

*FAKUMA, Friedrichshafen, 16<sup>th</sup> to 20<sup>th</sup> October 2018, hall A7, stand 7207*

## **WINDSOR boosts individual injection moulding solutions**

**During Fakuma WINDSOR demonstrates unusual entrepreneurial diversity with three exhibits: The SD300SV from FCS further expands the company's offer of servohydraulic injection moulding machines (IMM). Adjacent to it, a fully electric J100ADS from JSW works with an actuator mould for medical device applications. A special highlight is WINDSOR's own product: the PxP73 is an independent injection unit which virtually sets no limits to upgrading an IMM towards multi-component injection moulding. Obviously, WINDSOR's exhibits are compatible with the requirements laid down in Industry 4.0 and/or Euromap 77.**

In 2016, Fu Chun Shin Group (FCS), Taiwan, and WINDSOR Kunststofftechnologie GmbH in Hanau, Germany, signed an agreement under which FCS committed to construct and supply hydraulic and servo-hydraulic IMMs according to European standards and specifications as prescribed by WINDSOR. In return, WINDSOR acquires, based on its established sales network developed over 65 years, responsibility for long-term sales, trading, installation, replacement parts supply and service for these 300 to 37,000 kN clamping force IMMs in all EU and EFTA countries. "We have been making great progress with FCS since. The technological status of the machines passes the comparison test with European brands," says Peter Kochs, WINDSOR's managing director,

**The new FCS machine:** WINDSOR operates the servohydraulic SD300SV – 3,000 KN clamping force – with a mould made by Kiranda/Turkey. "The ornamented dish we mould in PP weighs 120 grams and takes a cycle time of barely 15 seconds. A SEPRO robot demoulds the bowls and deposits them on a conveyor belt directly to the visitors", explains Kochs and adds: "We offer servohydraulic IMMs from FCS because they use the latest and high-end technology in this special segment." The machines' quality meets European standards. However, their price level is comparatively low: "The price/performance ratio of the FCS machines is unequalled", maintains Kochs. After acquiring the pan-European distribution rights for FCS, WINDSOR has been quite successful in marketing toggle SGMs and two-platen machines from FCS and relies on these proven large machines in the future. FCS machines are the choice a great number of applications: they produce components for household appliances, white goods, electronics, toys and also automotive parts to name only a few. Kochs: "There are practically no limits for applications." The FCS toggle IMMs are available with clamping forces ranging from 30 to 1420 tonnes – complemented by servohydraulic two-platen machines with clamping forces from 500 to 4000 tonnes. Kochs promises: "We strive to improve quality even further and maintain the low-price level."

**PRESS RELEASE**

**The JSW machine:** Japan Steel Works (JSW) has contributed a fully electric J100ADS injection moulding machine providing 100 tonnes of clamping force. It is equipped with an actuator mould from KEBO/Switzerland. The machine produces the mentioned actuator components in transparent PP, the parts weighing only 6.8 grams each. They are switch elements for medical devices such as sphygmomanometers and blood glucose meters. The two-cavity mould operates at a cycle time of barely seven seconds including part demoulding. “We have integrated the SEPRO robot control, responsible for demoulding and transportation of the parts, into our IMM control system”, explains Kochs. A special feature of the plant is its data visualization on a 15” android system: regulation and control is effected with a software version used in mobile phones. “JSW was the first IMM supplier offering an android surface”, says Kochs. Control commands such as for instance closing or opening etc. are integrated which are broadly comparable to apps of standard smartphones. This instrument offers the user extremely easy control operations. A predominant advantage of the JSW machines – for which WINDSOR holds the distribution rights for Germany – is their reliability: “The technology is namely state-of-the-art and widely proven. The occasions where wear parts have to be exchanged are very rare, the machines work year in, year out impeccably”, states WINDSOR’s managing director and concludes: “JSW develops and builds fully electric injection moulding machines since 1985. So, their technology is quite sophisticated.”

