

# Universal analog measuring case with integrated data logger

Recording down to the second

1000 days long-term measurement

8 universal analogue inputs

4 decentralized measuring points

PC program for evaluating

16 compressors and 16 sensors



**WF STEUERUNGSTECHNIK GMBH**

WF Steuerungstechnik GmbH, Zeppelinstr. 7-9, 75446 Wiernsheim,  
Tel. 07044/91 11 00, Fax 07044/5717

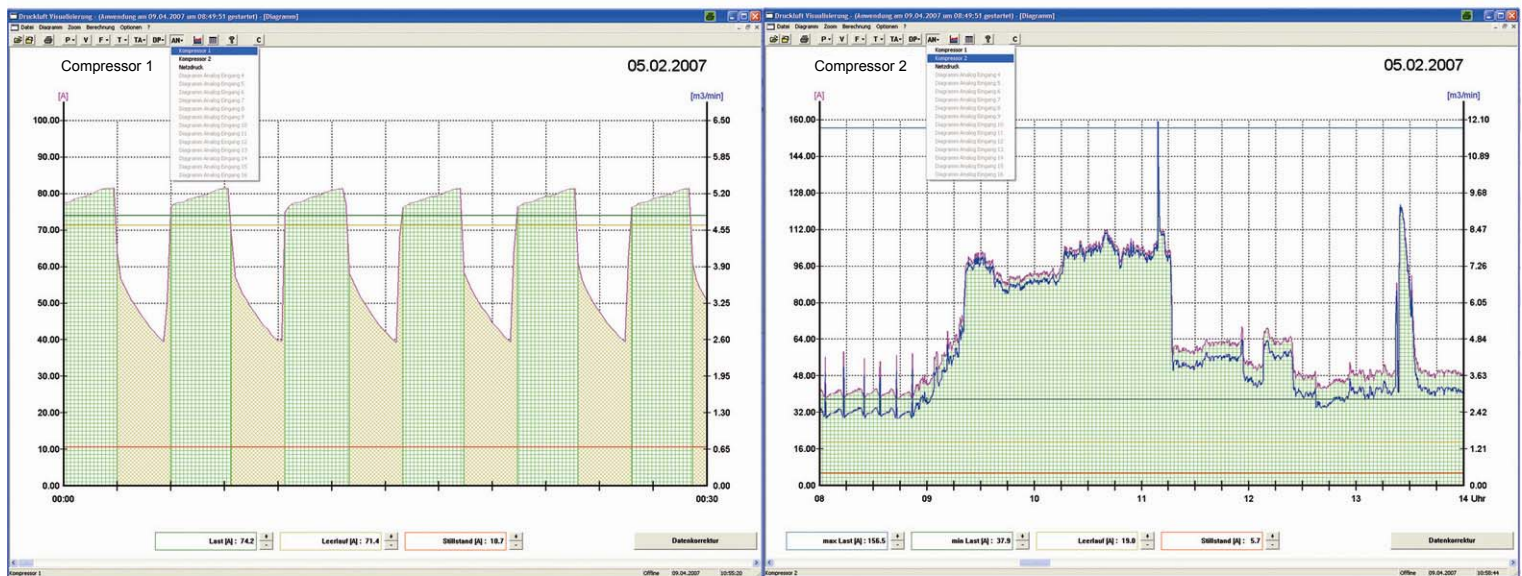
# Real-time analysis of the compressed air station

1.

