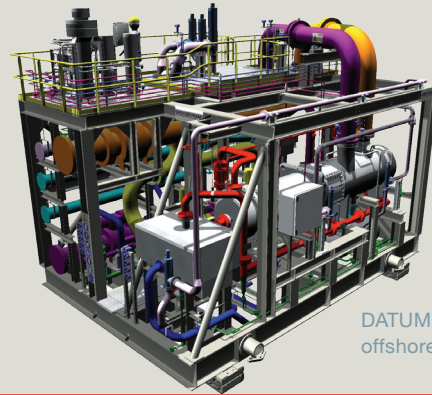




DATUM ICS - Brownfield offshore application.



DATUM ICS - Greenfield offshore application.

TURBOMACHINERY

DATUM® ICS

Integrated Compression System (ICS)

Dresser-Rand helps clients achieve their business objectives by providing innovative solutions of the greatest value. Our leadership in technology, business processes and operational excellence create products and services capable of achieving the highest level of satisfaction and long-term loyalty throughout the global energy industry.

The Dresser-Rand DATUM® line of centrifugal compressors sets the standard for modular design and high-efficiency performance. As a direct result of their serviceability, these compressors have reduced downtime and lowered life cycle costs. More than 1,000 DATUM units have been sold to clients in more than 40 countries for virtually every type of critical gas compression application.

Building on the successful experience of the DATUM line of compressors, Dresser-Rand developed a new compression concept—the DATUM® integrated compression system (ICS). The compression system includes gas/liquid centrifugal separation technology incorporated on the compressor rotor to provide an efficient, compact solution to compression system design. The DATUM ICS system is designed for onshore, offshore and subsea applications.

Versatile and Efficient

Features of the DATUM ICS system include the high-efficiency DATUM centrifugal compressor technology (a

DATUM® I compressor); Dresser-Rand's proprietary centrifugal separation technology; a high-speed, close-coupled, gas-cooled electric motor; robust, fault-tolerant, magnetic bearing-supported rotor system; dedicated unit controls; process coolers, valves, instrumentation and interconnecting piping—all packaged in a compact module design. Conventional drivers and oil lubricated bearings can also be used for applications that do not require an oil-free, hermetically sealed compression train.

The DATUM ICS system is a complete compression system that can be applied to all markets—upstream, midstream and downstream—with a small footprint, reduced weight and at the lowest total cost. The Dresser-Rand approach to compact compression could result in typically 50 percent less space and 50 percent less weight when compared to traditional compression modules. Each DATUM ICS can be factory-tested with wet gas and provided as a fully assembled module(s). As a result, installation and start-up times are reduced and production could begin sooner than otherwise possible with traditional modules.

Configuration Flexibility

The DATUM ICS is a product platform, where several technologies are used as building blocks to tailor the resulting compression solution to the specific needs of the client, allowing Dresser-Rand to optimize the solution. Main family member designations are DATUM® C compressor, DATUM I compressor and the DATUM ICS.

The integrated separator technology and the resulting compact process equipment packaging benefits can be applied to seal-less, oil-free, hermetically sealed compression trains or to more conventional compression systems using dry gas seals and oil lubricated bearings.

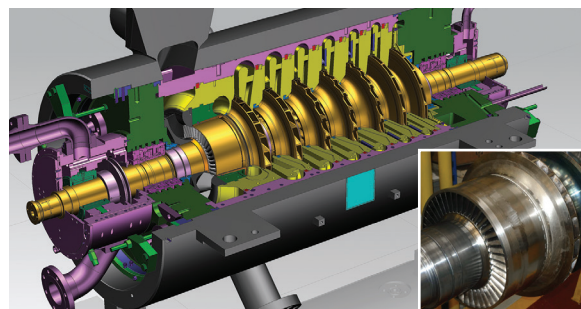
This makes the ICS solution independent of the type of driver selected for the compression application.

