



**Australian Government**  
**Department of Climate Change  
and Energy Efficiency**

# The Extended Product approach for regulating motor systems

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thinkchange



# Why do we need the Extended Product approach?

We regulate the component, (motor, pump, fan etc) because we can.

But we know that most of the energy savings are in the motor system – specifically through better control.

This will often be through the use of variable speed control, but not necessarily.

***But what is the Extended Product approach, and where is it applicable?***

*It is an explicit part of the Lot 28 & 29 European Commission EUP Preparatory studies on pumps.*

# What is the difference between a combined product, integrated product and extended product?

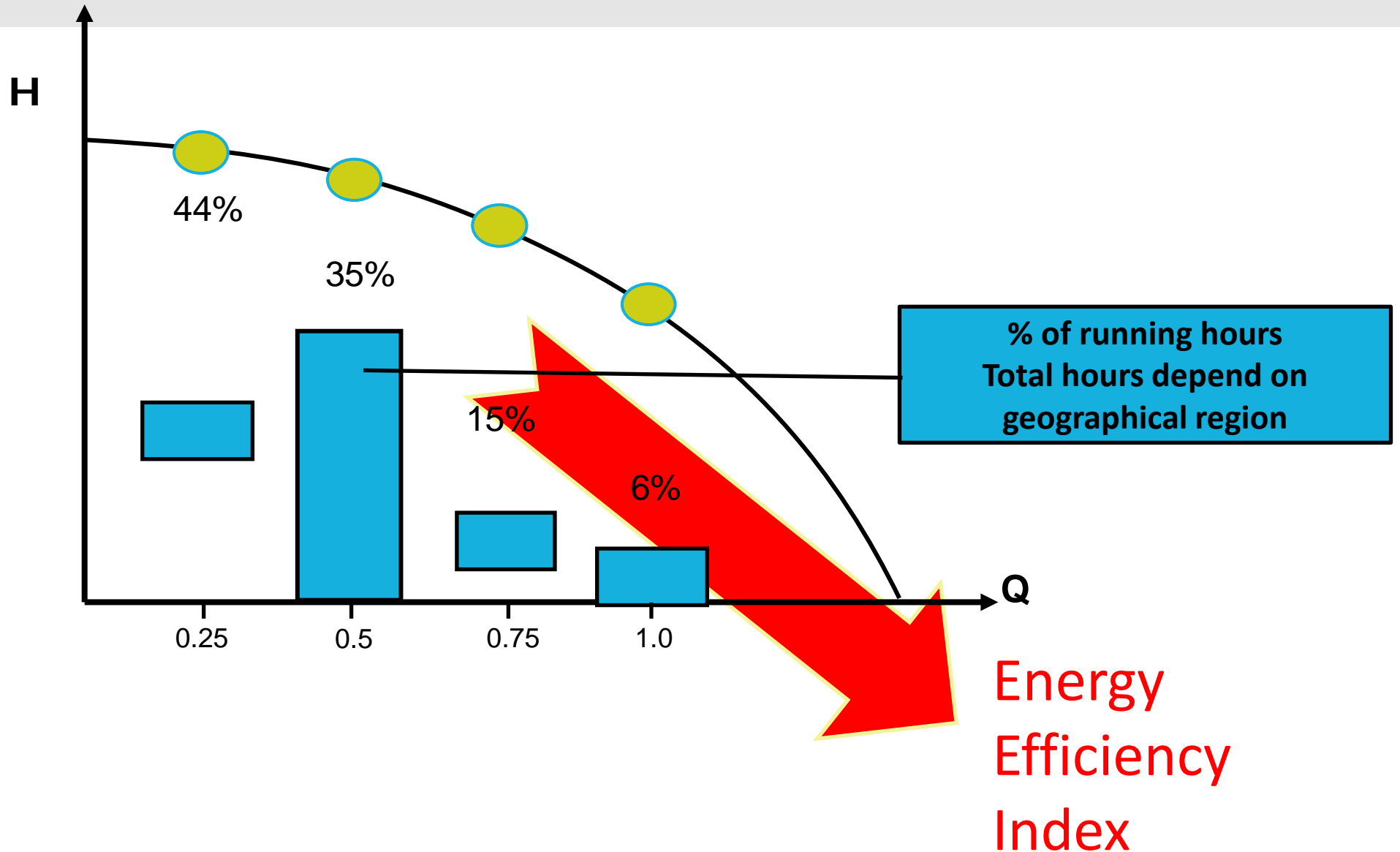
- A combined product is where the components may be marketed separated, even if eventually sold as a single product by a local distributor. The combined product is easy to separate for testing.
- An integrated product is an assembly of one or more components which are marketed as a single (joined) product. They are difficult to separate for testing.
- An extended product is either of the above PLUS something about how it operates in a typical system.

