ER INGENIERIE S.A.S.
245 rue de Pré à Varois
54670 Custines
(France)

Filiales
ER INGENIERIE MAROC
ER INGENIERIE TFZ (Maroc)
ER INGENIERIE AO (Côte d'Ivoire)

+33 (0)3 83 98 23 23
eringenierie@eringenierie.com
eringenierie.com

1L AND 10L EXTRACTION SKID

1L and 10L Extraction Skid with EC and ATEX certification	
Process	EXTRACTION WITH SUPERCRITICAL CO_2 or SUBCRITICAL WATER CO_2 storage tank / Subcooler exchanger / High pressure diaphragm pump / Hot exchanger / 2 Extractors (1L and 10L) / Back pressure regulator / 2 Separators + Co-solvent line
Max. operating pressure	1 000 bar
Max. operating temperature	180 °C
Contact material	316L stainless steel
CO_2 storage tank | Volume	15 L
CO_2 storage tank | PS	100 bar
CO_2 storage tank | TS	- 20 / 80 °C
CO_2 storage tank | Description	CO_2 input (primary storage or recycling) CO_2 output Cold double jacket Level measurement Pressure measurement Temperature measurement Safety valve calibrated at 90 bar A flange for maintenance Drain valve
Subcooler exchanger	Counterflow plate heat exchanger

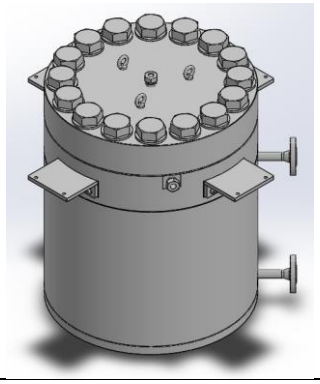
ER INGENIERIE

SAS au capital de 350 000 € • SIRET N° 487 611 691 00022 • R.C. NANCY B 487 611 691 • KOLB • Caisse d'Épargne • TVA intracommunautaire FR 07487611691

ER INGENIERIE S.A.S.
245 rue de Pré à Varois
54670 Custines
(France)

Filiales
ER INGENIERIE MAROC
ER INGENIERIE TFZ (Maroc)
ER INGENIERIE AO (Côte d'Ivoire)

+33 (0)3 83 98 23 23
eringenierie@eringenierie.com
eringenierie.com

1L and 10L Extraction Skid with EC and ATEX certification		
HP Pump | Flowrate	20 kg/h @ 1 000 bar	
HP Pump	Diaphragm metering pump Cooled pump head Variable speed drive and flowmeter for controlling the CO2 flow Pressure switch and safety valve calibrated at 1050 bar Diaphragm rupture indicator	
Hot exchanger	Shell and tube heat exchanger	
E310 Extractor | Volume	1L inside basket	
E300 Extractor | Volume	10L inside basket	
Extractors | PS	1 100 bar	
Extractors | TS	0 / 200 °C	
Extractors | Opening	By bolted flange	
Extractors | Description	Double jacket with thermal oil Inlet of CO2 at the bottom allowing homogeneous percolation through the feed bed CO2 outlet under the top cover Extraction basket equipped with two sintered metal discs of suitable porosity Pressure measurement Temperature measurement Safety valve calibrated at 1 050 bar Hoist for loading and unloading the basket Drain valve	

SAS au capital de 350 000€ • SIRET N° 487 611 691 00022 • R.C. NANCY B 487 611 691 • KOLB • Caisse d'Épargne • TVA intracommunautaire FR 07487611691

ER INGENIERIE S.A.S.
245 rue de Pré à Varois
54670 Custines
(France)

Filiales
ER INGENIERIE MAROC
ER INGENIERIE TFZ (Maroc)
ER INGENIERIE AO (Côte d'Ivoire)

+33 (0)3 83 98 23 23
eringenierie@eringenierie.com
eringenierie.com

1L and 10L Extraction Skid with EC and ATEX certification	
Separators | Volume	2 x 1,2 L
Separators | PS	100 bar
Separators | TS	0 / 200 °C
Separators | Description	Tangential inlet of CO_2 / extract mixture from the topCO_2 gas outlet via a central tube from the top of the separatorDouble jacket with thermal oilPressure measurementTemperature measurementSafety valve calibrated at 90 barOpening system by bolted flangeExtract collection valve at the bottom of the separator
Skid	 The process is installed on a framework. The skid is also equipped with all the required valves and instruments.
Electricity	Electrical study and skid wiring are already done. From an electricity point of view, it is plug and play.
Automation	 Control and regulation of CO2 pump for HMI data recording / display of process parameters in real time / alarm management Valves and temperatue regulations are manual

SAS au capital de 350 000€ • SIRET N° 487 611 691 00022 • R.C. NANCY B 487 611 691 • KOLB • Caisse d'Épargne • TVA intracommunautaire FR 07487611691

ER INGENIERIE S.A.S.
245 rue de Pré à Varois
54670 Custines
(France)

Filiales
ER INGENIERIE MAROC
ER INGENIERIE TFZ (Maroc)
ER INGENIERIE AO (Côte d'Ivoire)

+33 (0)3 83 98 23 23
eringenierie@eringenierie.com
eringenierie.com

1L and 10L Extraction Skid with EC and ATEX certification	
Required services	Electricity, clean and dry compressed air at 7 bar min., liquid CO2 at 50 bar min. to fill the storage tank) Glycoled cold water (-5°C) and hot thermal oil (180°C) production systems are supplied with extraction skid.

ER INGENIERIE

SAS au capital de 350 000€ • SIRET N° 487 611 691 00022 • R.C. NANCY B 487 611 691 • KOLB • Caisse d'Épargne • TVA intracommunautaire FR 07487611691