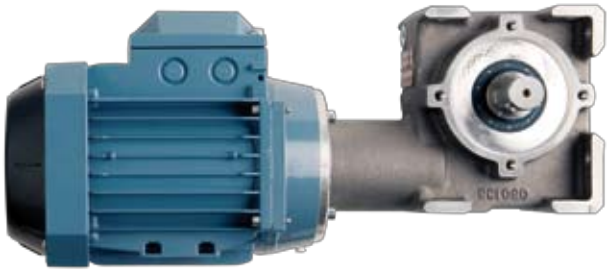
# Drive system for rotary heat exchangers

Emotron EMX-D



## Flexible and quiet

- Advanced user interface for complete control of settings and operation.
- High switching frequency for quiet operation.
- A wide speed range for maximum usage of the high efficiency in the heat exchanger rotor.
- Easy handling since no adjustments or settings are required.
- The control signal is proportional to the efficiency of the heat exchanger rotor.
- Selectable direction of rotation.
- Extensive protection against short circuit, overloading etc.
- Holding torque – prevents involuntary heat recovery.
- Flexible design makes the drive system prepared for future demands.

The Emotron EMX-D drive system is a new range of speed controlled drive systems especially designed for rotary heat exchangers. Each system consists of a motor and a corresponding electronic controller. Emotron EMX-D has the same functions as the previous versions but the design is based on the advanced AC drive Emotron FDU giving a flexible product prepared for future demands.

All functions are controlled on the built in display. This makes operation and troubleshooting very easy.

The motor can run in both directions and to further support an easy installation, no adjustments and settings are required to get the drive system into operation.

For maximum performance and efficiency in a rotary heat exchanger, low speed as well as high speed is required. The Emotron EMX-D system therefore offers full control over a wide speed range.

To prevent involuntary heat recovery, holding torque can be activated in the motor to hold a rotor still.

# Technical data

| Emotron EMX-D Drive unit | Standard | Special |
|---|---|---|
| Reduction | 10.3 : 1 | 15.5 : 1 |
| Max diameter of heat exchanger wheel with max 10-12 rpm[1)] | 5,500 mm | 3,500 mm |
| Speed of rotation | 8 - 200 rpm | 5.5 - 135 rpm |
| Direction of rotation | Selectable | |
| Torque | 26 Nm | 39 Nm |
| Motor power | 750 W | |
| Weight | 9.5 kg | |
| Dimensions, Length x Diameter | 410 x 194 mm | |

| Emotron EMX-D Control unit | |
|---|---|
| Indication | Heat exchanger rotor speed, operation status, alarm |
| Analogue output proportional to speed | Yes |
| Alarm output, alternating switch | Max 5 A, 250 V |
| Supply voltage | 230 VAC +/-15% , 50/60 Hz |
| Weight | 12.5 kg |
| Dimensions H x W x D | 351 x 203 x 203 mm |

1) Higher rotor speed or tight air sealings could result in need for a larger drive system.

| Common data | |
|---|---|
| Purging operation | Included |
| Motor protection | Included |
| Active holding torque | Included |
| Soft starting/stopping | Included |
| Rotation monitor | Sensor required |
| Short circuit protection | Included |
| Selectable maximum speed | Included |
| Control signal | 0-10 V, 4-20 mA |
| Protection class - motor and control unit | IP54 |
| Ambient temperature - motor and control unit | -30 to +40°C |

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