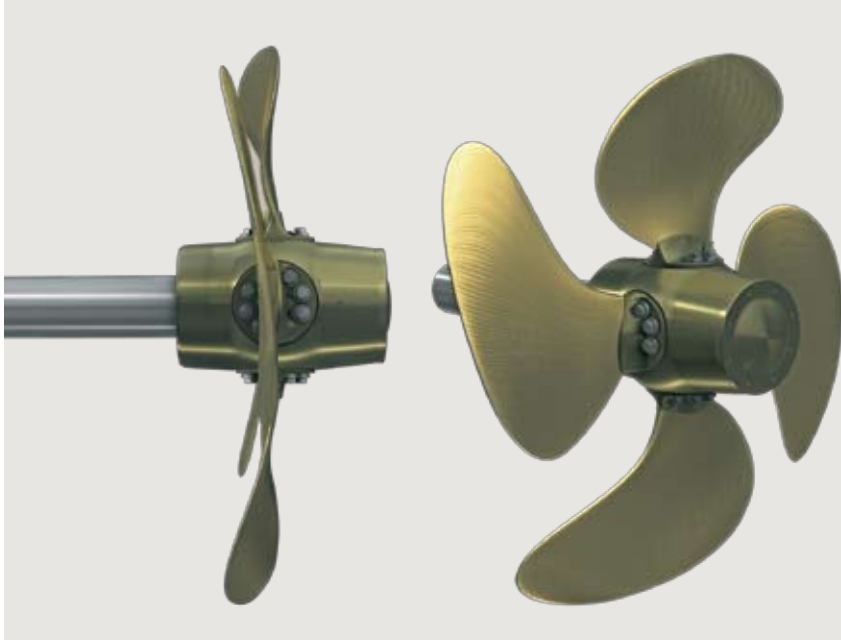




# Controllable Pitch Propeller

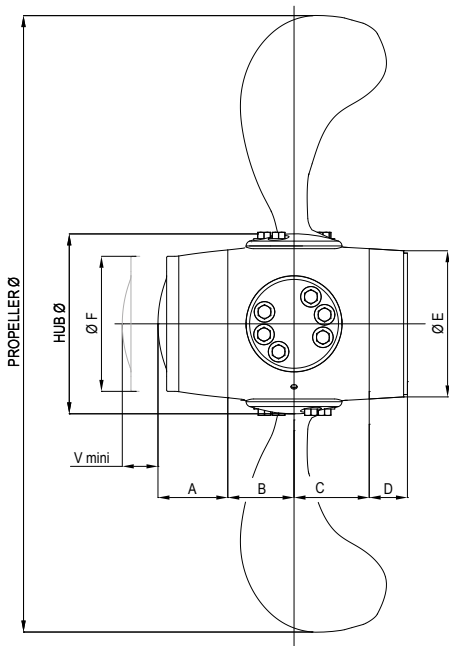




Design simplicity and ruggedness are the main features of the ZF Marine KS family of controllable pitch propellers. The solid hub has large blade port bearings to ensure that high thrust loads and wake-induced, alternating stresses are safely absorbed. This design approach results in reduced maintenance, and subsequently lower through-life costs. A double-blade sealing system further enhances the ecological attractiveness of these propellers.

## Technical data

### Hub



HUB Ø	MAX prop. Dia.	A	B	C	D	Ø E	Ø F	V min
350	1750	137	130	148	75	285	265	70
400	2000	157	149	169	86	326	303	80
450	2250	176	167	190	96	366	341	90
500	2500	196	186	211	107	407	379	100
550	2750	215	204	232	118	448	416	110
600	3000	235	223	253	129	489	454	120
650	3250	254	241	274	139	529	492	130
700	3500	274	260	295	150	570	530	140
760	3800	297	282	320	163	619	575	152
820	4100	321	305	346	176	668	621	164
880	4400	344	327	371	189	717	666	176
940	4700	368	349	396	201	765	712	188
1010	5050	395	375	426	216	822	765	202
1080	5400	423	401	455	231	879	818	216
1150	5750	450	427	485	246	936	871	230
1220	6100	478	453	514	261	993	924	244
1300	6500	509	483	548	279	1059	984	260
1380	6900	540	513	582	296	1124	1045	276
1460	7300	571	542	615	313	1189	1105	292
1550	7750	607	576	653	332	1262	1174	310

## Hub body

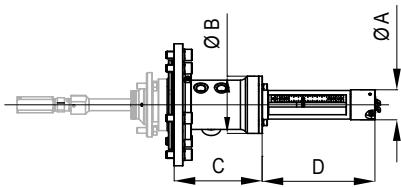
To ensure maximum strength, the hub body is machined from a single, robust, NiBrAl (nickel-bronze- aluminium) casting and is designed to absorb the centrifugal and bending loads that are exerted by the propeller blades. The hub bearing areas are sized using FEM (finite element) technology enabling local stresses to be minimized thereby reducing wear and tear of the bearing surfaces. A strong, cast-steel yoke is centrally located in the hub body with four slots (five slots in the case of a five-bladed propeller) and integrated piston. Sliding blocks are fitted on the blade carrier pins. The hub body also contains blade carriers (counter flanges)

which are bolted to the propeller blade feet. This so-called “pin-slot” mechanism translates the axial motion of the servo piston into pitch rotation of the propeller blades.

## Servo cylinder

The servo cylinder is bolted to the aft face of the hub body and contains a servo piston integrated into the yoke. This has also been generously dimensioned using FEM analysis resulting in a more compact and optimized hub profile.

## OD-box



ODB Model	Ø A	Ø B	C	D	Suitable for hub
ODB 090	65	120	130	190	350
ODB 090	65	120	130	190	400
ODB 110	65	120	150	200	450
ODB 110	65	120	150	200	500
ODB 130	65	120	170	220	550
ODB 130	65	120	170	220	600
ODB 150	65	120	190	240	650
ODB 150	65	120	190	240	700
ODB 170	65	120	210	260	760
ODB 170	65	120	210	260	820
ODB 200	65	120	230	290	880
ODB 200	65	120	230	290	940
ODB 220	85	180	260	310	1010
ODB 220	85	180	260	310	1080
ODB 250	85	180	290	340	1150
ODB 250	85	180	290	340	1220
ODB 280	85	180	320	370	1300
ODB 280	85	180	320	370	1380
ODB 310	85	180	350	400	1460
ODB 310	85	180	350	400	1550

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