Worthington Creyssensac

BECAUSE IMPROVEMENT NEVER STOPS

DWVS 36-364
REFRIGERANT DRYERS

www.airwco.com

DWVS: A REVOLUTION IN DRYER EFFICIENCY

The Worthington Creyssensac DWVS refrigerant dryers are making top quality air at previously unimaginable energy savings a reality. Their variable speed drive ensures that your dryer will only use the energy needed to match your compressed air demand. In addition to their unparalleled efficiency, they also deliver stable, high air purity and a small carbon footprint.

1 HIGHER PRODUCTION QUALITY AND RELIABILITY

- Increase your operational reliability by safeguarding downstream equipment, such as piping, receiver and machinery.
- Boost your output thanks to higher uptime and process optimization results by connecting to your compressor room communication protocol.
- Advanced controller and ICONS remote connectivity give you production insights, flexibility, efficiency and reliability.

2 UNMATCHED ENERGY SAVINGS

- Lower operational cost due to lower electricity bills and maintenance costs.
- Quick return on investment (ROI), as low as 1.5 year.

3 ENVIRONMENTALLY FRIENDLY

- Contribute to a CO_2-neutral production process and greener society.
- Achieve your environmental goals.
- GWP gas regulation compliant.

4 SMART, COMPACT DESIGN

- Small footprint to fit on your production floor or in your utility room.
- Easy to move and to access for service.

DWVS: STRENGTH IN NUMBERS

- Variable speed drive delivers up to **60% in energy savings.**
- ISO 8573-1:2010 **air purity Class 4** guaranteed, even in high ambient **(46°C)** temperatures.
- **Up to 65% less CO_2 emissions** in TEWI (Total Equivalent Warming Impact) compared to fixed speed dryers, up to **55%** less than thermal mass dryers currently on the market.
- Up to **33% smaller size** than thermal mass dryers.
- Available in **12 sizes** from **360 to 3636 m³/hr.**

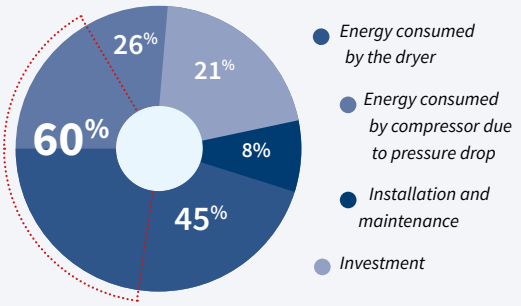
EXCEPTIONAL DRYER PERFORMANCE & QUALITY AIR

IMPROVE YOUR OPERATIONAL RELIABILITY AND QUALITY

Installing an air dryer is the smart choice, as compressed air contains moisture that can damage your air system, your pneumatic equipment and your products. Unfortunately, not all refrigerant dryers give you reliable performance and air quality. With a guaranteed ISO 8573-1:2010 Class 4 air purity, the Worthington Creyssensac DWVS gives you protection and peace of mind. What is more, with the advanced Airlogic²T controller, you can monitor and control your DWVS to enhance its efficiency and reliability. And with an ICONS remote monitoring plan, you can optimize its operation even further.

DWVS: REDUCE YOUR TOTAL COST OF OWNERSHIP

By matching its power usage to your air demand, the DWVS can decrease your dryer energy consumption by up to 60%. In addition, the new Worthington Creyssensac DWVS dryer also delivers indirect savings: Its patented heat exchanger reduces the pressure drop and therefore results in even lower operating costs. By drastically lowering your total cost of dryer ownership on these two fronts, the DWVS offers you a return on investment as quick as 1.5 year.