***Ultimately it doesn't matter what terminology is used, but lets have a shared language!***

# An extended product should meet the following criteria

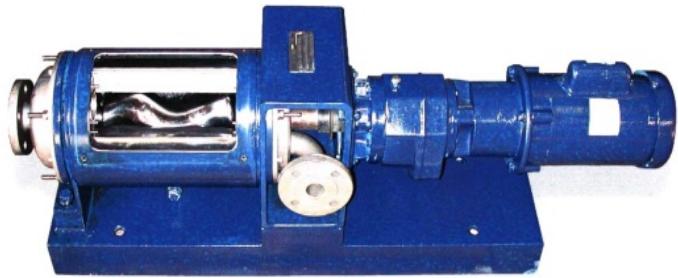
- Commonly sold as a complete **package**
- Includes **controls** . This gives a means of altering the operation of the product
- Includes a sensor for **feedback**. Input to the control system such that the control system works properly.
- Similar **duty profile** to allow comparison between products on a fair basis. This is important because duty defines the life cycle cost of the product.
- It may also include any **hydraulic passageways** that are part of the packaged product. *This is not essential, but is a clear mark of a genuine mini system.*

# Heating Circulator Proven Approach

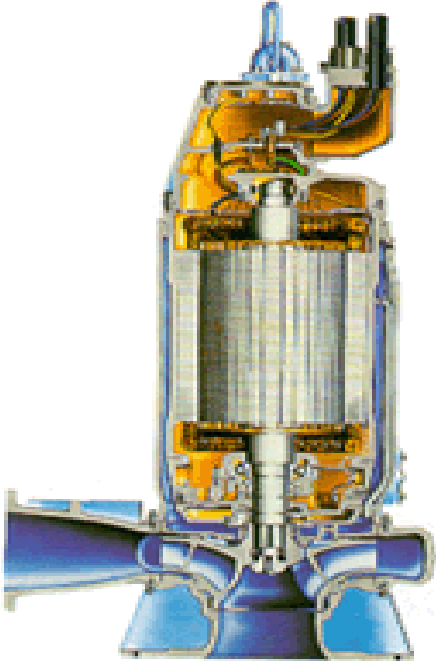


# Combined Products

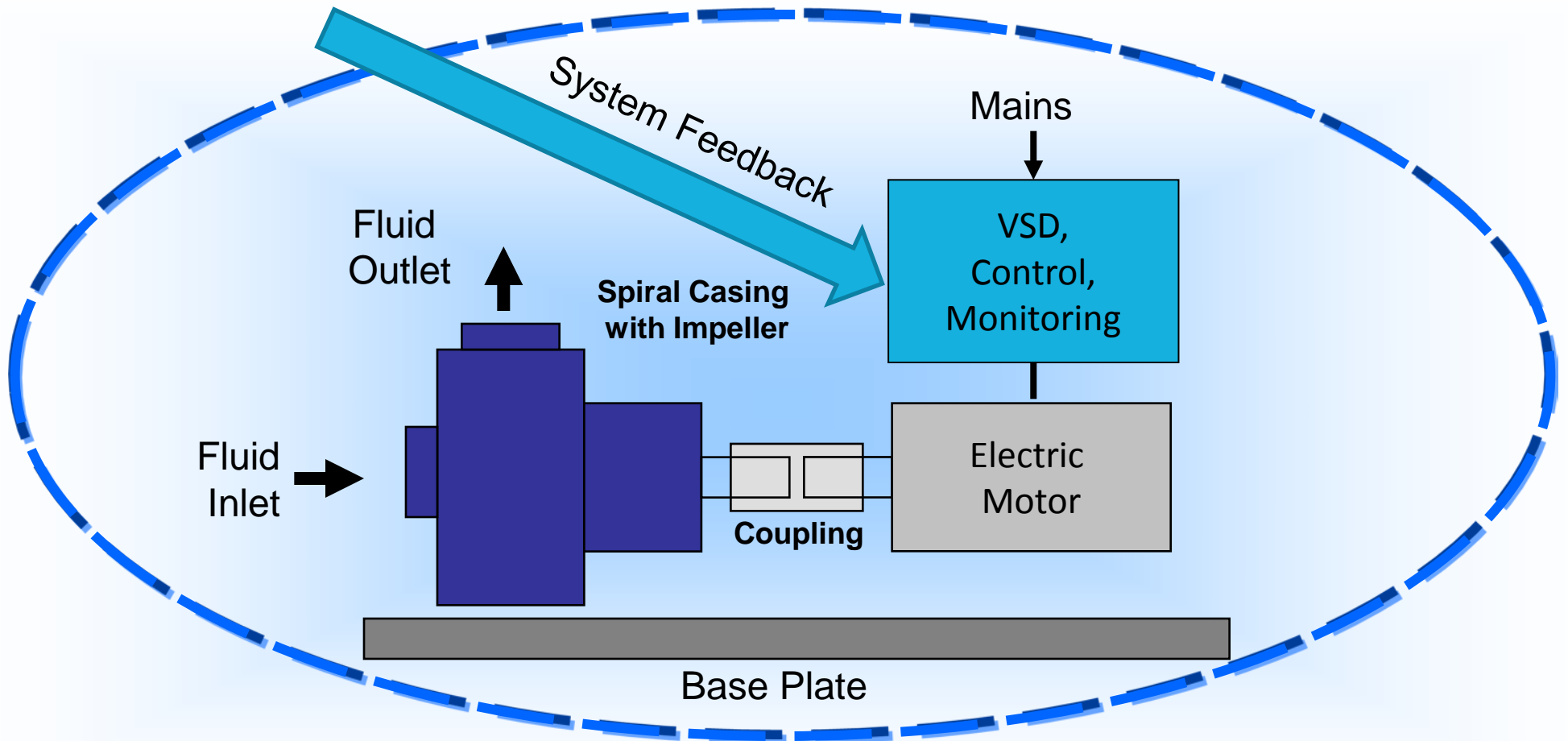
Usually sold with the motor, but the motor separable



