MIXING HEAD
HIGH PRESSURE
PU METERING MACHINE
PU PLANTS
The Creation of Future-oriented Value!
World Standard Competitive Company, UREATac!

UREATac Goes with Creativity and Passion for Client

Total solution in of Polyurethane

- Mixing heads
- PU foaming machine
- All kinds of sandwich panel production line
- All kinds of PU foaming plants
- Vacuum forming machine
- Refrigerator production line
It is the most reliable mixing heads in the world
UREATac's Mixing Heads

It is the most reliable mixing heads in the world >>

- UREATac has developed innovative mixing heads which all of customers are satisfied.
- UREATac has developed mixing heads of optimum process design to cover whole range of PU system.
- UREATac has developed mixing heads based on over 20 years experience in field of PU machines and plant engineering.
- UREATac mixing heads can be used without any trouble and any problems on all kinds of high pressure PU metering machines.
- UREATac make three kinds of mixing heads.
  - L-type Mixing Heads
  - Straight type Mixing Heads
  - Mixing Heads for Continuous Panel
- UREATac's all mixing heads are available as multi components (2~6 components)

UREATac Mixing head is the best solution for your production >>

- Easy, Friendly operating, Economical mixing heads
- The most reliable mixing heads
- Accuracy and right mixing heads
- Quality guaranteed & Innovative technology
- Man-man interface design
- Eco friendly design
L-TYPE Mixing Heads

MXL Type, 2Comp (L-Type)

- UREATac's L-Type mixing heads are injected two components into mixing chamber of MC piston.
- The flows of mixed components into the outlet pipe that is offset by 90°.
- This L-Type mixing heads ensures a laminar flow, non splashing output and excellent mixing quality even with small output volumes into the open mould.
- After shot, the cleaning piston clean outlet pipe.
- UREATac’s L-type mixing heads are increased mixing efficiency of up to 30% due to innovative nozzle system and mixing mechanism.
- There are available as 2,3,4,6 components.

MXL Type, 4Comp (L-Type)

THE STRONG POINTS
1. High function, Economical & Reliable mixing heads
2. Perfect laminar flow and mixing quality
3. Low and Quick maintenance & zero defects
4. Eco friendly and self cleaning piston type
5. Easy operation & Simple Design
6. Min. shot time 0.3sec
7. Several million shots possible(Long life time)

MXL Type, 4CS (Single Head Type)

MXL Type, 4CD (Double Head Type)
**L-TYPE Mixing Heads**

**Injection**

**Cleaning**

**Circulation**

### Nozzel Diameter

**L-Type Head**
- Ø 0.3/0.4/0.5/0.6/0.8/1.0/1.2/1.5/2.0/3.0/3.5/4.0/4.5/5.5

**S-Type Head**
- Ø 5.0/5.5/6.0/6.5/7.0/7.5/8.0/9.0/10/11/12
Straight Type Mixing Heads

**MXS Type** (Straight Type)
- UREATac’s Straight mixing heads are mixed directly by powerful collision principle of two components at mixing chamber.
- Two Components by collision is mixed completely, reliably and intensively at mixing chamber
- There are available as 2, 3, 4 components.

**THE STRONG POINTS**
1. Economical & Reliable mixing heads
2. Eco friendly and self cleaning piston type
3. The pressure setting can be controlled by nozzle needle
4. Min. shot time 0.3 sec
5. Several million shots possible

UREATac’s MIXING HEAD MAINTENANCE
- Quick and easy design
- Lubricating and cleaning are very easy to carry on
- Quickly and easily disassemble and assemble
- Quick delivery for all spare parts
- In case of repair and overhaul of mixing heads, quick handling at economical price
- In case of emergency in customer production, we prepare for spare mixing head for customer service quickly
Mixing Heads for Continuous Panel

> MCP -10

THE STRONG POINTS
1. Economical & Reliable mixing heads
2. Eco friendly and easy cleaning type
3. Low and Quick maintenance & zero defects
4. Easy operation & Simple Design
Mixing Head Comparative Data

<table>
<thead>
<tr>
<th>Models</th>
<th>Mixing Ratio &amp; Output (g/sec)</th>
<th>Mixing Head Models by Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>UREATac</td>
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<td>UREATac</td>
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<td>Cannon</td>
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<td>Hennecke</td>
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<td>Krauss Maffei(KM)</td>
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<tr>
<td>EMB(Elastogram)</td>
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<tr>
<td>MXL Mixing Heads (L-Type)</td>
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<tr>
<td>MXL 0507-2C</td>
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<td></td>
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<tr>
<td>MXL 0608-2C</td>
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<tr>
<td>MXL 0812-2C/3C</td>
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<tr>
<td>MXL 1014-2C</td>
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<tr>
<td>MXL 1218-2C</td>
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<td>MXL 1220-2C</td>
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<tr>
<td>MXL 1220-4CD</td>
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<td>MXL 1422-2C</td>
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<tr>
<td>MXL 1625-2C</td>
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<tr>
<td>MXS Mixing Heads (Straight Type)</td>
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<tr>
<td>MXS 10-2C</td>
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<tr>
<td>MXS 18-2C</td>
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<td>MXS 25-2C</td>
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<tr>
<td>MXS 30-2C</td>
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<tr>
<td>MXS 36-4C</td>
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<td>MCP-10 MD</td>
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Output Range by Mixing Head Models

