variation in the diameter/cross-sectional area. The actual jacking force will depend upon the actual seating and friction losses. Similarly, the final effective force in the tendon can vary depending upon the long-term losses. AMSYSKO reserves the right to change its products at any time.



Engineered for Reliability and Protection

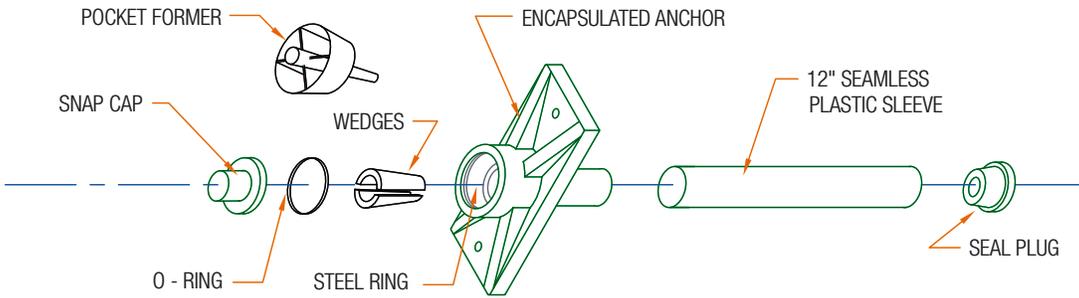
ANTI-CORROSION SYSTEM

Structures exposed to corrosive environments, such as parking garages, demand special protection. The **AMSYSCO Encapsulated PT System** is designed and produced to provide the highest possible level of corrosion protection. Our advanced design and manufacturing process provides watertight encapsulation of the steel strand, anchorage and all connections.

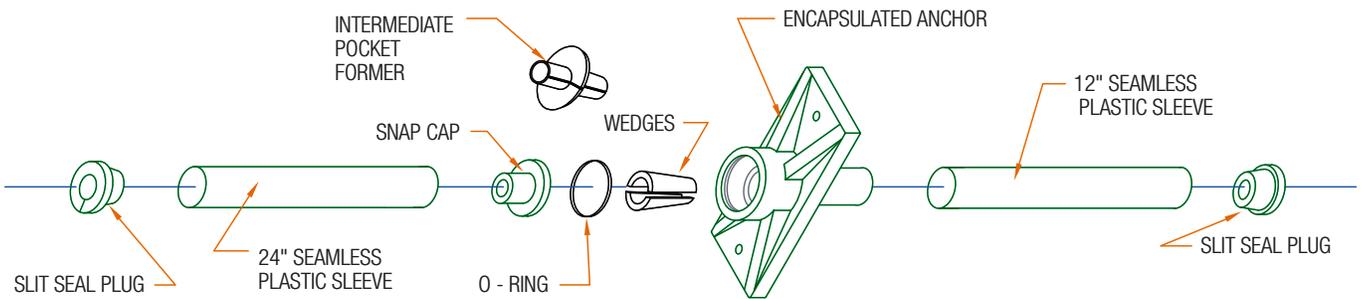
We begin by coating the steel strand with special high-quality anti-corrosion PT coating (grease), followed with high-density plastic sheathing manufactured using our state-of-the-art extrusion process. Then each anchorage is fully encased in an extruded jacket of high-density polyethylene. A tightly sealed plastic sleeve is fitted on the anchor/strand connection to provide additional protection. Finally, a grease-filled cap (pictured at right) is snapped on to prevent moisture intrusion into the tendon ends.



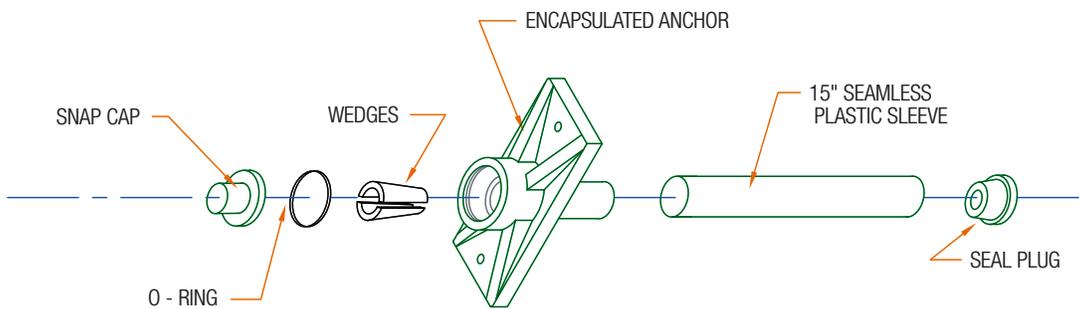
AMSYSCO ENCAPSULATED PT SYSTEM



STRESSING END ANCHORAGE SYSTEM



INTERMEDIATE STRESSING ANCHORAGE SYSTEM



DEAD END ANCHORAGE SYSTEM

“AMSYSCO was a great asset in successfully completing the project on schedule.”

—Steve DeGroote, Project Executive, Mortenson Construction
Minneapolis Airport Parking Garage

AMSYSCO delivered 4.7 million feet of Encapsulated PT Tendons







Ingenuity and Integrity

THE AMSYSCO VALUE

WE OFFER THE BEST VALUE THROUGH THE HIGHEST QUALITY PRODUCTS, EFFECTIVE CUSTOMER SERVICE AND COMPETITIVE PRICING.

- AMSYSCO's Continuous Improvement Process focuses on enhancing our product quality and customer service
- Operating under the same ownership since our founding in 1981, we offer unmatched stability and seasoned experience
- In-house, Value Engineering services to help you achieve the most economical post-tensioned concrete frame
- Exceptional production capacity in our advanced manufacturing facility
- Rigorous Quality Control systems proven over decades
- Climate-controlled protection—all raw material, including strand as well as finished product, are stored inside one building
- Consistent on-time delivery
- Exceptional customer retention
- Post-Tensioning Institute Certified Plant
- Long-term supplier partnerships; prompt payment per terms
- Industry leader with a strong balance sheet and history of continuous stability and profitability
- A portion of profits are donated to charitable causes through KHOSA JG FOUNDATION
- AMSYSCO shares profits with employees

VALUE-DRIVEN PARTNERSHIP

In the end, the greatest value we offer our customers is our commitment to run a business based upon a solid foundation of uncompromising honesty and integrity. After several decades of being guided by the highest ethical standards, we have built more than just a successful organization—we have built a solid reputation that our customers value every day.



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SYSTEMS + SERVICE + ENGINEERING

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The information in this brochure was accurate as of printing, but is subject to change. Please contact AMSYSCO for the latest specifications and product details.

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