

**SOLID**  
*air*

The Clever Compressor

# Reliable in the long run.

## Screw compressors SOLIDscrew



# A clever balance between price and performance.

When does a compressor turn into a clever compressor? Quite simply:

When a customer can be certain to buy the most compressor for the least money.

This is exactly what the name SOLIDair stands for. We manufacture and sell piston

compressors up to 7.5 kW, screw compressors up to 22 kW as well as special type

of dental compressors. Our customers range from DIY'ers to craftsmen and

builders through to small industries. Every SOLIDair comes with a clear promise:

max performance and long service life at the best price. Clever makes the difference:

**Contact your specialist dealer for more information on SOLIDair!**



# SOLIDscrew: Our experience puts you at the cutting edge

The screw compressor range of the SOLIDscrew series successfully bundles the long years of experience of our engineers. This is the reason why SOLIDscrew compressors offer lasting advantages to their users: The sophisticated machine design and the standard electronic control stand for efficient operation. High quality materials provide a long service life and exceptional reliability. Owing to their wide variety of versions, SOLIDscrew compressors can be specifically adapted to individual customer requirements – your clever choice for applications with continuous compressed air demand.



## Efficient operation

The standard electronic SOLIDcontrol serves to automatically select the most favourable mode of operation. The LC display allows you to conveniently read important machine parameters. Optionally available with connection for compressor integration in a master control system.



## Intelligent design

SOLIDscrew compressors are an outstanding example of our engineers' long years of experience in the development of screw compressors. Among a number of other features, the combined overhead oil/air reservoir and the optimal cooling air flow are intended for a maximum of safe and efficient operation.



## Variable equipment

Screw compressors of the SOLIDscrew series are available in appropriately coordinated performance classes from 4 to 22 kW and from 7.5 to 13 bar. Furthermore, your compressor can be equipped with a receiver or with a receiver and additional dryer.



# SOLIDscrew 4 – 11: Strong performance, robust heart.

When continuous compressed air of up to 11 kW is required, this **V-belt powered screw compressor** is the right choice. The concept of the **combined overhead oil/air reservoir and the compressor stage mounted directly on top** serves, by means of the superfine oil separator cartridge to effectively pre-separate the oil and to minimise any pressure losses. The **optimal cooling air flow through the sound absorbing hood with integrated electrical switch cabinet (IP 54)** adds to increase both operating safety and efficiency. The robust construction principle of **high quality materials** and the **vibration decoupled machine part** stand for safe and reliable operation.





### Safe cooling concept

Due to the thermally controlled oil cooler there is no formation of condensate in the oil. The highly efficient aftercooler provides a constantly low compressed air temperature.



### Automatic air intake regulation

The automatic air intake regulation is intended to ensure completely load-free startup; during standstill the compressor is hermetically sealed. Equipped with generously dimensioned intake filter in sound absorbing housing.



### SOLIDcontrol

This standard micro processor equipped electronic control serves to automatically select the most efficient mode of operation, and includes display of fault messages, compression temperature and pressure as well as precise pressure settings by using the keyboard.



### External oil separator

The external oil separator with horizontally mounted combined reservoir is designed to optimally pre-separate the oil before the compressed air enters the oil separator cartridge so as to virtually avoid any compressed air losses and to only put minimum strain on the oil separator cartridge.

| SOLIDair Type<br>Standard | Effective free air delivery<br>in m <sup>3</sup> /min at maximum pressure |        |        | Motor<br>power<br>kW | Dimensions<br>silenced<br>W x D x H (mm) | Weight<br>silenced<br>kg | Dimensions<br>super silenced<br>W x D x H (mm) | Weight<br>super<br>silenced<br>kg | Compressed<br>air outlet<br>female<br>thread |
|---------------------------|---|--------|--------|----------------------|--|--------------------------|--|-----------------------------------|--|
|                           | 8 bar   | 10 bar | 13 bar |                      |  |                          |  |                                   |  |
| SOLIDscrew 4              | 0.61  | 0.53   | 0.42   | 4.0                  | 770 x 1000 x 1140                        | 205                      | —  | —                                 | G 1/2"                                       |
| SOLIDscrew 5              | 0.87  | 0.76   | 0.61   | 5.5                  | 770 x 1000 x 1140                        | 230                      | —  | —                                 | G 1/2"                                       |
| SOLIDscrew 7              | 1.12  | 0.99   | 0.78   | 7.5                  | 770 x 1000 x 1140                        | 230                      | —  | —                                 | G 1/2"                                       |
| SOLIDscrew 11             | 1.55  | 1.36   | 1.08   | 11.0                 | —  | —                        | 770 x 1200 x 1140                              | 300                               | G 1/2"                                       |

