

Hydroster > Products > Rotary vane steering gears

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Rotary vane steering gears

HYDROSTER produces complete rotary vane steering gears in cooperation with Hatlapa. Both companies, i.e. HYDROSTER and HATLAPA have got vast experience in design, production and service for piston and ram type steering gears. Thus joined efforts in common product – rotary vane steering gear – ensures the product of high quality. Rotary vane steering gears generate torque without transverse forces. At the same time they are the part of rudder's stock upper bearing. The design allows to apply RVSG for rudder of seagoing vessels of unlimited navigation area. However due to their compact construction enabling to meet low space requirement RVSG are preferable for container vessels, ro-ro, offshore support vessels. Fitting on the conical rudder stock by means of hydraulic shrink connection. The double hydraulic system is divided automatically in case of single failure. Rotary vane steering gears meet requirements of SOLAS Convention 1974 with all later amendments.



Scope of supply:

The standard scope of supply consists of :
actuator unit of parameters and dimensions given in the enclosed tables.

- two independent drive units, each consisting of:
 - pump,
 - electric motor,
 - oil tank,
 - air oil cooler,
 - directional control valve co-operating with remote control system, equipped with hand levers of local control,
 - valve block,
 - auxiliary hydraulic fittings with signalling elements.
- electric equipment of drive and signalling system in the range agreed with client,
- standard set of spare parts,
- technical-operation documentation,
- required certificates and guarantee documents,
- guarantee documentation,

Additionally at the shipyard request we can deliver:

- spare oil tank with hand pump for filling hydraulic system of steering gear,
- hydraulic nut,
- rudder position indicator,
- remote control system,
- hydraulic oil,

TECHNICAL DATA AND BASIC DIMENSIONS OF ACTUATOR UNIT

Nominal pressure $p_{nom} = 100$ bar, maximum pressure $p_{max} = 125$ bar

Actuator unit for 2 x 350 rudder angle

Size of actuator unit	Diameter of ruder stock [mm]	Torque [kNm]		Overall dimensions of actuator unit [mm]		Mass [kg]	Power consumption [kW]
		nominal	maximal	diameter	height		
HVT200-35	200	94	118	797	474	850	6,5
HVT250-35	250	151	188	962	555	1510	10
HVT300-35	300	283	353	1155	702	2730	18
HVT350-35	350	467	584	1340	800	4100	30
HVT400-35	400	712	890	1547	914	7440	45
HVT460-35	460	1028	1285	1760	1061	9428	65

HVT520-35	520	1404	1755	1952	1225	13356	90
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Actuator unit for 2 x XX⁰ (2 x 45⁰ or 2 x 65⁰) rudder angle

Size of actuator unit	Diameter of ruder stock [mm]	Torque [kNm]		Overall dimensions of actuator unit [mm]		Mass [kg]	Power consumption [kW]
		nominal	maximal	diameter	height		
HVT175-35	175	63	79	790	490	807	4,5
HVT215-35	215	98	112	970	580	1430	6,5
HVT265-35	265	188	235	1160	710	2590	12
HVT305-35	305	312	389	1340	800	3895	20
HVT345-35	345	475	594	1520	920	7068	31
HVT400-35	400	685	857	1740	1050	8956	45
HVT455-35	455	952	1190	1950	1190	12680	61
HVT475-35	475	1123	1140	1950	1340	13450	73