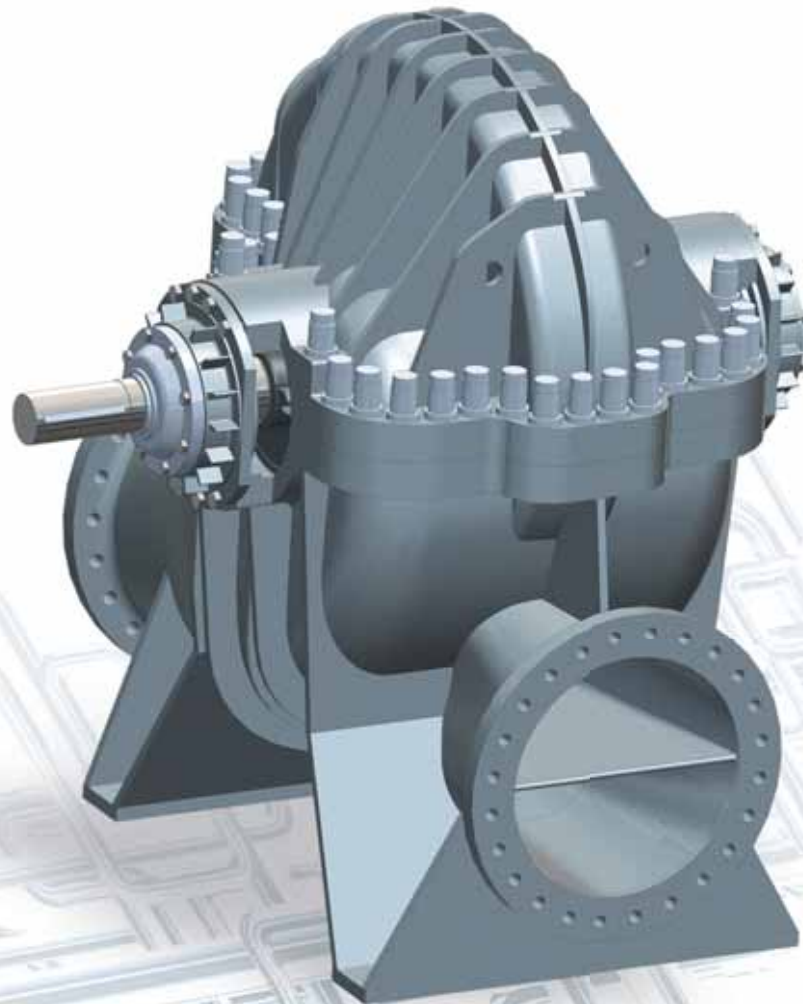




ENGINEERING FLOW SOLUTIONS

HMS Desum

DOUBLE SUCTION PUMPS



About HMS GROUP



HMS Group being the leading Russian pump manufacturer and EPC solutions provider offers state-of-the-art pumps and systems, integrated energy efficient and environment friendly solutions.

Our advanced research and development, extensive process expertise with comprehensive understanding of customers' requirements keep us consistently ahead on the Russian and CIS markets and allow us to grow and expand in international markets.

We continuously and dynamically develop our network of R&D, manufacturing and EPC facilities together with sales and service centers. Our dealers are in close proximity to major clients, so we are able to meet customer needs at short notice.

Our solutions help clients to increase productivity and operational profitability, cut costs and lower environmental impacts.

Companies of HMS Group have a long history of providing standard and engineered pumps and solutions to the following industries:

- Oil & Gas
- Nuclear & Thermal Energy
- Water Supply and Utilities
- Steel & Mining
- Chemical processing
- Industrial application
- Agriculture
- Pulp & Paper
- Food & Beverage
- Marine

We cherish our customers and proud to have among our clients Gazprom, Gazpromneft, Lukoil, Rosneft, NOVATEK, BP, Eni, Danieli, Severstal, Iraqi Ministry of Oil, Ministry of water resources of Turkmenistan, Uzbekistan, Water supply operators of Moscow, St Petersburg etc.