Load and no-load amps  
of normal compressors  
parameterize

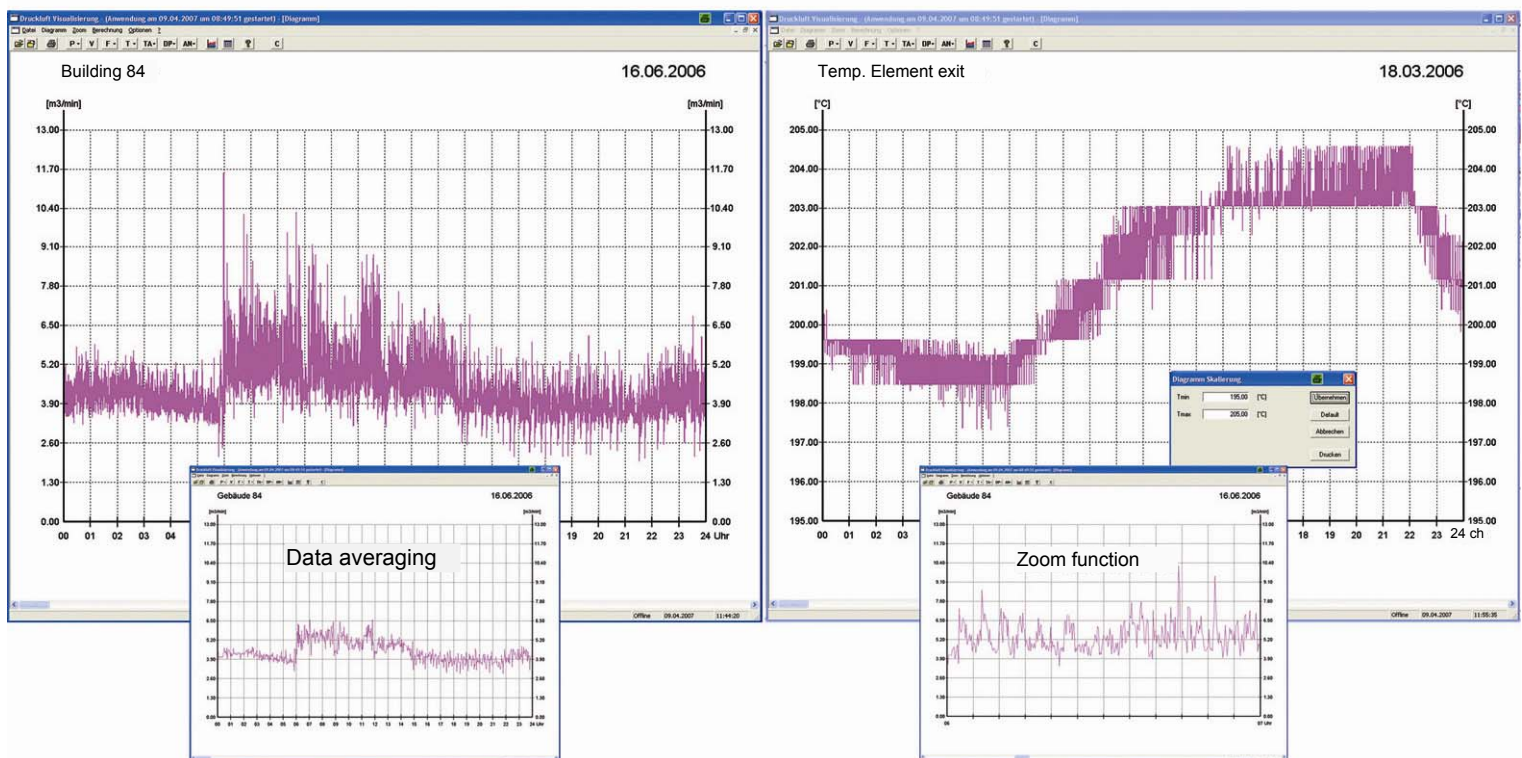
2.

Minimum and Maximum  
Load ampere of the regulated  
Parameterize compressors



Flow diagrams can  
can be averaged flexibly

The axis of the charts  
can be adjusted freely



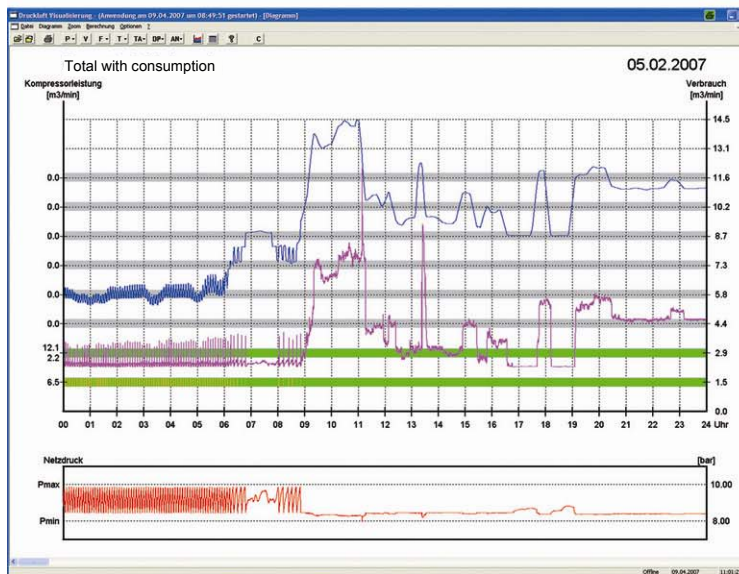
# through flexible and precise evaluation

3.

Individual days in the overall view show the pressure, compressed air consumption and condition of the compressors

4.

