

SHEAR MIXING SYSTEM

High-performance drilling fluid mixing package



Engineered for demanding
operations.
Configured around your project.

SALE

RENTAL

CUSTOM BUILDS

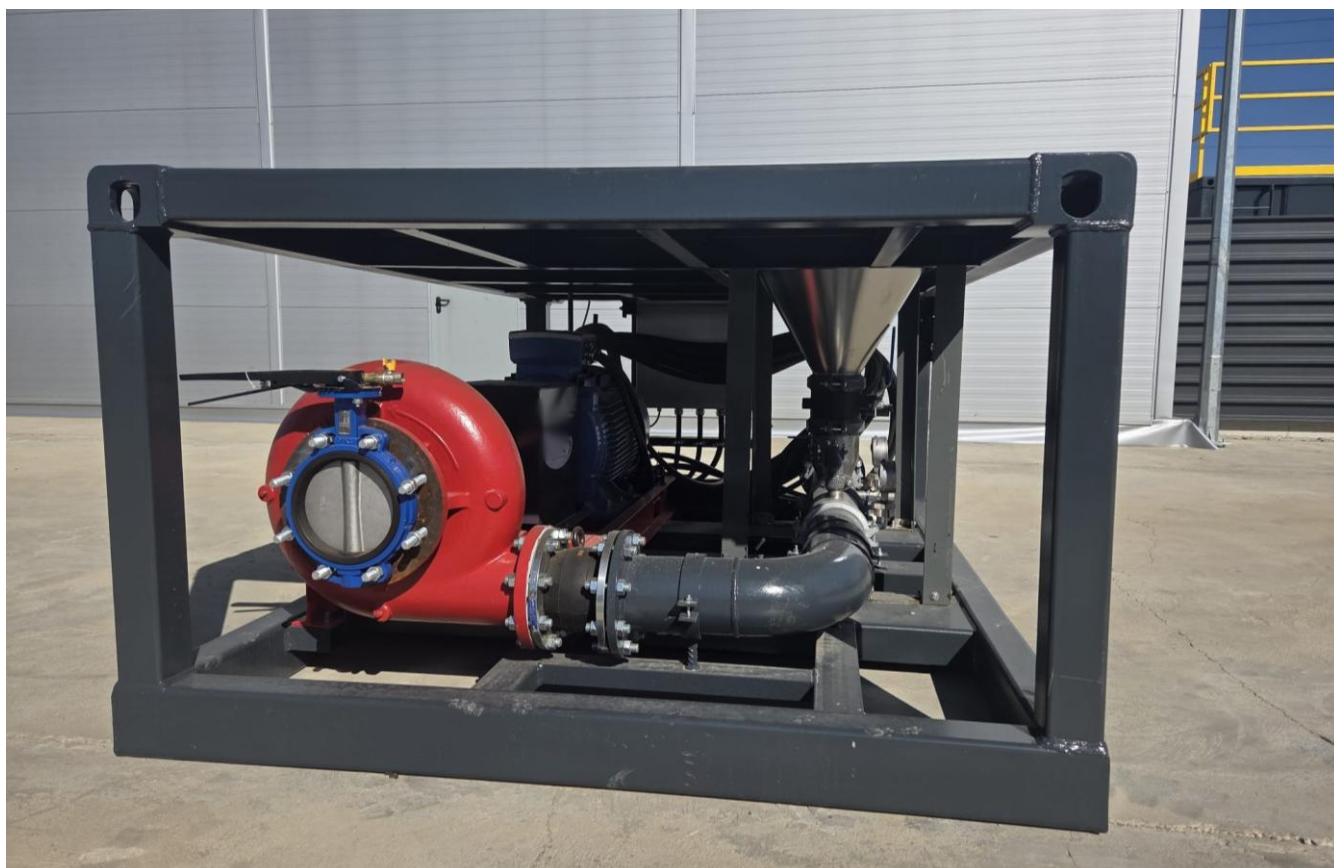
Engineered and supplied by CHEMFOR

01. SYSTEM OVERVIEW

A field-ready package for drilling fluid preparation and conditioning.