Our Quality Management System complies with ISO 9001:2008. Our pumps are made in accordance with internationally recognized ISO, ANSI and API standards and can be tailored to customer specifications.

HMS Desum Pumps



Desum pumps with double suction impellers are highly efficient, long life operated, reliable and easy maintained. All critical parts are made and tested by HMS Group including own precision casting of casing and impellers.

Extensive bank of models, use of at least two replaceable impellers for one casing enable our clients to choose the most suitable pump within 1400-10000 m³/h capacity and 15-200 m head range.

Customized impeller parameters are offered.

To achieve max efficient performance Desum pumps can operate with variable speed drives and through hydraulic couplings.

Testing

Full load string tests with simulation of operating parameters are carried out at our manufacturing sites for each Desum pumps.

Our testing capabilities:

Capacity - up to 25000 m³/h

Head - up to 350 m

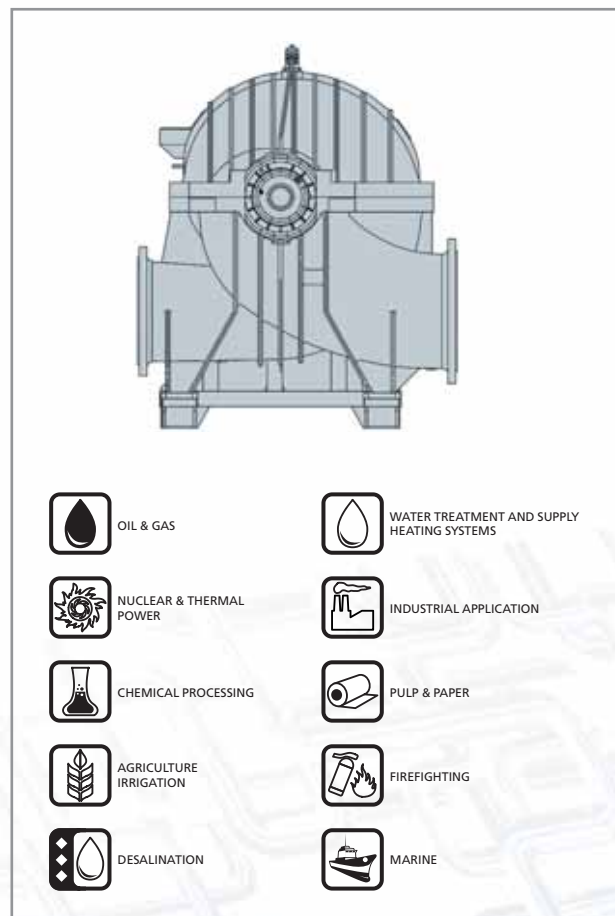
Power - up to 14 MW

Performance tests including cavitation are carried out both in manual or automatic mode.

All measuring equipment complies with ISO 9906: 1999.

After testing the customer receives all pumps with guaranteed parameters.

