

DRILLTEC LE-RAP™

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The LE-RAP™ packaging system is a reusable pipe packaging system which integrates lifting eyes designed to handle pipe packages of up to 6 metric tonne within an ambient temperature of -10 °C (14 °F).

The LE-RAP™ packaging system is composed of rugged galvanized steel structures called frames. The frames contain high density polyethylene segments reinforced with galvanized rectangular steel tubing.

Like all RAP™ systems, each package requires four frames. In the case of the LE-RAP™ packaging system, the center frames have lifting eyes.

Each joint of pipe is placed in its own matching diameter recess. This feature reduces the risk of corrosion and impact damage.

After assembly, the package is secured by bolts linking the bottom member of the structure to the ends of the solid bars which extend through the top segments of each frame.

The package is secured by applying a make-up torque of 70 ft-lb (95 Nm) to the bolts using a properly calibrated torque wrench, not by estimation.

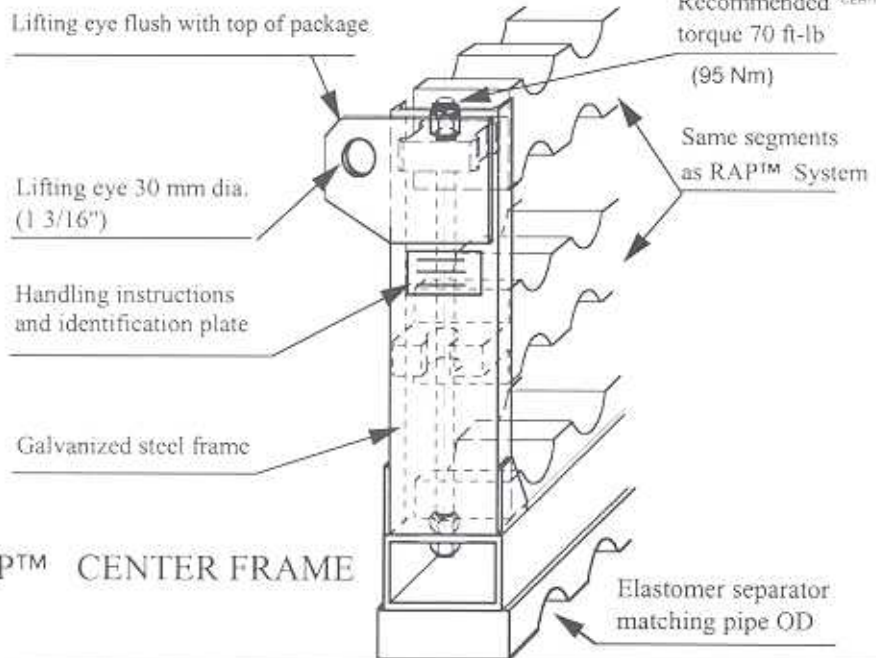
The package is designed to be lifted with hooks attached to the lifting eyes, but can also be lifted by forklift or slings.

The LE-RAP™ packaging system is available for tubular sizes ranging from 2 3/8" through 9 5/8".

Certification for initial offshore use is available on request.



The purpose of the LE-RAP™ systems is to provide lifting capability to the RAP™ system and to further secure the pipe in packages for easier and safer, secured handling, transport and storage of the pipe between the pipe mill and the end destination.



LE-RAP™ CENTER FRAME

1 - Description of the LE-RAP™ System

The LE-RAP™ pipe packaging system consists of "U" shape galvanized steel frames with High Density Polyethylene segments reinforced by encapsulated galvanized rectangular steel tubing. The steel frames are designed according to OFFCON code of practice for safe handling working loads of **6 metric tonne** at 14 degrees Fahrenheit (minus 10 degrees Celsius).

Each lifting frame is individually load tested at the factory prior to delivery.

The segments are identical with the RAP™ system segments. They are designed to prevent contact between the individual joints of pipe and other metallic objects. The segments contain a specified number of moulded recesses which match the pipe diameter to be packaged. Spacing of the recesses is designed to accommodate the size of all known couplings.

The segments are placed in a vertical plane between the layers of pipe and are held in place inside the steel frames by bolts.

One set of four frames is required for optimum stability of the pipe package. (See assembly instructions for frame spacing).

- The two frames fitted with lifting eyes are located on either side of the center of the packages with lifting eyes facing inward.
- The two frames located at either end of the package are not fitted with lifting eyes.

Hooks or slings are attached to the two center frames for lifting the package. (See handling instructions for minimum length of slings).

2 - Safety -

After assembly, the package rests on separators attached to the bottom of the steel structures. These separators have pipe recesses facing downwards and when packages are stacked, the separated segments interlock with the pipe of the lower package for optimum stability. When lifting LE-RAP™ system packages, it is very important to use slings of the recommended minimum length to keep the lateral force applied to the packages within design values.

The minimum length of each sling is equal to the distance between the two center frames.

3 - Application -

The LE-RAP™ system is available for all API Tubing and Casing sizes from 2 3/8" through 9 5/8".

It is recommended for packaging pipe destined for ocean transit, onshore and offshore use.

It is also recommended for packaging corrosion sensitive pipe such as Chrome alloy material and externally coated pipe.

4 - Operation -

The maximum safe working load of the LE-RAP™ system is 6 metric tonne.

Should heavy wall pipe induce a package weight in excess of 6 metric tonne, pipe spaces in the top layer should be left empty. Custom made systems can be manufactured to accommodate heavier packages.

The LE-RAP™ system features lifting eyes for hook attachment, but like ECONO-RAP™, RAP™, packages can also be lifted by forklift.

Packages can be stacked as high as is practicable in accordance with local safety considerations.

Three packages of LE-RAP™ can fit side by side on a standard truck bed.

5 - Reclamation and recycling -

LE-RAP™ segments and galvanized frames can be reused many times.

Plastic and steel reinforcement can be separated for recycling at the end of the life cycle of the segments.

Contact your local Drilltec office for information on worldwide reclamation services.