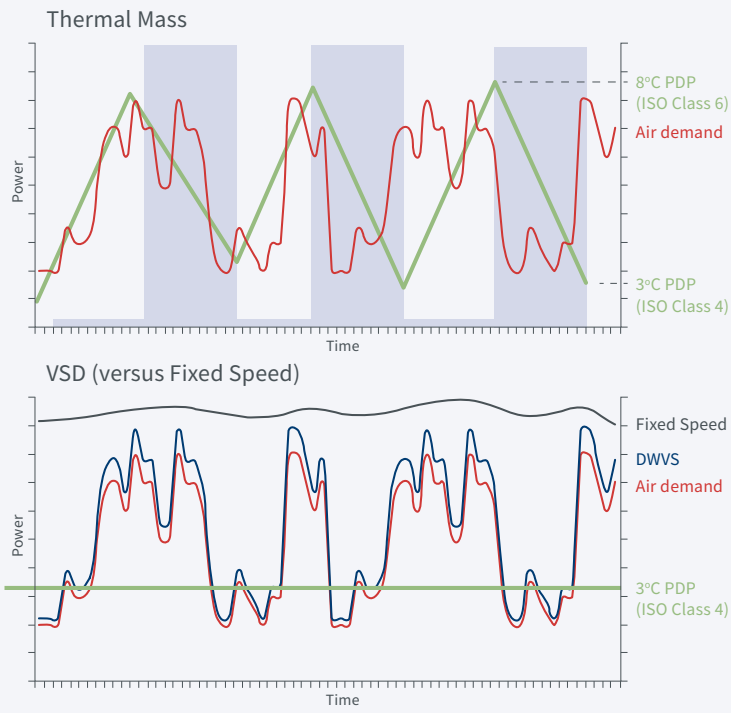
ACHIEVE YOUR ENVIRONMENTAL GOALS

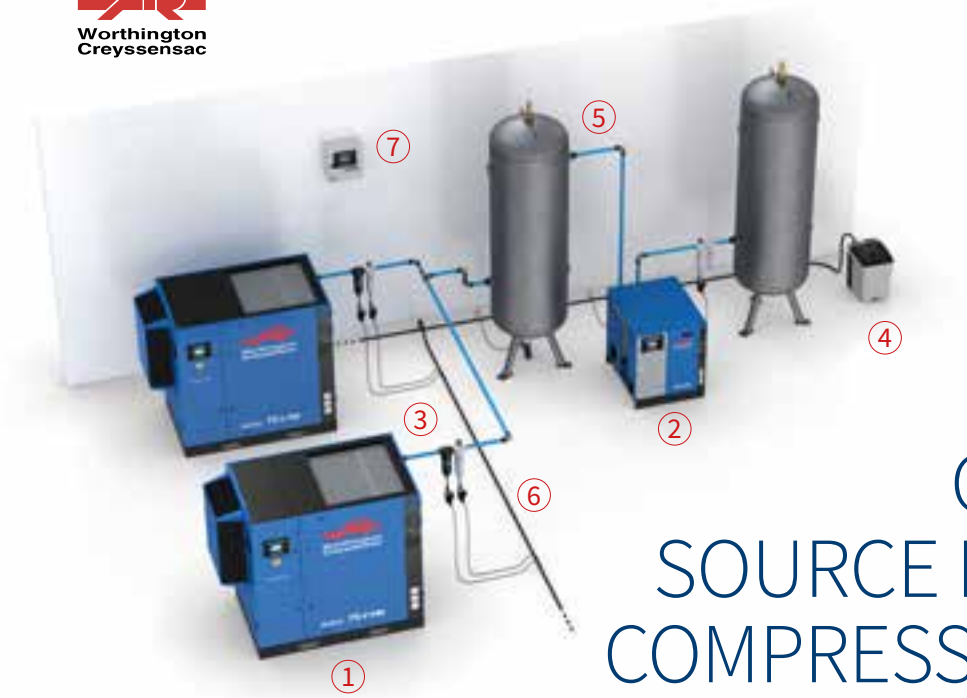
Sustainability is not a vague goal anymore; it has become a production KPI. The DWVS delivers a measurable contribution to your environmental and emission objectives with a low TEWI score (Total Equivalent Warming Impact). The dryer features the R410A refrigerant, which is GWP gas regulation compliant and has a zero-ozone depletion potential.

THE SUPERIOR ALTERNATIVE TO THERMAL MASS

For many years, the most efficient dryers were the so-called thermal mass dryers, which run at full load to cool a thermal mass, then stop and rely on that mass for cooling before repeating the process. However, this process is inefficient as the dryer still needs to run at full load to cool the thermal mass. In addition, thermal mass dryers offer limited or no energy savings in high ambient temperatures.

Compared to thermal mass technology, DWVS dryers offer real innovation and vastly superior energy savings. It is also important to point out that the dew point of DWVS dryers stays consistently low. The result: A constant supply of high-quality air. The dew point of thermal mass compressors, however, rises and falls, which compromises air quality by up to 2 purity classes.





ONE RELIABLE SOURCE FOR ALL YOUR COMPRESSED AIR NEEDS

Worthington Creyssensac stands ready to meet all of your compressed air needs: From the compressor ① itself and the new DWVS dryer ② to line filters ③, oil-water separators ④, air receiver buffer storage ⑤, our own easy-to-install AIRnet piping system ⑥, and a central controller to manage the entire system ⑦. All of these products are available in the proven Worthington Creyssensac quality and each of them is built to last.