Extensive model range is optimized for various applications



Features, Advantages, Benefits

HMS Desum

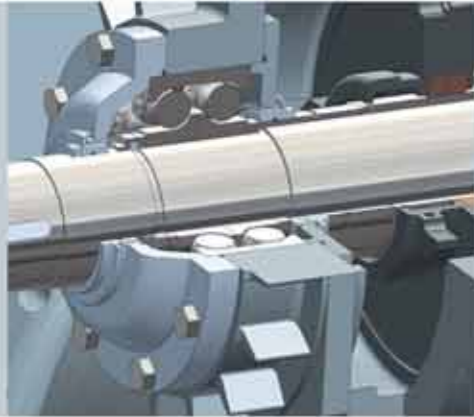


fig.1

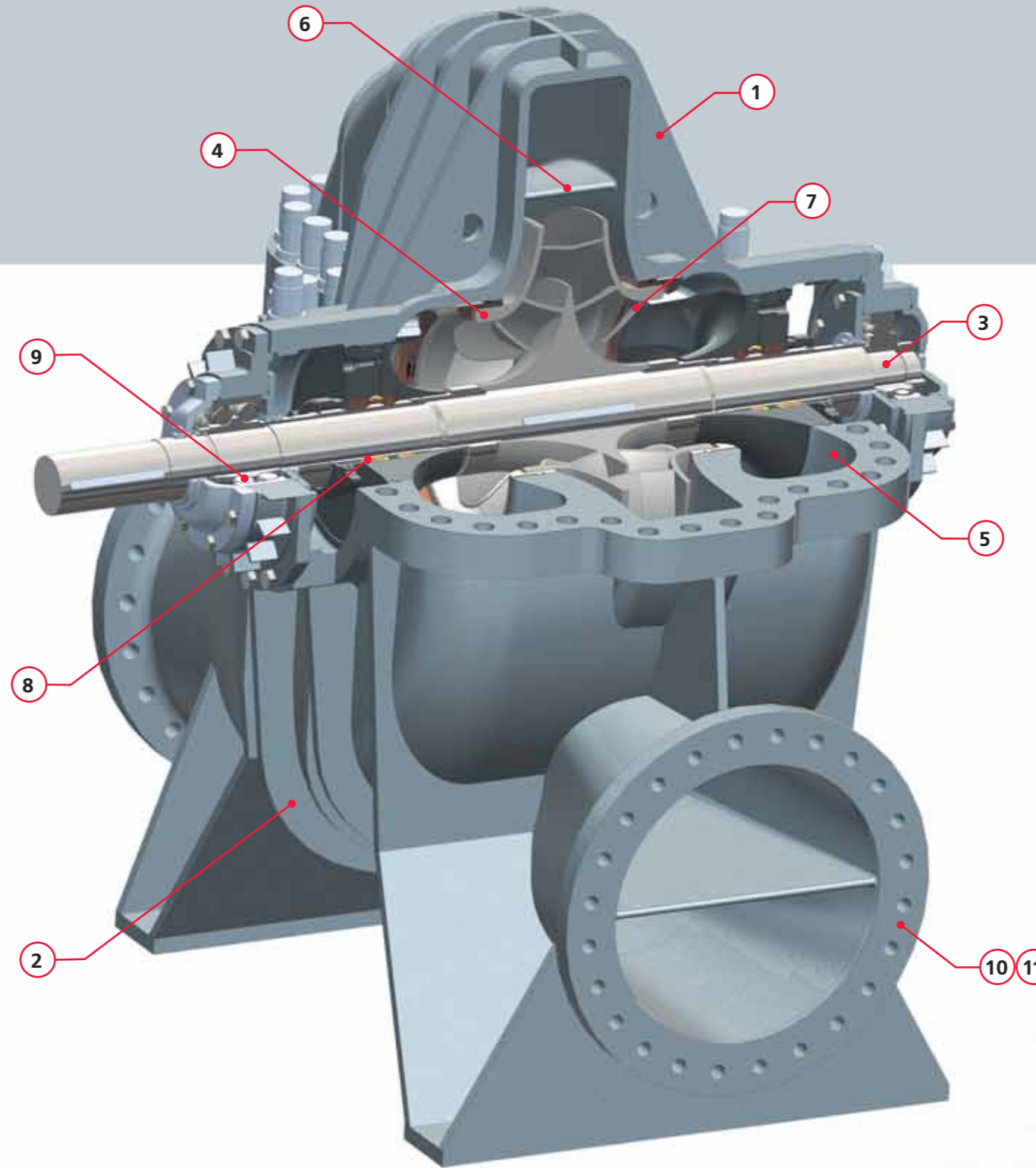


fig.2

Multipurpose

Extensive list of material selection provides pumps for any applications

Mechanical Seals comply with API 682 for possible use from different manufactures

