



# HOMOGENISING SYSTEMS

THE NEW HOME OF THE **STANSTED** RANGE OF HIGH PRESSURE HOMOGENISERS AND CELL DISRUPTER

## "nm-GEN-7575" SERIES

ROBUST - HIGH PERFORMANCE - VERSATILE - RELIABLE

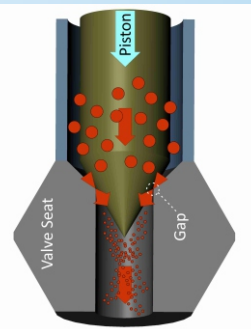
- NANOPARTICLES
- LIPOSOMES
- MICROEMULSIONS
- DEAGGLOMERATION
- CELL RUPTURE
- HP PASTEURISATION

- PRESSURES to 420 MPa  
60,000 psi
- FULLY CONTROLLABLE  
HOMOGENISING VALVES
- MICRO CHANNEL DEVICE
- BACK PRESSURE CONTROL
- PROCESS TEMPERATURE CONTROL
- EASY TO USE, CLEAN & MAINTAIN
- REPRODUCIBLE RESULTS
- SCALE UP



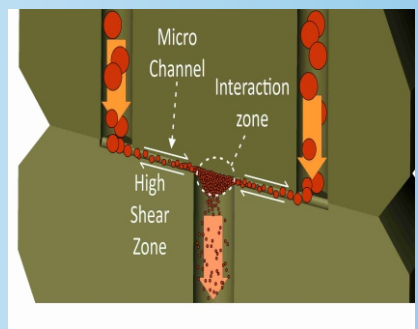
### 7575 SERIES MODELS

MODEL	MWP bar	MWP psi	FLOW lt/hr NOMINAL	POWER kW
nG7575-15-04S-40	4200	60000	18	4.0
nG7575-10-04S-32	3250	47000	20	4.0
nG7575-08-04S-27	2700	40000	25	4.0
nG7575-06-04S-20	2100	30000	30	4.0
nG7575-04-04S-14	1380	20000	50	4.0
nG7575-15-09T-40	4200	60000	40	7.5
nG7575-10-09T-32	3250	47000	55	7.5
nG7575-08-09T-27	2700	40000	60	7.5
nG7575-06-09T-20	2100	30000	85	7.5
nG7575-04-09T-14	1380	20000	130	7.5



**REVERSE FLOW PISTON GAP SYSTEM**

Custom configurations, refurbishable, inspectable



**MICRO CHANNEL DEVICE IMPINGING JET SYSTEM**

Custom configurations, refurbishable, inspectable

The **nm-GEN 7575 Series "Hy-Drive"** series of homogenisation / cell rupture systems have been developed to meet the special requirements associated with biotechnology, chemical and pharmaceutical processing applications.

These systems complimented by smaller and larger models ranges offering processing from a few ml to many m<sup>3</sup>.

The **nm-GEN-7575 Series** is suitable for pilot and production applications.

The processing module is fully enclosed and the systems incorporate synchronised pair(s) of electro-hydraulic high pressure intensifiers. These intensifiers feed the product at high pressure through a pressure processing head.

**STANSTED** high pressure homogenisers offer optimal processing by providing the user with the both Piston Gap homogenising valves or a Micro Channel Device (interaction chamber). Systems may be supplied with either or both options depending on the optimal choice the processing application.

Our piston gap devices offer market leading pressure capability to 420 MPa (60,000 psi , 4200 bar) and the range includes a number of optimised geometric patterns and profiles for optimal performance in each application. These devices incorporate advanced hard materials for optimal wear resistance and are simple to clean and maintain.

Our micro channel devices provide multiple configurations including "Z" and "Y" paths a range of channels sized for control of shear rates Our assemblies incorporate hard wearing polycrystalline diamond channels and assemblies by be simply opened and reassembled for cleaning, inspection and refurbishment.

System control is provided through a dedicated PLC with HMI or IPC with touch screen interface.