Emitted sound pressure values in accordance with DIN 43635 part 13, silenced version 67-72 dB(A) and super-silenced version 68 dB(A).  
Effective free air delivery figures in accordance with ISO 1217, appendix C, at 20° C ambient temperature and maximum pressure.

# SOLIDscrew 4 to 11: With reservoir / with reservoir and dryer.

The "small" SOLIDscrew compressors are capable of even more: Why not beef up your compressor with a **270 or 500 litre pressure receiver as an option**. Or additionally with a receiver plus a **refrigerating compressed air dryer** while at the same time opting for a particularly economical way of producing compressed air with marginal humidity and a low level of impurities.



**SOLIDscrew 11-500 D**  
with 500 litre compressed  
air receiver and refrigerant  
compressed air dryer



#### Automatic dryer.

The SOLIDair refrigerant compressed air dryer is engineered to operate automatically and comes completely pre-assembled and ready for operation. Only minor pressure losses will be caused, allowing the upstream compressor to produce less pressure.



#### Completely equipped.

Hand hole for inside inspection / examination. Further equipment features: type tested safety valve, gauge, control flange with nozzle bore, check valve at compressed air outlet, condensate discharge through ball valve.

#### High quality compressed air receiver.

The compressed air receiver is metallically bright and completely hot dip galvanised. Every SOLIDscrew receiver is manufactured according to Directive 2009/105/EC, Data Sheet AD 2000, and carries a CE marking.

#### Efficient operation.

Negligible pressure losses during drying ensure maximum operation efficiency along with continued cost savings: probably the most effective way to dry and practically foreign matter free compressed air.

| SOLIDair Type<br>compressed air system<br>with compressed<br>air receiver | Effective free air delivery<br>in m <sup>3</sup> /min at maximum pressure |        |        | Motor<br>power<br>kW | Dimensions<br>silenced<br>W x D x H (mm) | Weight<br>silenced<br>kg | Dimensions<br>super-silenced |     | Weight<br>super-<br>silenced<br>kg | Compressed<br>air outlet<br>female<br>thread |
|---|---|--------|--------|----------------------|--|--------------------------|------------------------------|-----|------------------------------------|--|
|   | 8 bar   | 10 bar | 13 bar |                      |  |                          | W x D x H (mm)               | kg  |                                    |  |
| SOLIDscrew 4-270  | 0.61  | 0.53   | —      | 4.0                  | 1750 x 950 x 1700                        | 335                      | —                            | —   | —                                  | G ½"   |
| SOLIDscrew 5-270  | 0.87  | 0.76   | —      | 5.5                  | 1750 x 950 x 1700                        | 350                      | —                            | —   | —                                  | G ½"   |
| SOLIDscrew 7-270  | 1.12  | 0.99   | —      | 7.5                  | 1750 x 950 x 1700                        | 350                      | —                            | —   | —                                  | G ½"   |
| SOLIDscrew 11-500   | 1.55  | 1.36   | —      | 11.0                 | —  | —                        | 2050 x 1010 x 1810           | 480 | —                                  | G ½"   |
| with refrigeration dryer and<br>compressed air receiver                   |   |        |        |                      |  |                          |                              |     |                                    |  |
| SOLIDscrew 4-270 D  | 0.61  | 0.53   | —      | 4.0                  | 1750 x 950 x 1700                        | 370                      | —                            | —   | —                                  | G ½"   |
| SOLIDscrew 5-270 D  | 0.87  | 0.76   | —      | 5.5                  | 1750 x 950 x 1700                        | 385                      | —                            | —   | —                                  | G ½"   |
| SOLIDscrew 7-270 D  | 1.12  | 0.99   | —      | 7.5                  | 1750 x 950 x 1700                        | 385                      | —                            | —   | —                                  | G ½"   |
| SOLIDscrew 11-500 D   | 1.55  | 1.36   | —      | 11.0                 | —  | —                        | 2050 x 1010 x 1810           | 520 | —                                  | G ½"   |