Superior suction capabilities, low NPSH

Electric motor, petrol/diesel engine, turbine are used/supplied as prime mover

Reliability

1. Pumps design has been optimized with applying computer modeling and FEA methods
2. Reliable pump configuration provides smooth operation in areas with seismicity of up to 9 on a MSK-64 scale
3. Shaft is completely isolated from pumped fluids (fig.1)
4. Using of wear resistant materials for the wearing rings. Design with replaceable wearing rings of impeller is available
5. Special corrosion-resistant surfacing for efficiency increase and to slow wearing and erosion available
6. Double volute casing reduces the radial load on the shaft and vibration

Reduced distance between bearings and optimized hydraulics reduce maintenance costs and life cycle cost of pumps

Vibration and temperature sensors can be supplied/installed on bearings housing

Low Costs of Operation

7. Pumps have been designed with 3D modeling methods. Flow part has been designed with the help of advanced CFD methods to achieve the maximum efficiency and performance

8. Stuffing box or single/double mechanical seals are used. (fig.2) Pumps for liquids with solid particles are supplied with hydrocyclones

9. Bearings come with grease or oil bath lubrication. For oil bath lubrication version oil cooling system is provided

Easy to Install/Maintenance

10. Flange design according to DIN/ANSI/ISO

11. Suction and discharge nozzles are IN-LINE

Self-aligning pump cover for easy assembly

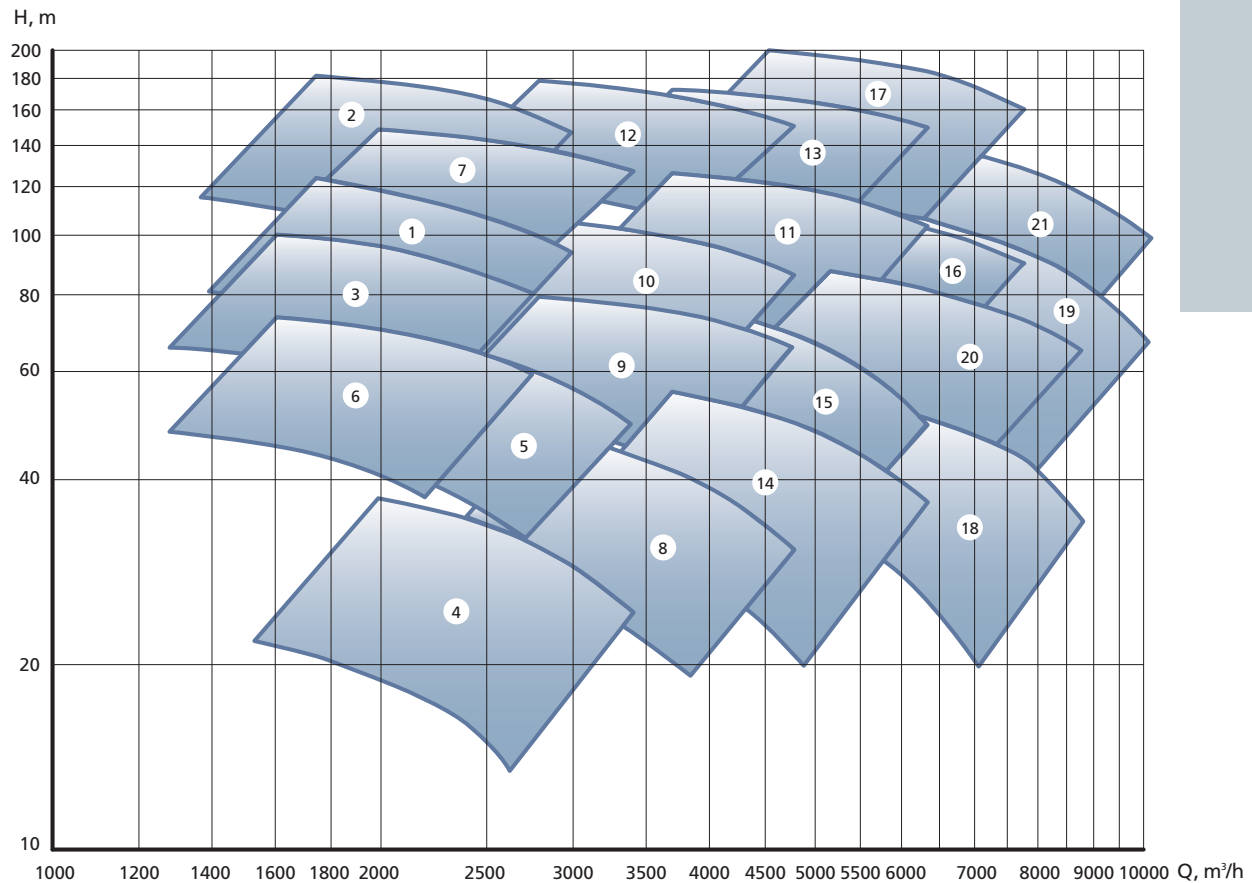
Pumps can be supplied on a common baseplate with electric motors or separately

