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- Repair and Strengthening
- DYNA® Force Elasto-Magnetic Sensor



Multistrand Post-Tensioning System

System Description

DYWIDAG Post-Tensioning Systems are world renowned for reliability and performance, most suitable for all applications in post-tensioned construction. They embrace the entire spectrum from bridge construction and buildings to civil applications, above and below ground.

The first ever structure built with a prototype DYWIDAG Post-Tensioning System using bars was the Alsleben (Germany) arch-bridge in 1927. From that time on, DYWIDAG has continuously improved its systems to keep up with the growing demand of modern construction technology. DYWIDAG-Systems International (DSI) offers a complete product line in strand and bar post-tensioning (bonded, unbonded and external) as well as stay-cables and is thus able to fully serve the post-tensioning construction industry.

DYWIDAG Post-Tensioning Systems have always combined the highest safety and reliability standards with the most economical efficiency in their research and development. Dependable corrosion protection methods incorporated into the DYWIDAG Post-Tensioning Systems contribute to the longevity of modern construction. High fatigue resistance is achieved with optimized material selection and careful detailing of all components especially in their system assembly.

Post-Tensioning System using Strand

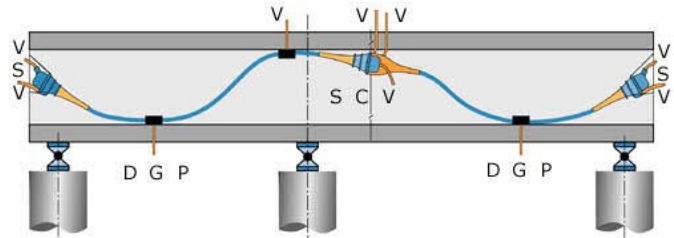
Strand is manufactured from 7 individual cold-drawn wires, outer wires helically wound around one center wire (king wire). The mechanical properties of the strand as well as its corrosion protection are most important to DSI. Strand coatings do not affect the anchorage's capacity or efficiency. For improved corrosion protection, we offer systems using polyethylene (PE) or polypropylene (PP) ducts.

DSI looks back on many years of valuable experience in the field of post-tensioning, which leads to our extremely versatile product range that offers economical solutions for practically any problem. This includes our highly developed, most sophisticated field equipment which is easy to operate in all phases of installation including assembly, installation, stressing and finally grouting.

DYWIDAG Post-Tensioning Systems are being developed and maintained by DYWIDAG-Systems International and are serviced and distributed by a worldwide network of subsidiaries, licensees and agents. Our systems comply with the different national and international specifications and recommendations (ASTM, AASHTO, BS, Eurocode, DIN, Austrian Code, SIA, FIP, fib, EOTA, etc.).

DSI Scope of Services:

- consulting
- design and shop-drawing engineering
- manufacturing and supply
- installation or training and/or supervision of installation
- inspection and maintenance



- D - drain
- V - vent
- G - grout injection
- C - coupler
- S - stressing anchorage
- P - post-grouting injection

- Downloads** [read more ...](#)
- Brochure DYWIDAG Post-Tensioning Systems, Filesize:1.8 MB
 - Brochure What is Post-Tensioning, Filesize:17.6 kB
 - Brochure ASBI Grouting Practices, Filesize:67 kB

- References** [read more ...](#)
- Genco Place Building, Calgary, Canada
 - Boundary Dam, Estevan, Canada

Convert Technical Units

Search DSI Website

code / specification	type	ASTM A 416			ASTM A 416	
		0.5" (13mm)	0.6" (15mm)		0.5" (13mm)	0.6" (15mm)
yield strength f_y ¹	(ksi)	243	243	(N/mm ²)	1,670	1,670
ultimate strength f_u	(ksi)	270	270	(N/mm ²)	1,860	1,860
nom. diameter	(in)	0.5	0.6	(mm)	12.7	15.24
cross-sectional area	(in ²)	0.153	0.217	(mm ²)	98.71	140
weight	(lbs/ft)	0.52	0.74	(kg/m)	0.775	1.102
ultimate load	(kips)	41.3	58.6	(kN)	183.7	260.7
modulus of elasticity	(ksi)	28,000	28,000	(N/mm ²)	195,000	195,000
relaxation after ²	(%)	2.5	2.5	(%)	2.5	2.5

1,000 h at 0.7 x 9013

¹⁾ yield measured at 1% extension under load

²⁾ applicable for relaxation class 2 according to Eurocode prEN 10138/BS 5896: or low relaxation complying with ASTM A 416, respectively.



Subject to modification.