



A BETTER WAY TO REINFORCE



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Average Cost Savings with Mechanical Coupling Compared with Other Methods



Buildings

25%



Shopping centers

20%



Bridges

15%

Complete construction 3X faster



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A stronger connection. Hardman's molded-steel reinforcement-bar couplers come delivered to your building site with our self-contained installation system (and one of our staff mechanics to get you up and running). With the Hardman system, couplers are installed by hand and crimped with the provided portable mechanical press, and can be tested on the spot. In an hour, your workers will be fully trained and back on the job, connecting rebar the Hardman way.

It's a faster, simpler and stronger way to join any two length of rebar, offering a dramatic reduction in construction time and labor costs compared to welding, wire-tying, or other coupling methods. With a Harman coupler in place, two lengths of rebar – even two pieces of different diameters – act as one continuous piece, distributing stress evenly and retaining the joint's full tensile strength during extension, compression, temperature fluctuations – even the dynamic stresses and load shifts caused by seismic events. With Hardman, you get a more reliable, more durable full-strength joint that prevents rebar thickening and adds to the long-term structural integrity of your concrete structure. And we'll be there with all the supplies and support you need to help you build your best.

Builders across the world are switching to couplers for all their reinforced-concrete projects. And with Hardman, joining any two lengths of rebar is faster, simpler and stronger than welding, wire-tying, or with other coupling systems.



Advantages of Coupler Splicing with a Mechanical Press

- High-speed joint production – faster building with consistent quality
- Resistance to dynamic stresses during technological and natural phenomena
- Reduces reinforcement overrun, increases eco-friendliness and saves energy



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Fast and Easy to Install and Test

With Hardman's couplers and portable mechanical pressing system, one joint can be made in 3–8 minutes (depending on rebar diameter). No additional devices are required — Hardman provides everything you need!

Testing Advantages

- Easy joining of horizontal or vertical reinforcement bars, at any height
- No prior preparation of the rebar required
- Testing is performed in place after each installation
- Eliminates the need for costly X-ray examination of joints

Installation Advantages

- Quick and easy installation: one joint takes 3–8 minutes
- No advance preparation of couplers is necessary
- Join any two bars, of any cross-section — even two different diameters!
- Provides strength and durability equal to a full-length reinforcement bar
- Reduces needed rebar concentration, compared to wire-tying

Time-Saving and Cost Efficient

Welded joints can have a reject rate as high as 30% — with mechanical splicing, the rate is close to zero!

Using Hardman's reinforcement coupler system will dramatically increase the pace of work on your project while reducing waste and the costs of materials and labor. Depending on the diameter of the reinforcement, and the spatial positioning of the joints, workers can produce up to 100 joints in a single 8-hour shift — many times faster than welding.



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- No need for high-skilled or specialized craft workers
- Training provided on-site — usually about an hour
- One set of equipment does the work of 5–12 welders
- Elimination of rebar overlap further reduces materials cost
- Joints can be applied to bars of any length and diameter



Seismic Resistance

The high-performing operational qualities of coupled bars are especially in demand for reinforced concrete structures of “enhanced responsibility” — transportation projects, high-rises, and building projects in seismically active zones.

Overlap joints lose their strength when exposed to dynamic loads. But Hardman’s molded steel couplers retain their performance characteristics under shock waves, earthquakes, and other impacts. The building’s designers can use the same reinforcement-arrangement standards as for welded joints. When Hardman couplers are then used in the same density, their operational qualities mean additional strength and durability in the buildings that need it most.

Reinforcement bars joined with Hardman couplers act as a single piece. So even in the extreme case of the complete destruction of the protective layer of concrete, the structural integrity of the reinforcement remains!

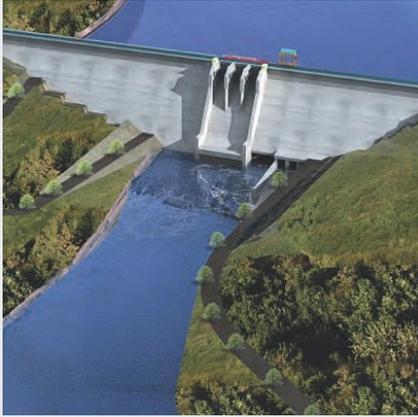
Reinforced concrete construction with Hardman couplers conforms to all construction rules and requirements for earthquake-proof building construction, taking into account the reduced need for reinforcement bars when coupling is used as opposed other methods.