Horizontal and vertical installation. Vertical is a standard option

High degree of main part unification of different pump sizes significantly lower installation and startup costs, reduce parts inventories, maintenance costs, downtime; enhance operability and save money

Technical Data

Performance range



1. D 350-580 (n=1480)	4. D 400-520	7. D 400-990	10. D 500-825	13. D 500-1070	16. D 600-870	19. D 700-850B
2. D 350-725 (n=1480)	5. D 400-660	8. D 500-580	11. D 500-875	14. D 600-635	17. D 600-1135	20. D 700-1000A(n=730)
3. D 350-800	6. D 400-700	9. D 500-735	12. D 500-1050	15. D 600-720	18. D 700-850A (n=730)	21. D 700-1000B

Material and sealing selection

Water and similar liquids with temperature range within 1...105°C

- **Casing**
Cast Iron, Ductile Iron, Stainless steel
- **Impeller**
Cast Iron, Ductile Iron, Stainless steel, Bronze, Duplex
- **Sealing**
Stuffing box, Single/Double mechanical seals

Capacity up to 10 000 m³/h

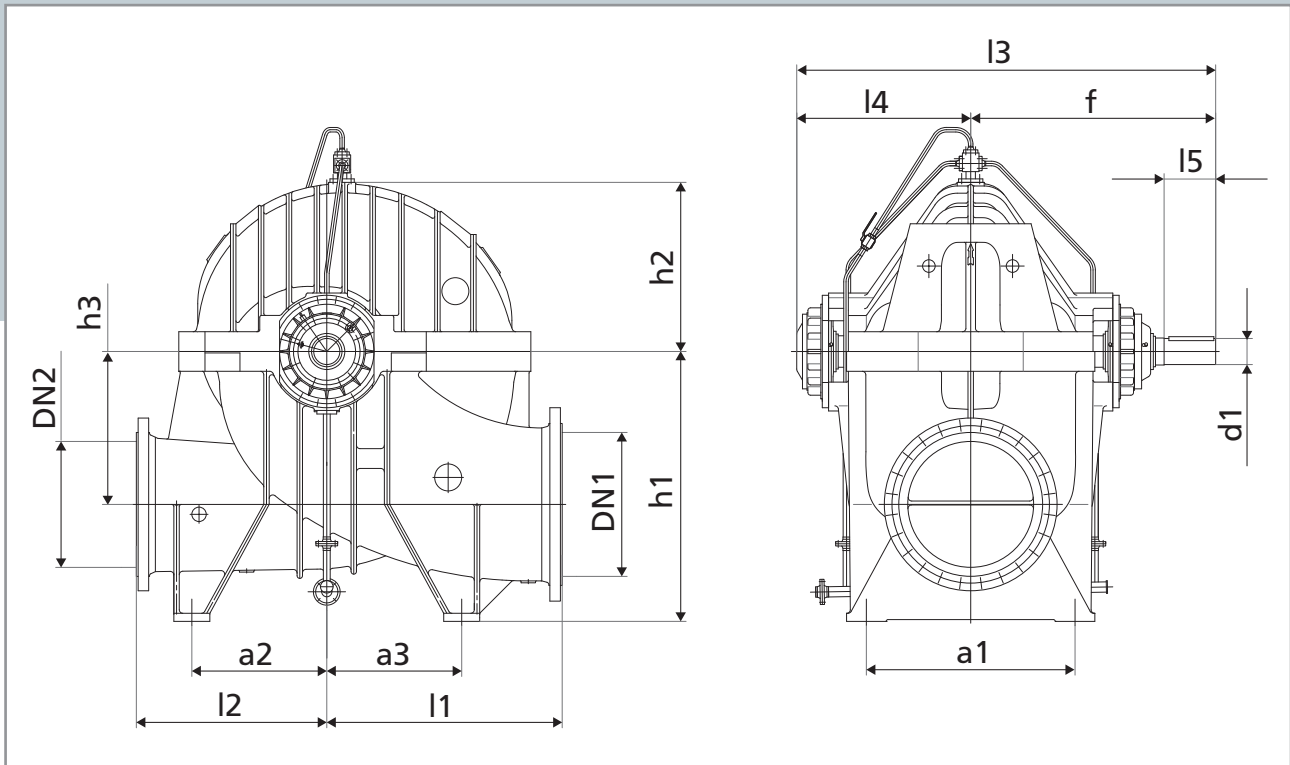
Head up to 200 m

Efficiency 91.5 %

Maximum operating pressure 25 bar

Pump versions to operate in the regions with a temperature range from -40 to +50°C are available

Main Dimensions



Type	DN1	DN2	a1	a2	a3	f	l1	l2	l3	l4	l5	h1	h2	h3	h4*2	d1
D 350-580	400	350	630	485	485	956	900	700	1676	720	210	900	550	475	880	95
D 350-800	400	350	630	485	485	956	900	700	1676	720	210	900	550	475	880	95
D350-725	400	350	630	485	485	956	900	750	1676	720	210	900	550	475	880	95