Emitted sound pressure values in accordance with DIN 43635 part 13, silenced version 67-72 dB(A) and super silenced version 68 dB(A).  
Effective free air delivery figures in accordance with ISO 1217, appendix C, at 20° C ambient temperature and maximum pressure.

# SOLIDscrew 15 to 22: Maximum performance, maximum efficiency.

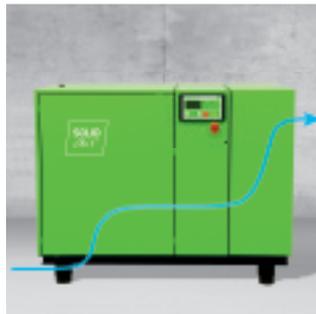
The "big" SOLIDscrew compressors between 15 and 22 kW were specially developed for a high demand of continuous compressed air. The oil injection cooled **SOLIDair** **airend with optimised screw profile** mounted directly on the receiver was engineered to warrant efficient operation at a minimum of internal pressure losses. The **electronic SOLIDcontrol** comes as a standard and serves to automatically select the most efficient mode of operation. The effective pre-separation in the horizontally mounted combined oil/air reservoir ensures, by means of the superfine oil separator cartridge, **a constantly low residual oil content in the compressed air**, and minimises treatment expenses – for maximum performance with maximum efficiency!





### Convenient maintenance

The external superfine oil separator cartridge and the HD oil filter make maintenance easier than ever before. The entire oil circuit works without any valves, while central V-belt tension enables simple tensioning of the V-belts.



### Intelligent design

The sound absorbing hood with its highly efficient lining, intake air filter mat and completely integrated electrical switch cabinet enable optimal cooling air flow.



### SOLIDcontrol

This standard micro processor equipped electronic control serves to automatically select the most efficient mode of operation, and includes display of fault messages, compression temperature and pressure as well as precise pressure settings by using the keyboard



### Safe cooling concept

Due to the thermally controlled oil cooler there is no formation of condensate in the oil. The highly efficient aftercooler provides a constantly low compressed air temperature.

| SOLIDair Type<br>Standard | Effective free air delivery<br>in m <sup>3</sup> /min at maximum pressure |        |        | Motor<br>power<br>kW | Dimensions<br>super silenced<br>W x D x H (mm) | Weight<br>kg | Compressed air outlet<br>female thread |
|---------------------------|---|--------|--------|----------------------|--|--------------|--|
|                           | 7,5 bar   | 10 bar | 13 bar |                      |  |              |  |
| SOLIDscrew 15             | 2.50  | 2.06   | 1.70   | 15.0                 | 1200 x 850 x 960                               | 372          | G 1"                                   |
| SOLIDscrew 18             | 2.94  | 2.45   | 2.05   | 18.5                 | 1200 x 850 x 960                               | 389          | G 1"                                   |
| SOLIDscrew 22             | 3.52  | 2.85   | 2.45   | 22.0                 | 1200 x 850 x 960                               | 429          | G 1"                                   |

Emitted sound pressure values in accordance with DIN 43635 part 13, silenced version 73-75 dB(A).  
Effective free air delivery figures in accordance with ISO 1217, appendix C, at 20° C ambient temperature and maximum pressure.

# SOLIDscrew 15 to 22: With receiver / with receiver and dryer.

The "big" SOLIDscrew screw compressors are variably extendable. "A **completely hot dip galvanised and horizontally bottom mounted pressure receiver** with a capacity of 770 litres is available for the SOLIDscrew 15 to 22 series. If extremely dry and practically foreign matter free compressed air is needed, the integration of a **refrigerating compressed air dryer** can be useful with view to its particularly efficient mode of operation. Highest performance plus highest flexibility – this is only possible by means of a real clever compressor!





