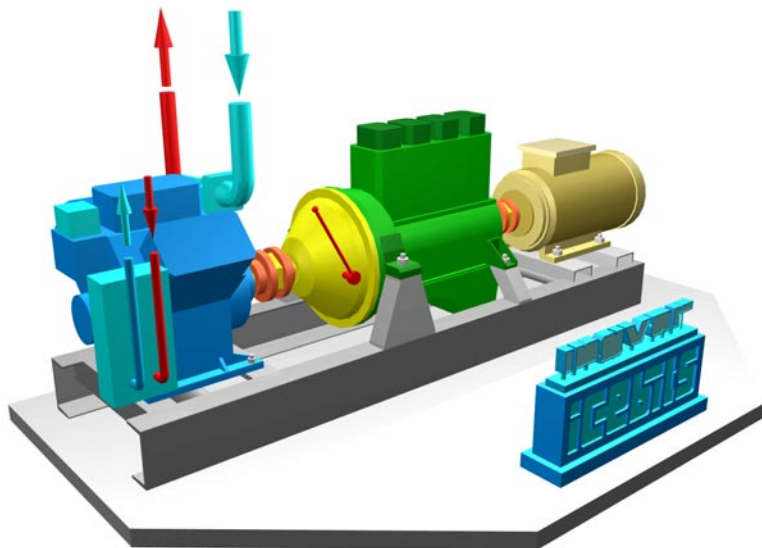
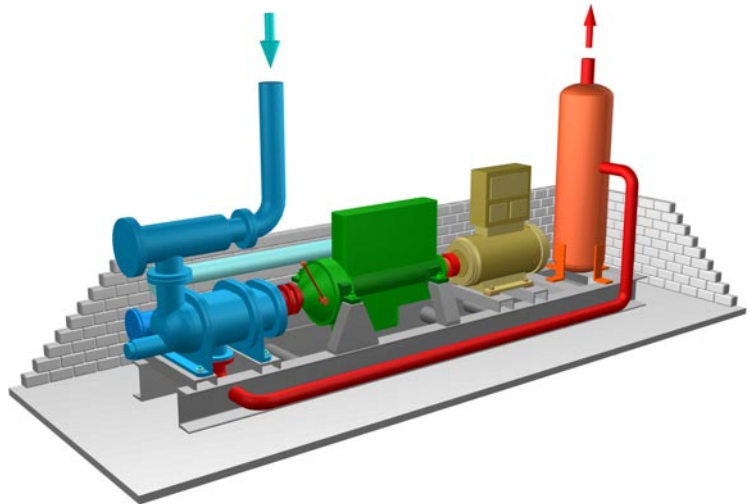


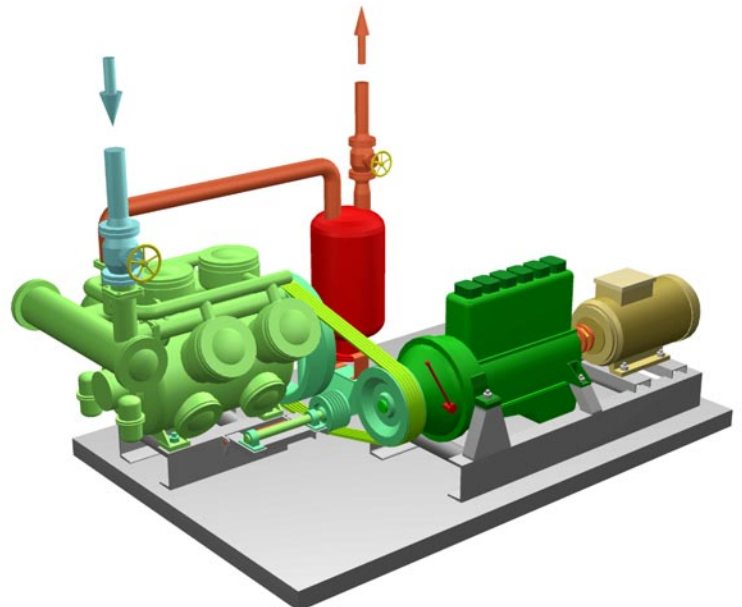
Alternative Prime Movers - RPE Units

The **RPE Unit** pictured on the right is built up around a rotary screw compressor (blue), which is directly driven from the flywheel end of a diesel engine over a manual disengaging clutch (green). An electric alternator (beige), to power auxiliary motors in the plant (pumps, fans etc), is directly driven off the front end of the engine and the vertical oil separator (rose) is placed behind the alternator. The units can also be equipped with a gear box—so-called speed increaser—between the compressor and the engine, permitting the compressor to operate at a higher speed (up to 3600 rpm) while the engine runs at 1500 rpm (for 50cy) or 1800 rpm (for 60cy) only.