The CHEMFOR Shear Mixing System is a skid-mounted package designed for fast and efficient solids induction, wetting and homogeneous mixing of drilling fluid additives.

The system is available for sale or rental and can be custom-engineered to match operator requirements, site constraints and project specifications.



1

Sale or rental

Flexible commercial model for campaigns, projects or permanent operations.

2

Custom engineering

Configuration can be adapted around duty, layout, controls and project requirements.

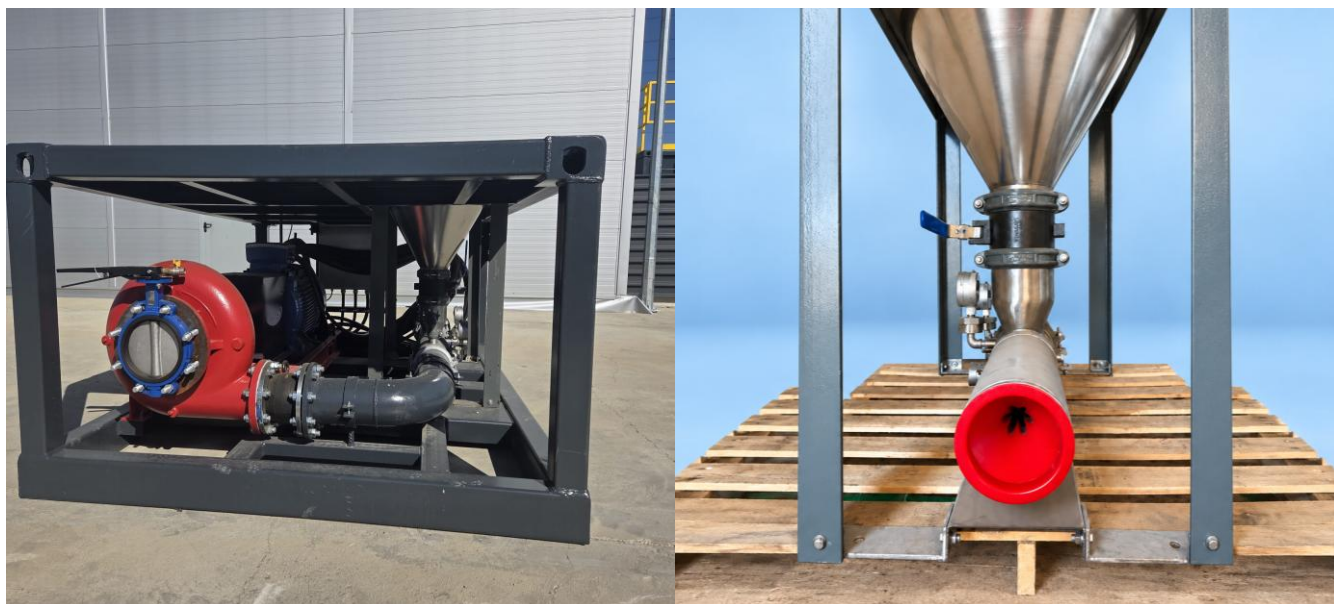
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Documented build

The package can be supplied with a manufacturing quality dossier and inspection records.

02. SYSTEM CONFIGURATION

Example configuration shown; final specification is project-dependent.



1 High-capacity mixer / eductor

6 in diameter solids induction and shear mixing unit, featuring a special shear nozzle design

3 Centrifugal pump

Heavy-duty USA-made pump in the shown configuration.

5 Piping and instrumentation

Valves, gauges and pipework integrated on the skid.

7 Hoses and connections

Heavy-duty flexible connections for field deployment.

2 Stainless-steel hopper

With isolation valve for controlled additive feeding.

4 Electric drive

Italian-made motor; CE conformity documentation and ATEX options available.

6 Control panel

Local electrical control arrangement; options can be customized.

8 Skid frame

Forklift pockets and lifting points for handling and mobilization.