#### Automatic dryer.

The SOLIDair refrigerant compressed air dryer is engineered to operate automatically and comes completely pre-assembled and ready for operation. Only minor pressure losses will be caused, allowing the upstream compressor to produce less pressure.



#### Completely equipped.

Shipment comes complete with instrument panel and all required fittings: type tested safety valve, gauge, control flange with nozzle bore, hand hole for inside inspection / examination, check valve at compressed air outlet, condensate discharge through ball valve.

#### High quality compressed air receiver.

The compressed air receiver is metallically bright and completely hot dip galvanised. Every SOLIDscrew receiver is manufactured according to Directive 2009/105/EC, Data Sheet AD 2000, and carries a CE marking.

#### Efficient operation.

Negligible pressure losses during drying ensure maximum operation efficiency along with continued cost savings: probably the most effective way to dry and practically foreign matter free compressed air!

| SOLIDair Type<br>Standard                               | Effective free air delivery<br>in m <sup>3</sup> /min at maximum pressure |        |        | Motor<br>power<br>kW | Dimensions<br>super silenced<br>W x Dx H (mm) | Weight<br>in kg at maximum pressure |        |        | Compressed<br>air outlet<br>female thread |
|---|---|--------|--------|----------------------|---|-------------------------------------|--------|--------|---|
|   | 7,5 bar   | 10 bar | 13 bar |                      |   | 7,5 bar                             | 10 bar | 13 bar |   |
| with compressed air receiver                            |   |        |        |                      |   |                                     |        |        |   |
| SOLIDscrew 15-750                                       | 2.50  | 2.06   | 1.70   | 15.0                 | 2150 x 1050 x 1775                            | 585                                 | 585    | 635    | G 1"                                      |
| SOLIDscrew 18-750                                       | 2.94  | 2.45   | 2.05   | 18.5                 | 2150 x 1050 x 1775                            | 635                                 | 635    | 685    | G 1"                                      |
| SOLIDscrew 22-750                                       | 3.52  | 2.85   | 2.45   | 22.0                 | 2150 x 1050 x 1775                            | 675                                 | 675    | 725    | G 1"                                      |
| with refrigeration dryer and<br>compressed air receiver |   |        |        |                      |   |                                     |        |        |   |
| SOLIDscrew 15-750 D                                     | 2.50  | 2.06   | 1.70   | 15.0                 | 2000 x 1050 x 1775                            | 620                                 | 620    | 670    | G ¾"                                      |
| SOLIDscrew 18-750 D                                     | 2.94  | 2.45   | 2.05   | 18.5                 | 2000 x 1050 x 1775                            | 670                                 | 670    | 720    | G ¾"                                      |
| SOLIDscrew 22-750 D                                     | 3.52  | 2.85   | 2.45   | 22.0                 | 2000 x 1050 x 1775                            | 725                                 | 725    | 775    | G 1"                                      |

Emitted sound pressure values in accordance with DIN 43635 part 13, silenced version 73-75 dB(A).  
Effective free air delivery figures in accordance with ISO 1217, appendix C, at 20° C ambient temperature and maximum pressure.

# SOLIDair components for compressed air treatment and accessories.

Facing extremely high quality demands on compressed air or intending to specifically upgrade your SOLIDair compressor? Then you should check the customised SOLIDair line: The **SOLIDdry**, **SOLIDclean**, **SOLIDtronik** and **SOLIDdrain** series are tailor-made components for drying, filtering and discharging any condensates. The separating systems of the **SOLIDsep** series serve to separate oil and water in the accumulated condensate – good for your compressor, good for the environment. Clever equipment for clever compressors!