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Built the Hardman Way



Senje Hydroelectric Power Plant
Equatorial Guinea
under construction

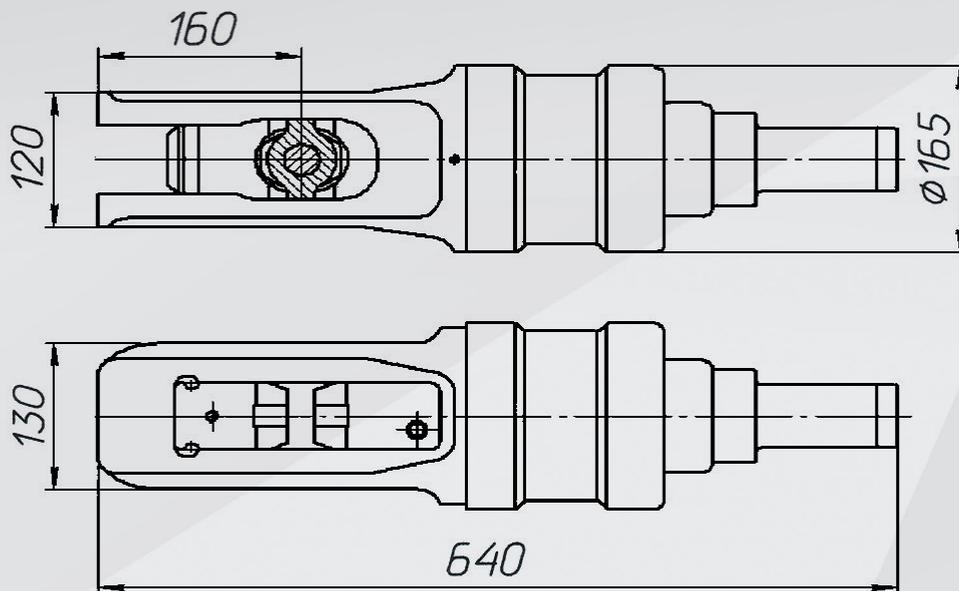


Aylon Plaza Business Center
Moscow, Russia
built in 2008



Lviv International Airport
Lviv, Ukraine
built in 2010

Mechanical Press Dimensions for Coupling



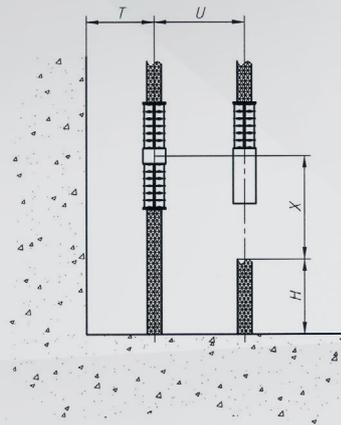
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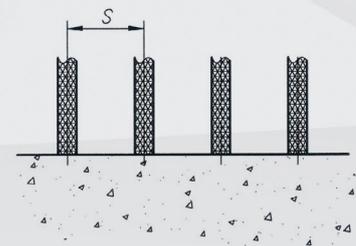
Coupler Sizes with Placement Specifications

№	Distance above floor level H, mm min.	Distance between bars (side view) S, mm min.	Distance of bar from vertical wall T, mm min.	Difference in elevation of nearby bars X, mm min.	Distance between bars (front view) U, mm min.
16	135	76	163	270	113
18	140	78	164	270	115
20	150	79	165	290	117
22	165	81	166	315	119
25	175	83	168	335	133
28	190	86	170	358	136
32	205	90	172	390	130
36	220	95	175	428	135
40	230	100	180	460	142

Side view



Front view



By designing reinforced concrete constructions with the use of compressing connections, same constructive requirements are taken as with the reinforcement that is connected by steel strap-lap.

Any way you look at it, the Hardman way is a faster, stronger, better way to design and build any reinforced-concrete structure. Save time, energy and money — and get all the supplies, service and support you need, delivered right to your site.

Our products are made according to European ISO 15835-1;2009(R) specifications.

When designing a reinforced-concrete structure that will be built with mechanically pressed couplers, the same construction requirements can be used as when building with welded rebar joints.



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