The weekly view shows the compressed air consumption for every day



Evaluation  
the measurement data



Extrapolation  
the measurement data

| Compressor data (measurement 02/02/2007 - 02/08/2007) |               |                   |      |           |        |                    |           |                    |           |                    |          |
|-------------------------------------------------------|---------------|-------------------|------|-----------|--------|--------------------|-----------|--------------------|-----------|--------------------|----------|
| Kanal                                                 | Kompressor    | Leistung [m³/min] |      | Last [kW] |        | Leerlauf [h:mm:ss] |           | Messzeit [h:mm:ss] |           | Laufzeit [h:mm:ss] |          |
|                                                       |               | min               | max  | min       | max    | min                | max       | min                | max       | min                | max      |
| 1                                                     | Kompressor 1  | 0.0               | 6.5  | 0.0       | 60.39  | 18.53              | 152:27:50 | 99:37              | 130:13:30 | 65:89              | 21:18:20 |
| 2                                                     | Kompressor 2  | 2.2               | 12.1 | 25.20     | 104.10 | 0.00               | 152:27:50 | 99:30              | 151:24:10 | 100:00             | 00:00:00 |
| 3                                                     | Kompressor 3  | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 4                                                     | Kompressor 4  | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 5                                                     | Kompressor 5  | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 6                                                     | Kompressor 6  | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 7                                                     | Kompressor 7  | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 8                                                     | Kompressor 8  | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 9                                                     | Kompressor 9  | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 10                                                    | Kompressor 10 | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 11                                                    | Kompressor 11 | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 12                                                    | Kompressor 12 | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 13                                                    | Kompressor 13 | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 14                                                    | Kompressor 14 | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 15                                                    | Kompressor 15 | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |
| 16                                                    | Kompressor 16 | 0.0               | 0.0  | 0.00      | 0.00   | 0.00               | 152:27:50 | 0.00               | 00:00:00  | 0.00               | 00:00:00 |

| Measurement data (measurement 02.02.2007 - 08.02.2007) |               |             |      |                       |          |                |         |                      |          |        |  |
|--------------------------------------------------------|---------------|-------------|------|-----------------------|----------|----------------|---------|----------------------|----------|--------|--|
| Kanal                                                  | Kompressor    | Schaltungen |      | Gesamte Energie [kWh] |          | Druckluft [m³] |         | Kostenberechnung [€] |          |        |  |
|                                                        |               | Motor       | Last | load                  | Leerlauf | Gesamt         | Last    | Last                 | Leerlauf | Gesamt |  |
| 1                                                      | Kompressor 1  | 0           | 0    | 6081.59               | 415.50   | 6977.09        | 50788.0 | 524.93               | 33.24    | 558.17 |  |
| 2                                                      | Kompressor 2  | 0           | 0    | 6279.39               | 0.00     | 6279.39        | 38540.0 | 502.35               | 0.00     | 502.35 |  |
| 3                                                      | Kompressor 3  | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 4                                                      | Kompressor 4  | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 5                                                      | Kompressor 5  | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 6                                                      | Kompressor 6  | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 7                                                      | Kompressor 7  | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 8                                                      | Kompressor 8  | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 9                                                      | Kompressor 9  | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 10                                                     | Kompressor 10 | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 11                                                     | Kompressor 11 | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 12                                                     | Kompressor 12 | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 13                                                     | Kompressor 13 | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 14                                                     | Kompressor 14 | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 15                                                     | Kompressor 15 | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |
| 16                                                     | Kompressor 16 | 0           | 0    | 0.00                  | 0.00     | 0.00           | 0.00    | 0.00                 | 0.00     | 0.00   |  |

| Specific power     |            |
|--------------------|------------|
| Firma              | Stetter    |
| Standort           | Stuttgart  |
| Kompressor Station | Werk II    |
| Start der Messung  | 02.02.2007 |
| Ende der Messung   | 08.02.2007 |
| Dauer der Messung  | 152:27:50  |

| Location data         |         |
|-----------------------|---------|
| Arbeitszeit Tage/Jahr | 365     |
| Kosten/kWh            | 0.080 € |

| Messdaten              | Schnitt | Minimum | Maximum |
|------------------------|---------|---------|---------|
| Leistung [kW]          | 78.42   | 54.05   | 101.80  |
| Druck [bar]            | 8.64    | 8.28    | 9.41    |
| Consumption [m³/min]   | 9.78    | 6.74    | 12.70   |
| System utilization (%) | 52.59   | 36.25   | 68.28   |

| Messung Gesamt        |           |
|-----------------------|-----------|
| Energy [kWh]          | 13256.48  |
| Energy load (%)       | 96.87     |
| Effizienz [kW/m³/min] | 8.01840   |
| Last-Periode Gesamt   | 1027.26   |
| Kosten Messung Gesamt | 1080.52 € |

| Jährliche Kalkulation Gesamt |            |
|------------------------------|------------|
| Last-Periode Gesamt          | 58023.84 € |
| Total annual energy (kWh)    | 761668.83  |
| Total annual costs           | 80933.49 € |

# Integrates all analog sensors



Flow sensor dew point temperature pipe temperature



Ampere pliers



200 A



400 A



1000 A



Your expert advisor

**WF STEUERUNGSTECHNIK GMBH**

Zeppelinstr. 7-9, 75446 Wiernsheim  
Tel. +49 7044 911100, Fax +49 7044 5717  
[www.airleader.de](http://www.airleader.de), [info@airleader.de](mailto:info@airleader.de)