03. SOLIDS INDUCTION PERFORMANCE

EFFICIENT
FLUID PREPARATION
FOR DEMANDING OPERATIONS

Typical performance of 6 in. eductor (indicative values)

Material	Induction rate	
	lb/hr	kg/hr
Bentonite	33,000	14,950
Lime	18,400	8,300
Barite	31,000	14,000
Calcium Chloride	22,100	10,000
Calcium Carbonate	25,100	11,400
PAC	14,600	6,600



FAST AND HOMOGENEOUS MIXING

Reliable performance with a wide range of materials used in drilling fluid preparation.

WHY SHEAR MIXING

1

No moving parts in the mixing section

Uses the pressure energy of the liquid feed to create a low-pressure vacuum zone.

2

Efficient powder induction

Rapidly draws and disperses solids into the fluid stream.

3

Pre-wetting before mixing

Helps reduce fisheyes and clogging, especially when mixing polymers and other challenging materials.

4

Easy maintenance

Replaceable nozzle and venturi inserts allow cleaning and adaptation to different applications.

03. SOLIDS INDUCTION PERFORMANCE

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FLUID PREPARATION
FOR DEMANDING OPERATIONS

Typical performance of 6 in. eductor (indicative values)

PERFORMANCE DATA — 6 IN. MODEL

OPERATING PRESSURE = 30–60 PSI [2–4 BAR]
FLOW RATE = 650–900 GPM [2,400–3,400 L/MIN]
VELOCITY = 70–140 FT/S [20–40 M/S]

PERFORMANCE DATA — 4 IN. MODEL

OPERATING PRESSURE = 30–60 PSI [2–4 BAR]
FLOW RATE = 300–400 GPM [1,100–1,500 L/MIN]
VELOCITY = 70–140 FT/S [20–40 M/S]

Critical Spare Parts Availability

1

Nozzle

Nozzles



2

Pre-wetter



3

Diffuser



Diffusers

4

Vacuum Gauge w /diaphragm



04. EXAMPLE TECHNICAL CONFIGURATION

This brochure presents one reference build; final parameters are confirmed for each project.

Pump size	8 x 6 x 14 shown configuration
Mixer / eductor	6 in. high-capacity solids induction unit
Electric motor	90 kW • 400/690 V • 50 Hz • IE4 • IP65
Speed	Approx. 1,489 rpm
Motor origin	Manufactured in Italy
Pump / mixer origin	Manufactured in the USA
Skid footprint	Approx. 3000 x 2200 mm
Overall height	Approx. 1250 mm
Controls	Integrated local control panel; options project-dependent
Customization	Pump, motor, controls, instrumentation and layout can be adapted

ATEX / CE note

The example drive configuration includes CE conformity and ATEX references. Final hazardous-area suitability is confirmed against the selected components and project specification.

Note: Technical information is accurate at the time of publication and may be subject to change due to supplier updates, product development or project-specific requirements.

05. COMPLIANCE & QUALITY ASSURANCE

Documented manufacturing and inspection controls support the delivered package.

Manufacturing and quality documentation available with the equipment

CE conformity references

Applicable declarations and component conformity documentation are included in the product file.

ATEX component references

Drive and pumping components are documented for hazardous-area configurations where specified.

EN ISO 15614-1

Qualified welding procedures are documented in the manufacturing dossier.

EN ISO 9606-1

Welder qualifications are documented for the relevant welding processes.

EN ISO 5817 - Level B

Visual weld inspection records for the skid document conformity with Quality Level B.

NDT inspection

Penetrant testing records are included for selected critical welds, with accepted results.

Structural documentation

Material certificates, dimensional checks and final visual inspections are recorded.

Corrosion protection

Coating / paint inspection records form part of the final quality package.

Note: ATEX statements refer to the documented selected components/configuration; this brochure does not claim independent ATEX certification of the complete skid as an assembly.

06. APPLICATIONS & COMMERCIAL OPTIONS

One platform, adapted to different drilling-fluid programs and project models.