The picture on the left shows an **RPE Unit** built up from a BOCK Model FZ16 two-stage reciprocating compressor (blue) operating with refrigerant R404A and primed directly through a Cummins Model 4B diesel engine (green, 65 kW at 1500 rpm) over a manual disengaging clutch (yellow). A 25 kVA alternator (beige), driven off the front end of the engine generates electric power for auxiliary motors in the plant (pumps, fans etc). With matching accessories, this unit will freeze up to 6 mTon of marine products in 24 hours in contact plate freezers in tropical climates.

The unit pictured on the right is built up from a GRASSO Model RC611 reciprocating compressor (light green) for refrigerant R717 (ammonia), belt driven from the flywheel end of a ~200 kW diesel engine (green) over a Twin Disc disengaging clutch. An electric alternator (beige), driven off the front end of the engine, powers auxiliary motors in the plant, such as pumps, fans, conveyors etc. This set-up has the capacity to produce 50 mTon of block ice in 24 hours in tropical climates. The belt drive permits that the engine be operated at a synchronous speeds—1500 or 1800 rpm for 50cy and 60cy respectively—while heavy reciprocating compressors must usually run very much slower.

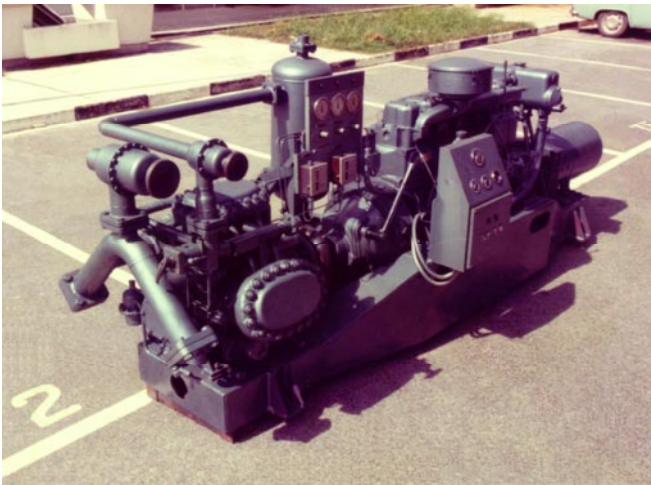


Alternative Prime Movers - RPE and RMPE

Diesel Prime Movers - RPE

(RPE stands for Refrigeration-Power-Electricity)

There are several reasons for someone wanting to prime his refrigerating compressor directly with a diesel engine. There may be no electric power available on the site, the power supply may be insufficient or unreliable, or it may be too expensive. In applications of industrial dimensions, diesel or gas prime movers sometimes offer substantial savings in the operating expences and may in some cases mean the difference between a company being competitive or not.



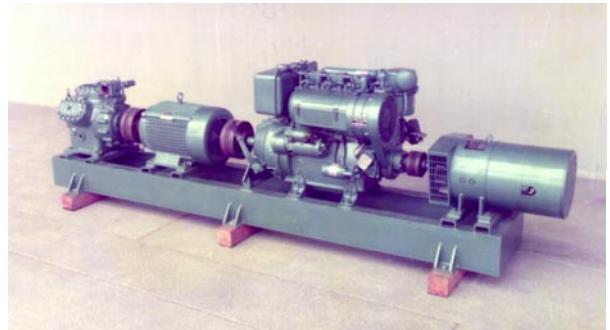
The unit pictured above is built up from a GRASSO Model RC69 reciprocating compressor, operating with refrigerant R717 and directly coupled to the flywheel end of a Daimler Benz Model OM355 120kW diesel engine over a Twin Disc disengaging clutch. At the back, a 35kVA Brush electric alternator, driven off the front end of the engine, powers auxilliary motors in the plant

(pumps, fans, conveyors etc). This particular Unit was delivered to Central Java, Indonesia; it has the capacity to produce twenty-five (25) metric tonnes of block ice in twenty-four (24) hours under tropical conditions.

Stand-by Diesel Power Train - RMPE

(RMPE stands for Refrigeration-Motor-Power-Electricity)

The picture below shows a conventional reciprocating compressor (Bitzer) for refrigerant R22, directly coupled to an electric motor (TECO). An air cooled diesel engine (Lombardini) is coupled to a second shaft end at the rear of the motor over a manual disengaging clutch on the flywheel end. An electric alternator (Brush) is driven off the front end of the diesel engine.



Normally, the compressor would be primed through the electric motor. In case of a power failure—or to save on the power cost through intermitent operation during high-rate periods (morning and afternoon peaks)—the diesel engine can drive the compressor directly through the shaft of the electric motor and, at the same time, generate electricity for auxilliary motors in the plant (pumps, fans etc).

If you wish to know more, please contact us:



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