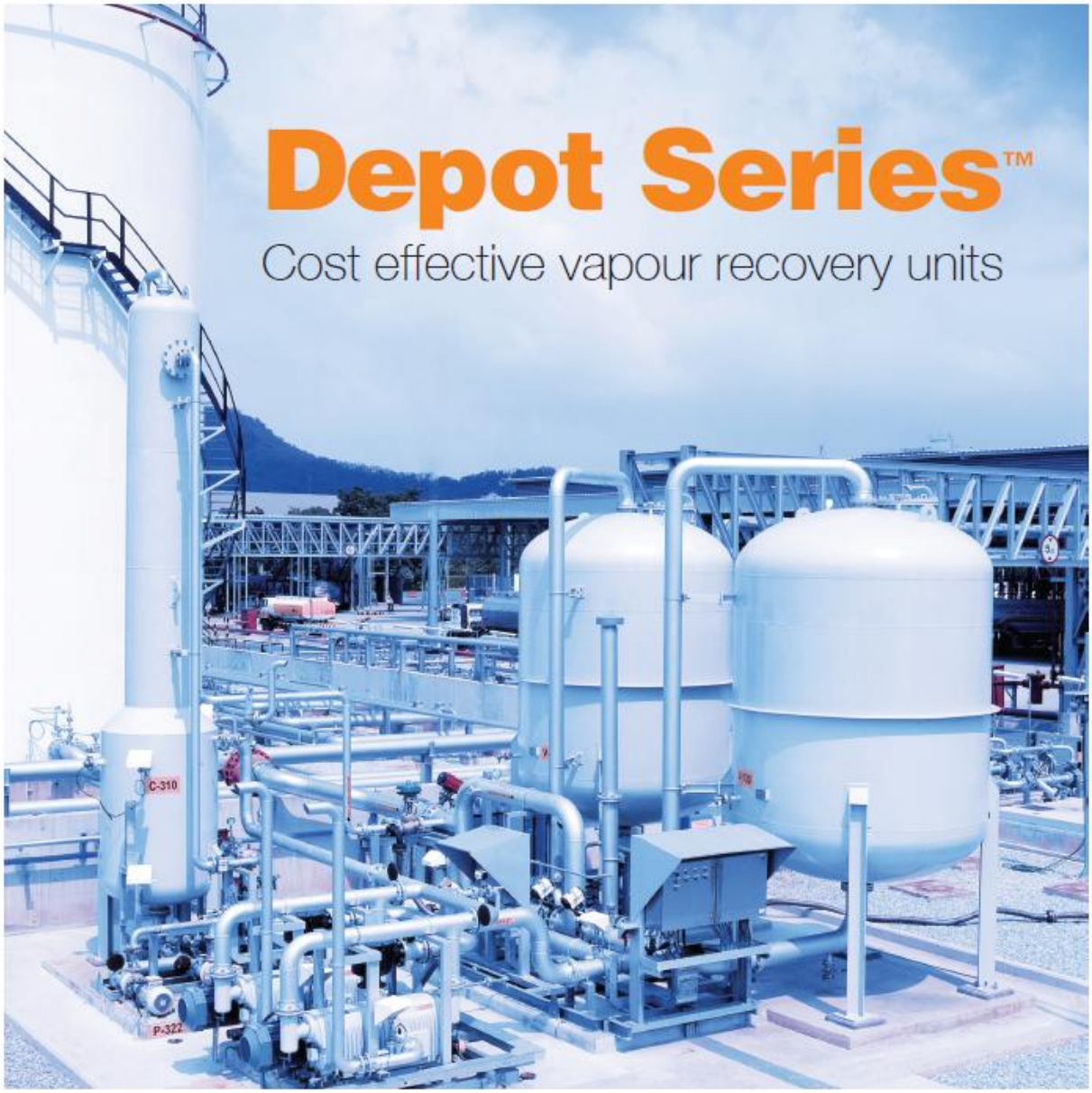

Aker Solutions' Depot Series™ vapour recovery systems are a range of pre-designed, standardised, cost effective vapour recovery units (VRU) intended specifically for small to medium sized depots and terminals, each Depot Series™ vapour recovery unit encompassing all of our years of expertise, knowledge and experience in the business.

The Depot Series™ units are based on the use of a rotary vane dry vacuum pump, and are available in a range of sizes, dependent on the loading capacity of the terminal. The units cover seven standard sizes and we are confident that the range will fully meet the loading capacities of your terminals.

At depots and terminals the requirements for full functionality and easy installation are paramount to the selection of a vapour recovery unit.

Our Depot Series™ units are designed specifically for this purpose. Furthermore, using pre-engineered, standard designs provides a number of specific advantages for our customers:

- Short lead time
- Low installation time and cost
- Low running cost
- Low maintenance cost
- High reliability
- High level of safety and functionality

Through adherence to our standard design and scope of supply we are able to offer units at very attractive prices and with a short lead time, fulfilling your needs for an expedited project completion.

AkerSolutions™

A pre-engineered solution

As a dedicated supplier of vapour recovery systems for over 30 years and with an experience record covering over 300 vapour recovery units installed world-wide, we are certain that our vapour recovery units will fully meet the needs of your terminal — at a favourable price and with a short lead time.

Our Depot Series™ is a range of seven pre-designed and standardised VRU models, designed for truck and rail loading terminal operations. The VRUs utilise the same components and are engineered to the same high standard as those you have come to expect from all our VRUs. Only well-known and respected suppliers known to deliver high quality equipment are used. All our systems are constructed in accordance with internationally recognised standards and codes.