**WINDSOR’s own product:** At short notice, WINDSOR decided to also showcase its own product during Fakuma: PxP 73 is a new version within the PlugXPress® range. PxP 73 is a self-contained injection unit comparable to an IMM without clamping system etc. WINDSOR’s great strengths are custom-designed adaptations: “We provide solutions which fit exactly in the plant configuration”, Kochs states. The results are individual systems with individual units. PxP communicates with the IMM via an interface. The customer can attach the PxP easily to the IMM without major changes in the machine. This injection unit operates a three-zone screw available from 16 to 105 mm and uses a B&R control system equipped with a 15” touchscreen. The PlugXPress® injection unit for multi-component injection moulding can be attached to any IMM. Kochs: “One of our customers produces tooth brushes in three different materials and four colours.” This way, six-component IMM’s are not unusual. The rising demand in the multi-component sector and the success of the PxP is said to be the reason why its sales volume in 2017 has more than doubled compared with the previous year. “Our strengths are individual custom solutions and we differentiate ourselves from the competition by realizing a great deal of flexibility. PxP works where standard solutions fail”, comments Peter Kochs.

**About WINDSOR:** 1945, shortly after the company R. H. WINDSOR Ltd. was founded in Chessington (UK), it built one of the very first injection moulding machines with hydraulic operation. In 1959 R. H. WINDSOR GmbH was founded in Frankfurt/Main, Germany. During the K 1963 exhibition, the company introduced its "SP12" machine with fully hydraulic drive, a pioneer product of this technology at the time. During 1969, the English machine manufacturing group GKN took over the WINDSOR Group. In 1972, GKN WINDSOR GmbH constructed a state-of-the-art production facility for the manufacture of injection moulding machines in Bischofsheim, Germany. Klöckner AG, Duisburg, Germany, took over the WINDSOR Group from GKN in 1982. Until the closing down of the factory in 1994 WINDSOR developed fully hydraulic injection machines with clamping forces up to 75,000 kN – among them the large vertical triple tie-bar machines with clamping forces up to 10,000 kN predominantly used in lost-core technology. Since 1994 the company has been concentrating on after sales service and enhancements in the area of multi-component machines. The PXP ancillary unit was introduced in 1999 and is still enjoying buoyant demand today. Particularly the automotive sector uses this specially developed unit in the processing of NFPP fibre plates. Since 2007, the company, located in Hanau/Germany since 1994, has been part of the WINDSOR Group, Inc., Mason/OH, USA. WINDSOR has been the official distribution partner of JSW, The Japan Steel Works Ltd. in Tokyo, since 2007 and – since 2016 – also a distributor for FCS, Fu Chun Shin Group, Tainan, Taiwan. In addition, WINDSOR distributes a variety of hydraulic units manufactured in-house as well as the flexible PlugXPress® secondary injection units. WINDSOR cooperates with several European distribution partners.

### **About FCS**

FCS, machine building company with a tradition of some 40 years, has become the largest injection moulding machine manufacturer in Taiwan since 1974. The public limited company is listed on the stock exchange since 2004. With about 500 employees, FCS produces its high-end IMMs as well as multi-component, rubber and thermoset presses in its main factory in Tainan/Taiwan. For capacity reasons, standard hydraulic machine ranges with clamping forces from 300 to 37,000 kN are being produced on the Chinese mainland. Based on its strong sales expansion, the FCS Group aims at the top 10 shortlist in the medium term, heading at a rise in production figures of more than 1500 machines annually.

### **About JSW**

The Japan Steel Works (JSW), based in Tokyo/Japan, is one of the global leading manufacturing companies of large extrusion equipment for polymerization, pelletizing, compounding, masterbatch production, devolatilisation, under water pelletizing, rubber/elastomer dewatering, among many others. The steel producing company was founded in 1907; the very first extrusion equipment was introduced in the early 1950s. Manufacturing expertise also includes electric injection moulding technology, blow moulding machines, cast and stretch film lines, reactor vessels, components for power plants and oil refineries, components for wind turbine and compressor technology. JSW has its European headquarters in Dusseldorf/Germany.

**Ref.:** 18-33-01, September 2018

### **Please contact:**

Peter Kochs  
WINDSOR Kunststofftechnologie GmbH  
Moselstraße 27  
63452 Hanau  
Tel. +49-6181-9003 0  
Fax +49-6181-9003 53  
Email: [pkochs@windsor-gmbh.de](mailto:pkochs@windsor-gmbh.de)  
[www.windsor-gmbh.de](http://www.windsor-gmbh.de)