Typical applications

- Drilling fluid preparation
- Chemical additive mixing
- Bentonite hydration
- Fluid circulation / conditioning
- Barite weighting
- Industrial fluid handling

SALE

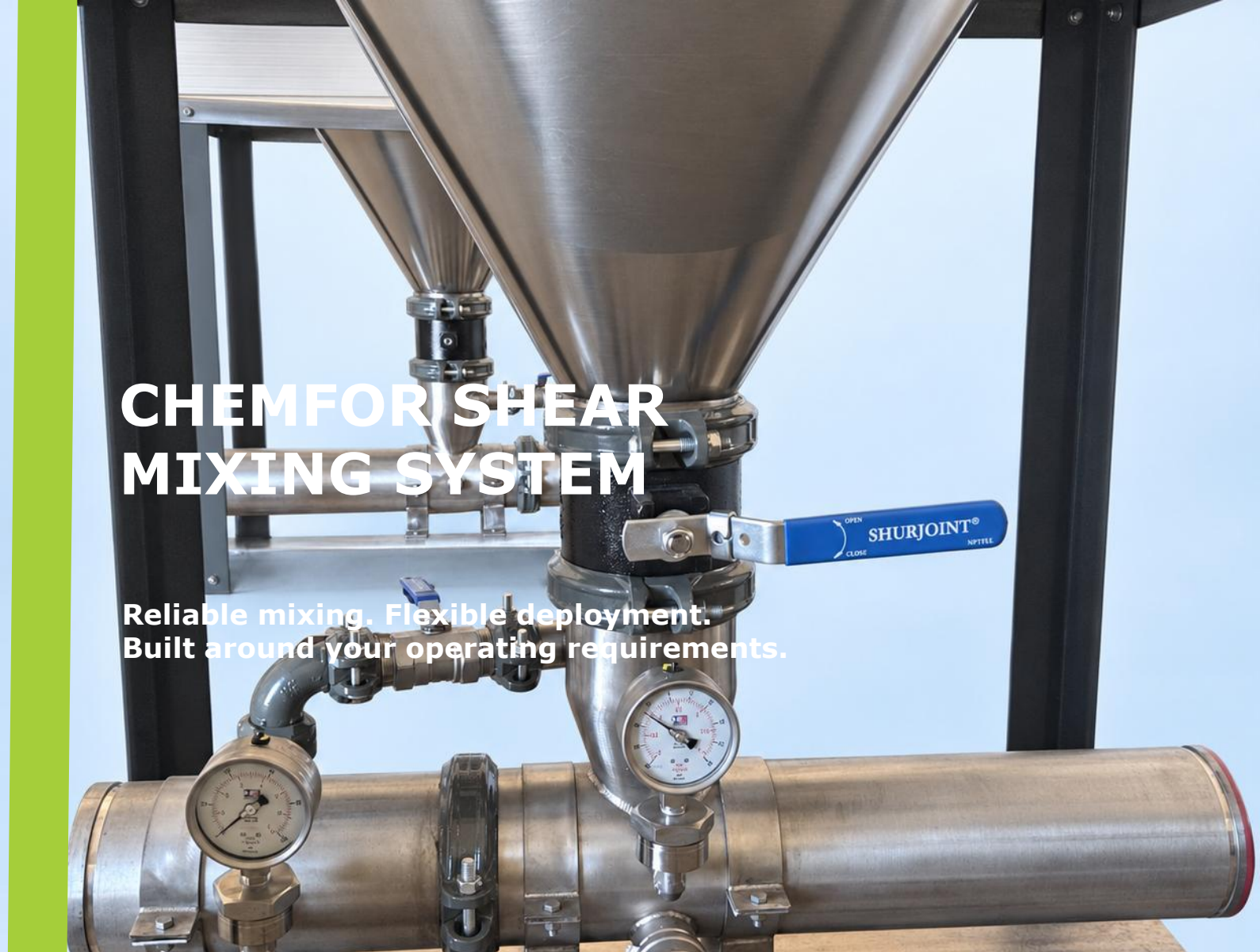
Dedicated package

RENTAL

Project flexibility

CUSTOM BUILD

End-user specification



CHEMFOR SHEAR MIXING SYSTEM

Reliable mixing. Flexible deployment.
Built around your operating requirements.



SALE | RENTAL | CUSTOM BUILDS

For technical configuration, availability and project-specific requirements, contact
CHEMFOR at contact@chemfor.eu



www.chemfor.eu

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