The basis for the selection of each of our Depot Series™ models:

Although the Depot Series™ has been designed with truck loading terminals in mind, the continuous duty flows found in tank filling and barge and ship loading operations can also be readily accommodated.

The vapour loading profiles have been developed to ensure a reasonable level of utilisation based on a number of loading bays or loading arms.

- Average inlet hydrocarbon concentrations, 40 per cent v
- Emissions, from 35g/Nm³ to 150mg/Nm³

Depot Series™ VRUs are all based on the use of rotary vane type dry vacuum pumps. These vacuum pumps offer an extremely reliable and economical operation.

To demonstrate our high degree of confidence in the reliability of these vacuum pumps, we can offer a five year guarantee on the vacuum pumps for all of our Depot Series™ units, where we provide a service and maintenance contract.

Aker Solutions has been using dry vacuum pumps in our vapour recovery system designs since 2002. During this time we have found that this technology offers many advantages over the conventional liquid ring vacuum pump (LRVP) design.

Advantages

Main advantages of the dry vacuum pumps:

- No glycol loop required: as such all the ancillary equipment required by the LRVP is eliminated, using dry vacuum pumps greatly simplifies the design of the VRU
- High level of reliability
- Durability: the rotary vane pump design is robust and has good resistance against particulate contaminants such as sand and grit
- Safe operation: the rotary vane vacuum pumps are tested to a pressure of 20barg
- Easy to maintain: maintenance of the rotary vane vacuum pumps is performed on site, including full dismantle and reconstruction
- Lower power requirements

Advantages of of a pre-engineered solution:

- All interface engineering available
- Fast delivery between 20 and 25 weeks
- Competitive price without compromise

Choose Your VRU

The key to selecting an adequately sized vapour recovery unit is accurately defining the loading profile. The loading profile provides the key information we at Aker Solutions need to complete the design.

Each VRU supplied is specifically selected, utilising detailed knowledge of your terminals' requirements. The table below is indicative of the capacities of each model in the range, and provides the maximum interrelated vapour flow rates that the particular VRU is required to process. The figures should be considered as guidelines only. We will always fully check the designs to ensure the most appropriate design is selected for each unit.

Loading profile — data selection table

Depot series™ model no.	DS080	DS150	DS300	DS450	DS550	DS700	DS850
Number of bays	1	2	4	6	8	10	12
Arms connected Simultaneously	4	8	16	24	32	40	48
Loading profile							
Instantaneous flow (Qi) m^3/min	10	18	28	37	48	68	83
15 min capacity 10g/Nm^3 (Q15) m^3	40	90	180	235	315	400	510
▪ For 150 mg/Nm^3 emissions		52	115	197		315	
1 hour capacity 10g/Nm^3 (Q1) m^3	120	260	510	690	900	1 160	1 440
▪ For 150 mg/Nm^3 emissions		154	335	576		910	
4 hour capacity 10g/Nm^3 (Q4) m^3	348	710	1 420	2000	2 480	3 300	4 000
▪ For 150 mg/Nm^3 emissions		450	964	1 667		2 630	
Daily capacity 10g/Nm^3 (Qd) m^3	950	1 900	3 850	5 500	6 700	9 000	10 700
▪ For 150 mg/Nm^3 emissions		1 200	2 640	4 575		7 200	
Continuous capacity, hourly	76	152	304	436	530	721	841
Continuous capacity 150mg		99	202	364		575	
Plot space (LxB mtr)	6x3	6.5x4	9x5.5	9.5x5.5	9.5x6.5	10x7	10x7
Power installed kW	22	28	36	61	61	102	102
Power consumption kW	16	21	26	50	50	76	76

Local presence, service and maintenance

Aker Solutions maintains a strong local presence in order to accommodate local languages, needs and cultures. Many years of experience and great relations with clients has shown us the value of maintaining a strong post-project relationship.

We always aim to be the market leader in service and maintenance of our vapour recovery units. We follow each VRU's lifecycle to provide the best possible service and maintenance based our world-wide experience and our service team has extensive experience in providing commissioning and start-ups, troubleshooting and capacity tests, and system revamps.

We also offer a wide range of extensive, worldwide service agreements for our Depot Series™.

Choosing the right application

A Depot Series™ VRU can be selected quickly from the selection table on the previous page. We do however recognise that these numbers cannot be representative of every application and will therefore always check every design.

In order for us to deliver the best possible proposal for a suitable system, we need a relatively limited amount of information from you. Please fill out the form below with as much information as possible and return it to us using the contact information below. If you prefer, you can simply return the form by email. We will respond with a proposal for a system best suited for your needs.

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System profile data form

Type of application

☐ Truck loading ☐ Tank filling ☐ Rail wagon loading ☐ Balanced vapour system

Number of loading spots _____ Number of loading arms per spot _____

☐ Gasoline ☐ Diesel ☐ Oils split _____ RVP of gasoline _____

Gasoline temperatures: Max/min _____ Ambient temperatures: Max/min _____

Required emissions limit _____

Loading profile

Number of trucks that can be loaded simultaneously_____ Number of trucks loaded per hour _____ Average truck size_____

Maximum volume of product loaded per hour _____ Daily _____

Estimated maximum volume loaded in four hours _____

For tank filling applications

Maximum fill rate number of storage tanks _____ Do the tanks have floating roofs ☐ Y ☐ N

Volume of tanks _____

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