### SOLIDdry type compressed air dryer

Wet as well as oil and dirt containing compressed air impacts on your entire compressed air system. The accumulated condensate will cause premature wear of your compressed air tools and entail poor work results (e.g. paint coating). The refrigerating compressed air dryers of the SOLIDdry series have been subjected to extensive tests in order to optimally conform with the performance data of our screw compressors. All models are optionally available with a bypass pipe and a pneumatically level controlled SOLIDdrain type condensate drain.

| SOLIDair Type | Flow capacity*      | max. operating pressure<br>bar | Pressure differential, full load<br>bar | Required power input<br>kW | installed power input<br>kW | Com-pressed air connection | Cooling air requirement<br>m <sup>3</sup> /min | Dimensions<br>W x D x H (mm) | Weight<br>kg |
|---------------|---------------------|--------------------------------|---|----------------------------|-----------------------------|----------------------------|--|------------------------------|--------------|
|               | m <sup>3</sup> /min |                                |   |                            |                             |                            |  |                              |              |
| SOLIDdry 4    | 0.40                | 16                             | 0.015                                   | 0.13                       | 0.26                        | G ½                        | 1.50   | 450 x 210 x 430              | 19           |
| SOLIDdry 6    | 0.60                | 16                             | 0.031                                   | 0.17                       | 0.26                        | G ½                        | 1.50   | 450 x 210 x 430              | 19           |
| SOLIDdry 9    | 0.90                | 16                             | 0.032                                   | 0.25                       | 0.35                        | G ½                        | 3.67   | 500 x 210 x 506              | 24           |
| SOLIDdry 12   | 1.20                | 16                             | 0.055                                   | 0.25                       | 0.35                        | G ½                        | 3.67   | 500 x 210 x 506              | 24           |
| SOLIDdry 22   | 2.20                | 16                             | 0.172                                   | 0.57                       | 0.76                        | G ½                        | 6.33   | 520 x 225 x 565              | 31           |
| SOLIDdry 30   | 3.00                | 16                             | 0.259                                   | 0.78                       | 0.92                        | G ¾                        | 9.17   | 520 x 225 x 565              | 35           |
| SOLIDdry 40   | 4.00                | 16                             | 0.137                                   | 0.71                       | 0.95                        | G 1½                       | 9.00   | 555 x 425 x 600              | 52           |

\* In relation to the intake state of the compressor (20° C, 1 bar) at a safety compressed air temperature of +35° C, safety operating pressure 7 bar.

| Correction factor for dimensioning of dryers in case of deviating operating data: |             |             |      |      |             |      |      |      |      |      |      |      |
|---|-------------|-------------|------|------|-------------|------|------|------|------|------|------|------|
| Ambient/cooling water outlet temperature (°C)                                     | 20          | <b>25</b>   | 30   | 35   | 40          | 45   | 50   |      |      |      |      |      |
| Factor f1   | 1.06        | <b>1.00</b> | 0.94 | 0.88 | 0.82        | 0.76 | 0.70 |      |      |      |      |      |
| Inlet temperature (°C)  | 30          | <b>35</b>   | 40   | 45   | 50          | 55   | 60   |      |      |      |      |      |
| Factor f2   | 1.21        | <b>1.00</b> | 0.84 | 0.70 | 0.59        | 0.49 | 0.41 |      |      |      |      |      |
| pressure dewpoint   | 3           | 4           | 5    | 6    | <b>7</b>    | 8    | 9    | 10   | 11   | 12   | 13   | 14   |
| Factor f3   | 0.74        | 0.83        | 0.90 | 0.96 | <b>1.00</b> | 1.03 | 1.06 | 1.08 | 1.10 | 1.12 | 1.13 | 1.14 |
| pressure dewpoint   | <b>3</b>    | 5           | 7    |      |             |      |      |      |      |      |      |      |
| Factor f4   | <b>1.00</b> | 1.10        | 1.40 |      |             |      |      |      |      |      |      |      |



## SOLIDair // The Clever Compressor



### SOLIDclean type compressed air filter.

In addition to drying, optimal compressed air treatment also requires filtering of the air. The compressed air filters of the SOLIDclean range are able to remove finest oil / water aerosols and dirt up to a particle size of 0.01  $\mu\text{m}^3$ . They come with an automatic float valve as standard for condensate discharge or with a differential pressure indicator as an option for early detection of maintenance intervals. If required, all filters can be equipped with our SOLIDdrain type condensate drain.