ICONS

INCREASED UPTIME, POWERED BY ICONS

Are you keeping an eye on your dryer's running parameters and service alerts? With an Intelligent CONnectivity System (ICONS), you get data and insights from your Airlogic²T controller delivered to your computer, tablet or smartphone. The result: no surprise breakdowns, no unforeseen costs:

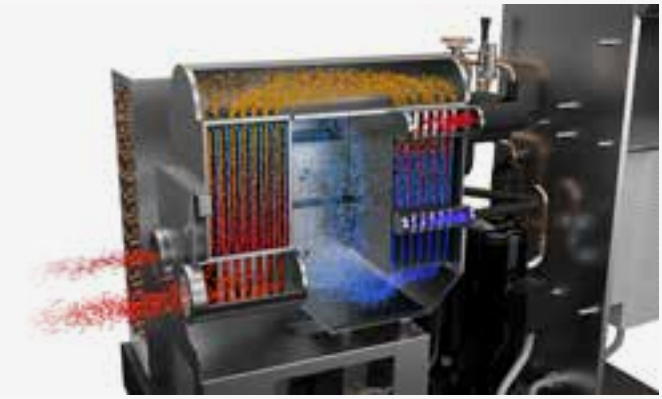
- On-time maintenance to control costs and ensure a longer machine life.
- Potential problems are recognized before they can pose a threat to the continuity of your production.

What is more, ICONS allows for truly proactive compressor and production management and optimization, with analyses and reports indicating potential energy savings and other enhancements.

A CLOSER LOOK AT THE DWVS

REFRIGERANT COMPRESSOR WITH DWVS INVERTER:
Matches its speed to your air demand to save on energy use and costs.

HIGH-EFFICIENCY HEAT EXCHANGER:
Patented design with air-to-air side to reduce pressure drop.



ZERO-LOSS DRAIN:
Features a level sensor to open the drain only when needed to prevent unnecessary loss of compressed air.

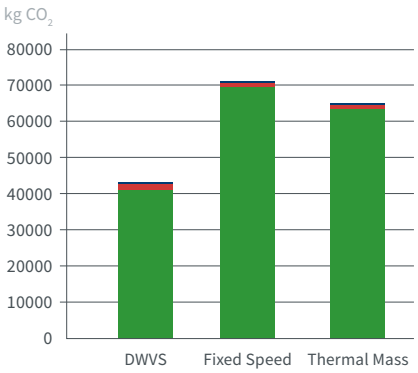
SINGLE ELECTRICAL CONNECTION:
Ensures quick and easy installation.

AIRLOGIC^{2}T CONTROLLER: with warning indications, dryer shutdown and maintenance scheduling. Also comes with ICONS remote monitoring to maximize your dryer performance and energy efficiency.

BETTER FOR THE ENVIRONMENT: A GOOD TEWI SCORE

The DWVS produces 65% less CO_2 emissions calculated in TEWI compared to fixed speed dryers, up to 55% less than thermal mass dryers currently on the market. But what does this TEWI score mean?

TEWI, short for Total Equivalent Warming Impact, is a measure that reflects the global warming impact of refrigerant equipment based on the emissions of greenhouse gases during the life-time of the equipment and the disposal of the operating fluids at the end. TEWI takes into account direct refrigerant emissions as well as and indirect emissions produced through the energy consumed in operating the equipment.



Indirect/Operations

DWVS	41340	kg CO_2
Fixed Speed	69960	kg CO_2
Thermal Mass	63600	kg CO_2

Direct Recovery

DWVS	1503	kg CO_2
Fixed Speed	802	kg CO_2
Thermal Mass	1224	kg CO_2

Direct Leaks

DWVS	226	kg CO_2
Fixed Speed	120	kg CO_2
Thermal Mass	184	kg CO_2

TEWI = GWP (**direct**; refrigerant leaks and recovery/recycling) + GWP (**indirect**; operation)

$= (GWP \times m \times L_{annual} \times n) + GWP \times m \times (1 - \alpha_{recovery}) + (E_{annual} \times \beta \times n)$

Where:

GWP = Global Warming Potential of refrigerant, relative to CO_2 ($GWP\ CO_2 = 1$)
L_{annual} = Leakage rate per year (Units: kg)
n = System operating life (Units: years)
m = Refrigerant charge (Units: kg)
$\alpha_{recovery}$ = Recovery/recycling factor from 0 to 1
E_{annual} = Energy consumption per year (Units: kWh p.a.)
β = Indirect emission factor (Units: kg CO_2 per kWh)

