

# POWER ON DEMAND *An Energy-Saving Solution*

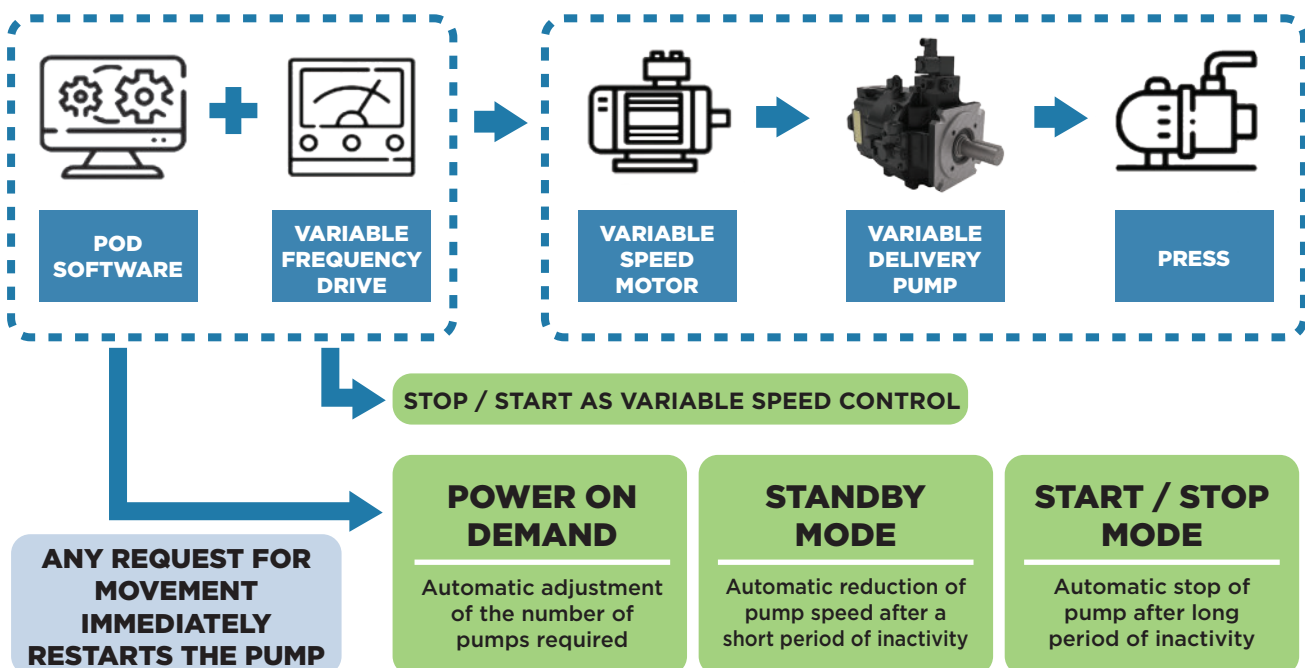
## PRODUCE MORE with Less Energy Consumption

### KEY BENEFIT

- Addition of a variable frequency drive to a production line & a new algorithm for operations management
- Smart use of e-motors & pumps/distribution of power for production
- Adjustment of operating speed optimizing processes energy saving, increased production output, and/or improved performances!

### HOW SAVINGS ARE PRODUCED

ACTION	SAVINGS	HOW
1. Switch off pumps, if not in use	10kW / per 540cc Pump	Pump stopped vs. unloaded
2. Efficient extrusion press cycle main pump	5-20%	Lower RPM = Higher stroke = Efficient pump under pressure
3. Increased efficiency for auxiliary pump	3-10 %	Reduce RPM during extrusion = higher stroke = efficient pump under pressure
4. Efficient boost pump	10-25 %	Increase/decrease RPM to match real flow needed by active main pumps
5. Sorter dead cycle and pressure build up	Production Increase	Higher RPM = 10-20% higher flow = higher speed/DCT reduction -> and better pressure build up management



## REAL WORLD IMPLEMENTATION POWER ON DEMAND **24 MN (2400 T) EXTRUSION PRESS**



### **PRODUCTS & SERVICES**

- 3 x PVV250 VM servos + 45kW Boost pump
- Replacement high eff. IE3 E-motors 200kW
- Inst. of 200kW/45kW variable speed drives
- Full POD (POWER ON DEMAND)
- Power and Control cabinets
- PLC and HMI programs Modifications

### **CHALLENGE**

- Power On Demand upgrade on P5 extrusion press with VFD and Emotors replacement (IE3)
- With DCT (Dead Cycle Time) reduction and improvement of pumps management in extrusion
- Main pumps overspeed
- File for Energy Saving Certificates (CEEs Gov. subsidy)



#### **REDUCED:**

Energy Consumption: -23%  
Dead Cycle Time: -2.7 sec

**ROI: > 8 months**

#### **IMPROVED:**

Production Output  
Pump Management

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