D 400-700	500	400	630	565	565	956	900	800	1676	720	210	900	570	450	875	95
D 400-520	500	400	740	485	485	998	750	700	1745	747	210	900	550	475	915	105
D 400-660	500	400	740	485	485	998	1000	750	1745	747	210	1000	620	525	915	105
D 400-990	500	400	690	565	565	956	1050	1000	1676	720	210	1000	650	550	880	95
D 500-580	600	500	900	565	565	1098	1100	800	1945	847	210	1100	680	550	1015	105
D 500-735	600	500	900	565	565	1098	1100	800	1945	847	210	1100	670	575	1015	105
D 500-825	600	500	870	750	750	1166	1150	1100	2038	872	250	1100	690	575	1000	125
D 500-1050	600	500	870	750	750	1166	1200	1100	2038	872	250	1200	750	725	1000	125
D 600-635	700	600	870	625	625	1098	1200	900	1945	847	210	1200	770	675	1015	105
D 600-720	700	600	870	625	625	1098	1150	1100	1945	847	210	1100	715	575	1015	105
D 500-875	600	500	870	625	625	1166	1200	900	2038	872	250	1200	775	700	1000	125
D 500-1070	600	500	870	750	750	1166	1250	1100	2038	872	250	1200	800	700	1000	125
D 600-870	700	600	870	750	750	1280	1300	1100	2206	926	290	1300	790	750	1040	145
D 600-1135	700	600	950	750	750	1280	1250	1200	2206	926	290	1300	850	750	1040	145
D 700-1000	800	700	1140	750	750	1365	1300	1050	2376	1011	290	1500	940	850	1150	145
D 700-850A	800	700	1140	750	750	1365	1300	1050	2376	1011	290	1500	940	850	1150	145

Become our Partner

We are looking for experienced dealers & distributors to sell products and services of HMS Group.

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