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<td>MXL Mixing Heads (Straight Type)</td>
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</tr>
<tr>
<td>MXL 1625-2C</td>
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</tbody>
</table>

Mixing Head Models by Application

- Refrigerator: Door - MXL 1014-2C or MXL 11218-2C
- Cabinet: MXL 1423-2C or MXL 1625-2C
- Door Trim: MXL 0812-2C
- Head Rest: MXL 1014-2C
- Steering Wheel: MXL 0812-2C
- Instrument Panel: MXL 1218-2C
- Discontinuous Panel: MXL 1625-2C or 30
- Car Seat: MXL 1422-2C / 4CD
- MXL 1422-2C / 4CD
- Pipe Insulation: MXL 18 or 25, 30, 36

Types of Heads

- MXL : L-Type Head
- MXS : Straight Type Head

Components & Kinds of Heads

- 2C : 2comp
- 3C : 2comp + Color
- 4CD : 4comp (2+2 Double Heads)
- 4CS : Single 4 comp
- 6CS : Single 6 comp
- 2CF or 4CF : For Fillers (Special Made)

Customer advantage for UREATac mixing head

- Low Maintenance Service
- Low Energy Consumption
- Low Material Consumption
- Low Trouble Rate
- Low Repair Costs
UREATac’s High pressure PU metering machine are the best Solution for your production.
UREATac’s High pressure PU metering machine are the best Solution for your production.

UREATac’s PU metering machine and mixing heads has the best solution for all kinds of PU products and high technology metering and mixing effect with high class metering pumps and mixing heads.

- UREATac has developed innovative mixing heads which all of customers are satisfied.
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- UREATac make two kinds of mixing heads.
  - L-type Mixing Heads
  - Straight type Mixing Heads
- UREATac’s all mixing heads are available as multi components (2-6 components).

RIGID FOAM
- Rigid integral skin foam
  - Density range: 180-1,100 kg/m³
  - A:B = approx 1:1
- Rigid foam
  - Density range: 10-200 kg/m³
  - A:B = approx 1:1

FLEXIBLE FOAM
- Hot curing flexible foam
  - Density range: 25-50 kg/m³
  - A:B = approx 2:1
- Cold curing flexible foam
  - Density range: 20-70 kg/m³
  - A:B = approx 2:1 or 3:1

SEMI RIGID FOAM
- Semi-rigid filing foam
  - Density range: 100-300 kg/m³
  - A:B = approx 2:1

INTERGRAL SKIN FOAM
- Semi-rigid integral skin foam
  - Density range: 160-1,100 kg/m³
  - A:B = approx 2:1 and 1:1
PU Metering Machines
Adjustment Range

Control Panel

Metering Unit

Edge Filter
MACHINE COMPOSITION

- Type: Rigid 1:1 and Flexible 2:1 or 3:1
- Mixing head
- Machine Tank Size: 60, 250, 500, 1,000 liter with stirrer and Temperature control unit, Level gauge
- Electric Control Panel
- Metering pumps and Motors
- Edge filters
- Hydraulic unit
- Steel structure/table for metering pumps and motors
- High & Low pressure gauge
- Safety Valve
- Low pressure circulation system
- Optional items
  - Flow meter
  - Magnetic coupling for polyol & Iso pumps
  - Chiller
  - Heat exchanger
  - Auto filling device from drum (Drum pump)
  - Insulation for machine tank
  - Inverter system
  - Boom with balancer
  - Upgrade for pentane process
The New Strong in Field of PU Industry!
PU Sandwich Panel Production Line

MANUFACTURING PROCESS

1. Uncoiler
2. Roll forming
3. Pre heating
4. Foaming portal
5. PU Metering machine
6. PU Pouring
7. Double conveyor
8. Cross cutter
9. Cooling conveyor
10. Staker
11. Bending & wrapping
12. Mineral wool insert line

ADVANTAGE OF PUR SANDWICH PANEL

• Thermal insulation
• Fireproofing (PIR Foam)
• Water & Moisture-Proofing
• Sound insulation
• Rigidity
• Easy application
• Saving cost
• Various architectural style
• Beautiful appearance
Flexible Facing Sandwich Panel Production Line
(Insulation Board / Al Duct Panel)