# Integrated Products – Hard to separate the motor, or non-standard



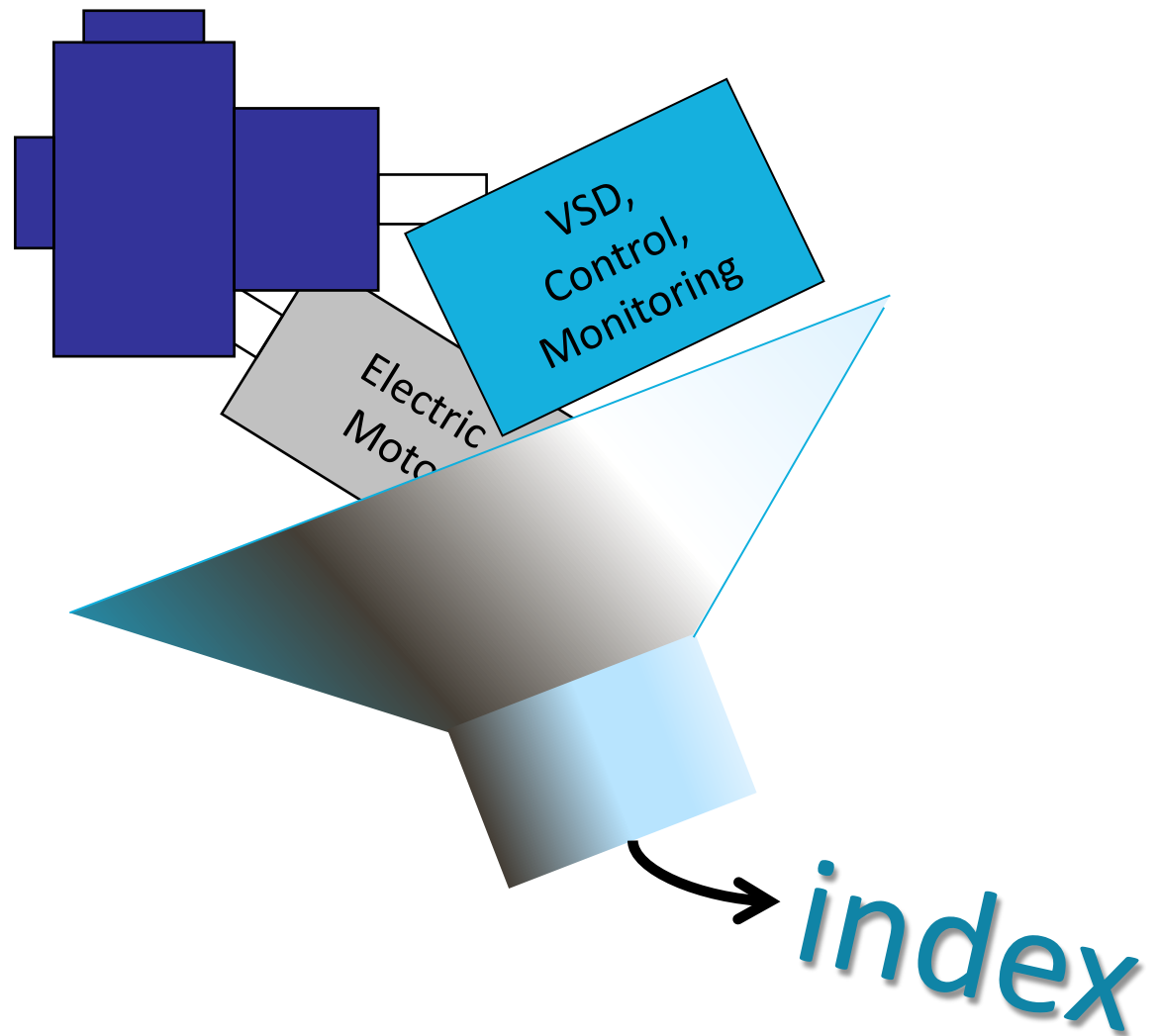
# Extended Product Approach = Motor Driven System







# Extended Product Approach

If it meets the criteria for an Extended Product, then it will be possible to make an Index of its energy consumption under the assumed duty profile.



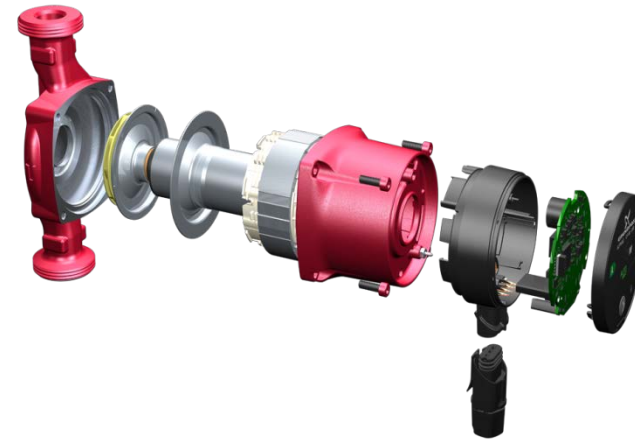
# Possible Categorisation of Pump types

Pump type	Pump Only	Combined Product	Integrated Product	Extended product
Circulator Pumps				
Domestic Swimming Pool pumps				
Centrifugal WWT submersible pump				
Fountain and pond pumps to 1 kW				
End Suction water pumps				

 Suggested category  
 Possible alternative category

# Examples of Extended Products

Packaged?     Yes  
Controls?       Yes  
Feedback?     Yes  
Use profile?    Yes



Circulator

*Which other pumps would benefit from the Extended Product approach?*



Swimming pool pump

We want to hear your ideas on the Extended product  
Approach!

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