Advanced Technology

The DATUM ICS system provides an efficient and compact method of gas-liquid separation that uses enhanced inertial forces to separate the liquids from the gas in a multi-phase stream. The separation process protects the compression flow path from potential damage due to liquids and reduces the fouling potential. In addition, oil and gas operators benefit from the overall size and weight reduction of production facilities, platforms and subsea modules because of the smaller footprint of the DATUM ICS.

Uniquely Suited for Subsea

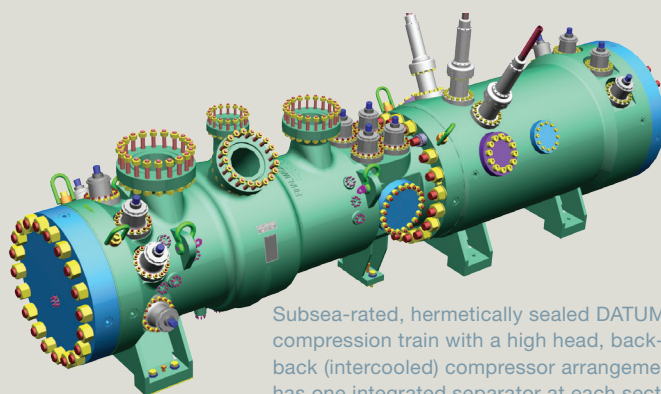
The DATUM ICS separator / compression system product development follows industry standards supporting technology qualification programs which readies the product for intended applications. The same features that provide value for topside applications are enhanced in a subsea environment. For hermetically sealed applications, in addition to protecting the compressor, the centrifugal separator provides the motor and magnetic bearing cooling system with cleaner and dryer gas when compared to other solutions employing raw process gas as a cooling medium. With higher system reliability and extended intervention intervals, associated operating costs are reduced.



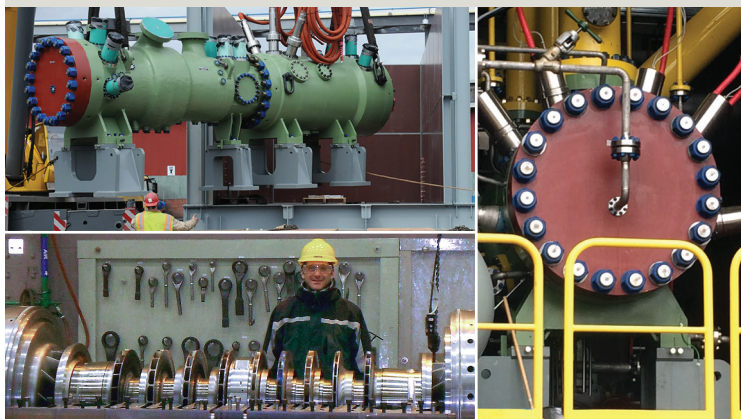
Conventional DATUM I compressor with dry gas seals and oil bearings for an offshore gas turbine driven application.

PRODUCT	TECHNOLOGY FEATURES							
	Casing Style		Driver		Bearing System		Process Extensions	
	Dry Gas Seal	Hermetic w/ Integrated Driver	Turbine or Motor	HS Motor	Oil	Magnetic	Turbo-Separator	Integrated Process System
DATUM®	✓		✓		✓	✓		
	✓		✓		✓	✓		
	✓			✓	✓			
DATUM® C	✓			✓		✓		
		✓		✓		✓		
				✓		✓		
DATUM® I	✓		✓		✓		✓	
	✓			✓	✓		✓	
		✓		✓		✓	✓	
DATUM® ICS	✓		✓		✓		✓	✓
	✓			✓	✓		✓	✓
	✓			✓	✓	✓	✓	✓
✓ Hermetic								

DATUM ICS platform family members (DATUM C, DATUM I and DATUM ICS).



Subsea-rated, hermetically sealed DATUM I compression train with a high head, back-to-back (intercooled) compressor arrangement. Unit has one integrated separator at each section.



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