

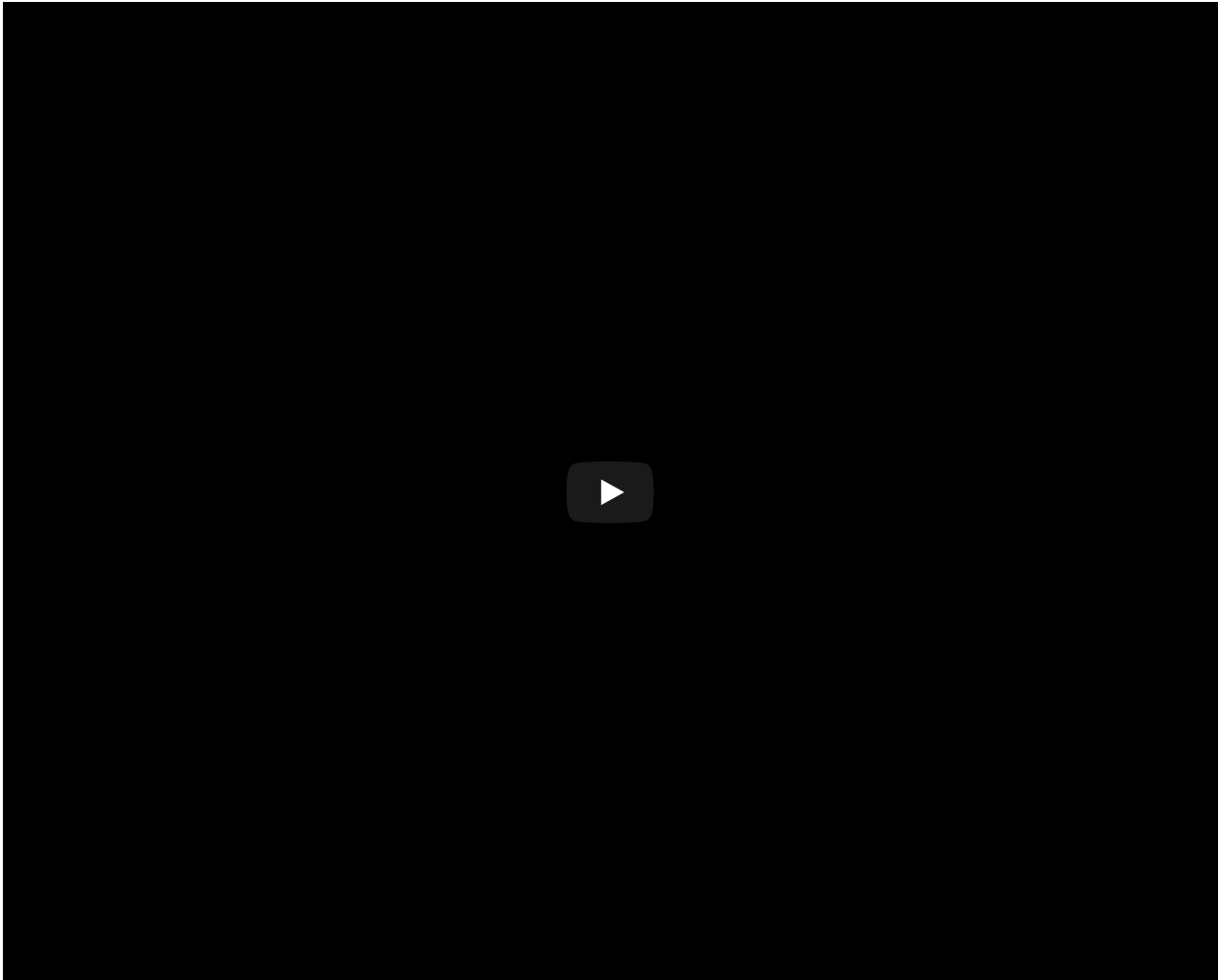
Video | December 11, 2017

Video: Syn Trac, the innovative multi-purpose vehicle

It has long been the goal of many an agricultural vehicle engineer to produce a multi-purpose farm vehicle that can perform very different roles while remaining practical and cost-effective.

Most have failed on one count or another, largely because the vehicle is compromised in some way for each of its intended roles or there is a preference for using 1 specialist machine for each task.

But that has not deterred the man behind the latest and in many ways most ambitious attempt to make a successful multi-function vehicle.



The Syn Trac is the brainchild of Austrian machine tools manufacturer Stefan Putz and the overall concept is of a 4-wheel drive, 4-wheel steer, equal-wheel vehicle with a mid-mounted cab, and couplings for implements front and rear.

So far, so familiar.

Syn Trac: the multi-purpose vehicle

But the prototype exhibited at Agritechnica displays some entirely novel ideas – not least an automatic coupling system that enables specially-equipped mounted and trailed equipment to be connected in barely a minute, without the driver leaving his seat.

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Tapered guide channels front and rear align an implement-mounted interface with a multi-point coupling that connects the mechanical power drive and the hydraulic, air and electrical supplies in one go.

On trailed equipment, the docking assembly can be mounted on a gooseneck drawbar to allow 90° turns with a trailer or slurry tanker, and when operating conventional mounted implements, the coupling system is used to install 3-point linkage lift and pto assemblies front and rear.



(<http://s3-eu-west-1.amazonaws.com/ff-wp-assets-live/sites/1/2017/12/Syn-Trac-03a.jpg>)

With a second rear axle installed, the Syn Trac gains space for transportation or specialist bodies and 6-wheel drive.

A loader or telescopic boom module can also be installed using this system – something that certainly gives the Syn Trac a unique element of versatility.

Caterpillar engine

Mounting the 420hp (310kW) Caterpillar engine and stepless transmission beneath the full-width cab ensures a clear view forwards and to the rear, while multi-mode 4-wheel steering make the relatively short vehicle highly manoeuvrable.



(<http://s3-eu-west-1.amazonaws.com/ff-wp-assets-live/sites/1/2017/12/Syn-Trac-02.jpg>)

A unique couplings interface is used to attach a 3-point linkage or loader module, a trailer or tanker gooseneck drawbar, and a third axle.

There are no beam axles; instead, active independent hydraulic suspension should enable the Syn Trac to ride smoothly or tackle rough terrain with plenty of underbelly clearance, and the suspension can be configured to keep the vehicle upright when working across a slope.

All-wheel drive from the hydro-mechanical CVT transmission are to be expected on such a vehicle, but the ability to attach a second rear axle using the implement docking infrastructure is a genuine novelty.



(<http://s3-eu-west-1.amazonaws.com/ff-wp-assets-live/sites/1/2017/12/Syn-Trac-01b.jpg>)

Syn Trac is intended as a high-specification multi-purpose vehicle – the prototype has a 420hp engine and CVT transmission mounted centrally.

The 6x6 configuration is intended for applications that require load space behind the cab – to mount a sprayer or spreader body, for example, or a specialist module such as an auxiliary power unit to drive a snow blower.

Syn Trac plans to build up to half a dozen units in 2018 for testing before the vehicle's anticipated commercial introduction for farming, highways, forestry and industrial applications.

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