Systems are designed to provide compliance with cGMP & FDA-GMP. Systems can be offered with IQ/OQ documentation, full materials certification. 21 CFR part 11 compliance can be provided. Production pharmaceutical applications are offered with finely polished finish on wetted surfaces, CIP and SIP capabilities

Systems can be supplied with many options to allow custom configuration, so of these include

- Back Pressure Module. A second stage homogenisation valve for us in the range 2-20% of system maximum working pressure
- Micro channel processing modules (for use up to 420 MPa (60,000 psi , 4200 bar)
- Outlet Heat Exchanger. May be used to cool or heat product as required. Suitable for connection to external fluid circulation systems -20°C to +120°C
- Inlet Heat Exchanger. May be used to cool or heat product as required. Suitable for connection to external fluid circulation systems -20°C to +120°C
- Pressurised feed reservoir for use with high viscosity products.
- Medium pressure feed pump for use with high viscosity products
- Temperature indicators, can be provided with indicators to monitor temperatures at all key stages of treatment.



The **STANSTED** nm-GEN-7575 series is designed to provide the ultimate tool for R & D and Production applications. The range has market leading pressure capability and construction incorporates the most advanced corrosion resistant materials and latest manufacturing techniques to ensure exceptional performance and reliability.

Attention to detail in design and manufacture ensures wetted surfaces our suitably polished, high pressure ram plungers and primary wear surfaces utilise super hard materials and ceramics. We retain full documentation for materials and instrumentation to ensure all appropriate documentation is available for system validation.

Our latest generate control interface combines a touch screen HMI / IPC and PLC combination with advanced control logic and safety interlocking for the system. Our menu driven user interface allows operator to easily set up and control processing primary processing parameters and to data log, record, store and retransmit process data for full integration into production lines.

## Bench Top Models



**STANSTED** bench top systems complement the range of large scale systems. On left small scale production pharmaceutical production system with CIP and SIP capacity and HMI/PLC control with touch operation.

## SERVICES

### Electrical Supply

7.5-23 kW systems  
208-460V 3ph 50/60Hz

### Compressed Air (or nitrogen)

6 barg (75 psig) minimum  
10 barg (150 psig) maximum

### Cooling Fluid Drive System

Inlet connection G 1/2  
Outlet connection G 1/2  
0.2 barg (3 psig) minimum  
3.0 barg (45 psig) maximum  
+4°C minimum  
+30°C maximum

### Cooling / Heating Fluid Outlet Heat Exchanger (if required)

Inlet connection G 1/2  
Outlet connection G 1/2  
0.2 barg (3 psig) minimum  
3.0 barg (45 psig) maximum  
-20°C minimum  
+80°C maximum

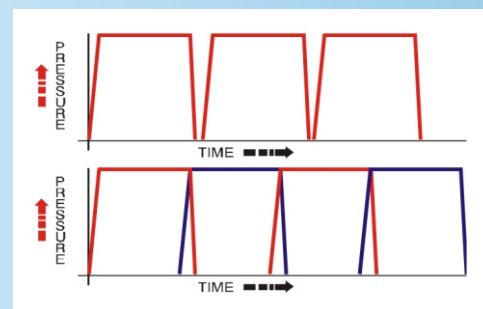
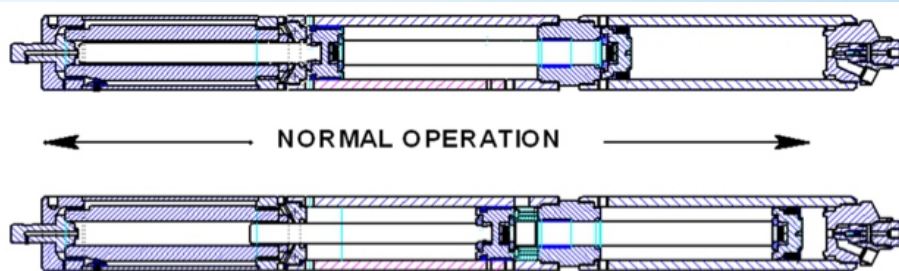
### Process Connections

Inlet connection 3/4" Triclamp  
Outlet connection 1/2" Triclamp

## PHYSICAL DATA

Width 1000 mm  
Depth 800 mm  
Height 2000 mm

Weight 475 kg - 550  
Depending on model



**STANSTED** pressure intensifiers. Graphic above (left) shows a typical **STANSTED** twin intensifier configuration. The graphic on the right shows the pressure vs time profile for a normal intensifier system and the bottom right the pressure vs time profile for a **STANSTED** synchronised intensifier pair. Smooth pressure delivery reduces fatigue and ensures a more uniform processing

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