| SOLIDair Type | Power*<br>m <sup>3</sup> /min | Connection | Dimensions (mm) |     |    | Weight<br>kg |
|---------------|-------------------------------|------------|-----------------|-----|----|--------------|
|               |                               |            | A               | B   | C  |              |
| SOLIDclean 5  | 0.53                          | 1/4        | 69              | 168 | 21 | 0.6          |
| SOLIDclean 10 | 1.00                          | 3/8        | 89              | 267 | 24 | 1.2          |
| SOLIDclean 18 | 1.80                          | 1/2        | 89              | 267 | 24 | 1.2          |
| SOLIDclean 30 | 3.00                          | 3/4        | 109             | 367 | 34 | 2.4          |
| SOLIDclean 45 | 4.50                          | 1          | 109             | 367 | 34 | 2.4          |

\*Applications require a filtration temperature of 20° C and a working pressure of 7 bar.

| SOLIDclean designation | V          | F                 | A                    |
|------------------------|------------|-------------------|----------------------|
| Type of filter         | Pre-filter | Ultra-fine filter | Active carbon filter |

### Classification in accordance with ISO 8573.1:2001 (degree of air purity)

| ISO class | max. particle concentration<br>per m <sup>3</sup> in micron |         | Oil<br>(with aerosols)<br>mg/m <sup>3</sup> |
|-----------|---|---------|---|
|           | 0.1–0.5   | 1.0–5   |   |
| 1         | 100 (F)   |         | 0.01 (A)                                    |
| 2         |   |         |   |
| 3         |   | 500 (V) |   |

| Correction factor for correct dimensioning of filters: |      |      |      |      |      |      |      |     |
|--|------|------|------|------|------|------|------|-----|
| Pressure (bar)   | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12  |
| Factor   | 0.75 | 0.88 | 1.00 | 1.13 | 1.25 | 1.38 | 1.50 | 1.6 |



### SOLIDscrew 22-750

with 7500 litre compressed air receiver and refrigerant compressed air dryer.



### SOLIDdrain and SOLIDtronik type condensate drains

Due to the compression process, most of the accumulated condensate is collected in the compressed air receiver and the compressed air dryer, and also in the filter. It needs to be drained at regular intervals and in a reliable manner.

Otherwise, there is a risk that the condensate is carried away with the air flow, thus contaminating your entire compressed air network.

You can choose between two different condensate drains:

**1. SOLIDdrain.** The pneumatic level controlled system serves to drain the condensate by means of electronic level detection without any pressure loss and in an efficient manner.

**2. SOLIDtronik.** The automatic SOLIDtronik drain valve serves to drain the accumulated condensate according to your manually set intervals and hours of operation.



| SOLIDair Type | Connection | Weight | Dimensions     | max. pressure |
|---------------|------------|--------|----------------|---------------|
|               |            | kg     | W x D x H (mm) | bar           |
| SOLIDdrain    | G 1/2      | 0.8    | 164 x 65 x 118 | 0.8–16        |
| SOLIDtronik   | G 3/8      | 0.4    | 43 x 90 x 108  | 0.5–16        |



### SOLIDsep oil/water separation systems

The condensate accumulated and discharged by means of the condensate drain is heavily contaminated with dirt and oil. Discharging this condensate directly into the sewage system will have a material impact on our environment.

For this reason, the legislator specifies in accordance with § 7a of the (German) Water Resources Act that the accumulated condensate be processed accordingly. As external disposal appears to be difficult and extremely expensive in many cases, the purchase of one's own separation system will pay off after a short period of operation.

| Type       | Screw compressors            | Piston compressors (VDL100)  | Dimensions      |
|------------|------------------------------|------------------------------|-----------------|
|            | max. compressor performances | max. compressor performances |                 |
|            | m <sup>3</sup> /min          | m <sup>3</sup> /min          | W x D x H (mm)  |
| SOLIDsep 1 | 1.9                          | 1.7                          | 220 x 222 x 528 |
| SOLIDsep 2 | 3.8                          | 3.4                          | 375 x 254 x 595 |

### Compressed air receivers

Please check our current price list for our range of separate compressed air receivers.

## Our range of Clever compressors:

- piston compressors up to 7.5 kW
- screw compressors up to 22 kW
- special dental compressors

SOLIDair compressors as well as accessories and service are available from your qualified specialist dealer!

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