TECHNICAL SPECIFICATIONS DWVS

Model	Maximum conditions at full flow Ambient (Inlet) Temp	Inlet flow for pressure dew point (PDP) of 3°C/37.4°F			Pressure drop at full flow		Power consumption		Max. working pressure		Compressed air connections (NPT for UL version)	Dimensions						Weight	
	°C	l/s	cfm	m³/hr	bar	psi	kW	hp	bar	psi		B mm	B in	A mm	A in	C mm	C in	kg	lb
DWVS 36	46 (60)	100	212	360	0.16	2.3	0.66	0.9	14.5	210	G 1 ½" F	805	31.69	962	37.87	1040	41	130	287
DWVS 50	46 (60)	140	297	500	0.11	1.6	1.04	1.41	14.5	210	G 2" F	805	31.69	962	37.87	1040	41	134	295
DWVS 65	46 (60)	180	381	650	0.18	2.6	1.54	2.09	14.5	210	G 2" F	805	31.69	962	37.87	1040	41	134	295
DWVS 79	46 (60)	220	466	790	0.14	2	1.77	2.41	14.5	210	G 2 1/2" F	805	31.69	962	37.87	1040	41	143	315
DWVS 94	46 (60)	260	551	940	0.1	1.5	1.9	2.58	14.5	210	G 2 1/2" F	805	31.69	962	37.87	1040	41	150	331
DWVS 108	46 (60)	300	636	1080	0.18	2.6	2.64	3.59	14.5	210	G 2 1/2" F	805	31.69	962	37.87	1040	41	165	364
DWVS 111	40 (50)	310	657	1116	0.23	3.3	2.28	3.06	14	203	3" M	850	33.46	1330	52.36	1190	46.85	220	485
DWVS 148	40 (50)	410	869	1476	0.21	3	3.02	4.05	14	203	3" M	850	33.46	1330	52.36	1374	54.09	240	529
DWVS 184	40 (50)	510	1081	1836	0.2	2.9	3.38	4.53	14	203	3" M	850	33.46	1330	52.36	1374	54.09	265	584
DWVS 274	40 (50)	760	1610	2736	0.17	2.5	5.3	7.1	14	203	DN 100	1060	41.73	1256	49.45	1685	66.34	390	860
DWVS 313	40 (50)	870	1843	3132	0.15	2.2	5.8	7.77	14	203	DN 150	1060	41.73	1258	49.53	1685	66.34	410	904
DWVS 364	40 (50)	1010	2140	3636	0.17	2.5	6.6	8.85	14	203	DN 150	1060	41.73	1594	62.76	1660	65.35	460	1014

Data refers to 50Hz air-cooled version.

REFERENCE CONDITIONS:

Ambient temperature: 25°C
Compressed air inlet temperature: 35°C
Working pressure: 7 bar (g)

LIMITATIONS:

(Operating limit conditions for DWVS 36 - 108)

Max. ambient temp: 46°C
Min. ambient temp: 5°C
Max. air inlet temp: 60°C
Max. compressed air inlet pressure: 14.5 bar (g)

(Operating limit conditions for DWVS 111 - 364)

Max. ambient temp: 40°C
Min. ambient temp: 1°C
Max. air inlet temp: 50°C
Max. compressed air inlet pressure: 14 bar (g)

NOTES:

Refrigerant type: R410A

WORTHINGTON CREYSSENSAC'S HERITAGE

Creyssensac was founded in Nanterre (near Paris), France in 1934 by Elie Creyssensac and quickly became renowned in the automotive industry for developing high quality piston compressors. In the mid nineteen sixties, screw compressors were added to the product portfolio while 1973 saw the merge with Worthington. This further expanded the influence of the company in the compressed air world and reinforced the distributor network.

Today, its long-standing experience and continuous innovation ensure Worthington Creyssensac is a trusted partner for its customers.

Contact your local Worthington Creyssensac representative

6999010521

ORIGINAL PART

Care

Care is what service is all about: professional service by knowledgeable people, using high-quality original parts.

Trust

Trust is earned by delivering on our promises of reliable, uninterrupted performance and long equipment lifetime.

Efficiency

Equipment efficiency is ensured by regular maintenance. Efficiency of the service organization is how Original Parts and Service make the difference.

www.airwco.com

Worthington Creyssensac