TECHNICAL DATA

- **Application**: Duct panel or Insulation board
- **Facing material**: Aluminum or paper, Fiber, Non-woven fabric [Flexible material]
- **Production speed**: 5~40 m/Min
- **Working height**: approx. 1,200mm
- **Panel width**: 1,200mm
- **Panel thickness**: 15~150mm pressure machine
- **Foam system**: PUR or PIR Rigid foam
- **Foam density**: Approx. 35~65 kg/㎡
- **Length of double conveyor**: 20~40m
- **Building inner height**: 6m
- **Factory length**: 70~120m
- **Factory width**: 20~25m
- **Electric consumption**: 400 kw
- **Required man power**: 5 men
Cold Room Panel Production Line (2+2 System)
(PU Discontinuous Panel Production Line)

THE SPECIFICATION OF PANEL & STEEL

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coil</td>
<td>Color coated or stainless steel</td>
</tr>
<tr>
<td>Steel thickness</td>
<td>0.45 - 0.8mm</td>
</tr>
<tr>
<td>Panel width</td>
<td>400 - 1,200mm</td>
</tr>
<tr>
<td>Panel length</td>
<td>1.5 - 12m</td>
</tr>
<tr>
<td>Panel thickness</td>
<td>50 - 200mm</td>
</tr>
</tbody>
</table>

MANUFACTURING PROCESS

1. Upper platen
2. Lower platen
3. Pressing machine
4. PU Foaming machine

USAGE
1. High class office building
2. Industrial building
3. All kind of factory
4. Cold storage
5. Door & Garage door
6. Clean room
7. Reefer container
Car Seat Production Line
(Oval Conveyor Type)

TECHNICAL DATA

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>PU Machine</td>
<td>High pressure machine 4 comp. Mixing head system</td>
</tr>
<tr>
<td>Production method</td>
<td>Continuous type</td>
</tr>
<tr>
<td>PU injection</td>
<td>Automatic pouring into open mould</td>
</tr>
<tr>
<td>Mould carrier type</td>
<td>2) Mechanical unit open and close</td>
</tr>
<tr>
<td>Mould locking / Unlocking</td>
<td>Locking &amp; Unlocking by air cylinder</td>
</tr>
<tr>
<td>Speed</td>
<td>Approx. 100-200mm/sec, Changeable type</td>
</tr>
<tr>
<td>Cycle time</td>
<td>Approx. 10-15 sec</td>
</tr>
<tr>
<td>PU Curing time</td>
<td>Approx. 3.5 - 4min</td>
</tr>
<tr>
<td>Heating unit</td>
<td>4 kw/h/2carrier / one heating unit, Hot water by electric heating</td>
</tr>
<tr>
<td>Seat weight</td>
<td>Approx. Min 310g - Max 3,200g</td>
</tr>
<tr>
<td>Seat consists</td>
<td>Front cushion and back, rear cushion and back</td>
</tr>
</tbody>
</table>

THE CONSIST OF SEAT LINE

- High pressure PU foaming machine, 4 comp. & Mixing Head, MXL-4CD, MXL-4CS
- 3sets machine tanks, 250L – 500L
- Industrial robot
- Electric control

OVAL CONVEYOR LINE

- Mould carrier & Moulds
- Mould open & Close system
- Mould heating system
- Vacuum crushing machine
- Safety system for working zone
- Gas exhaust and duct system
Foam in Conver Head Rest Line
(Turn Table Type)

TECHNICAL DATA

| PU Machine | High pressure machine, 2 comp. MXL Mixhead |
| Production method | Stop & go moving type |
| Product | Foam in cover head rest or general head rest |
| PU Injection | Automatic pouring into close mould by auto manipulator |
| Mould carrier type | Open and close by guide steel bar auto. Locking & unlocking by air unit |
| Mould carrier | 10 – 16 Carriers |
| Turn table size | Approx. 4m(D) × 1.6m(H) |
| Mixhead cleaning unit | Hot water or DOP cleaning by brush |
| The shot cycle time | Approx. 60 sec |
| Mould heating | By electric water boiler |
| Head rest weight | Approx. Min 150g – Max 350g |
| The required worker | 1~3 People |
| Yearly production capa | 1day - 8hr × 60min × 60sec ÷ 12sec = 2,400pcs |
| | 1month - 2,400 × 26days = 62,400pcs |
| | 1year - 624,000 × 12month = 748,800pcs |

THE CONSIST OF SEAT LINE

- High pressure PU foaming machine, 2comp. & MXL Mixhead MXL 1014-2C
- Turn table and moulds
- Auto manipulator with mixing head cleaning unit
- Mould open & close by steel guide bar
- Electric control
- Boiler
The Global UREATac!

Major Customers

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