

Tug boat requirements

TBP = Minimum tug bollard pull in ton

equi = equipped with

Tugs = minimum no. of tugs pr. assist

b and s contr. = bow and stern control

Group	SDWT/equi.	LOADED				IN BALLAST			
		Arrival		Departure		Arrival		Departure	
		TBP	Tugs	TBP	Tugs	TBP	Tugs	TBP	Tugs
LPG	900-7.999	15	1	15	1	15	1	15	1
LPG	8.000-15.999	30	2	30	2	30	2	30	2
0	<b>0-15.999</b>								
	<7.999	-	-	-	-	-	-	-	-
	8.15.999	-	-	-	-	-	-	-	-
1	<b>16-24.999</b>								
	standard	60	2	40	1	45	1	35	1
	bow control b and s contr.	50 -	1 -	- -	- -	40 -	1 -	- -	- -
2	<b>25-48.999</b>								
	standard	75	2	45	1	50	2	40	1
	bow control b and s contr.	50 40	1 1	- -	- -	40 35	1 1	- -	- -
3	<b>49-73.999</b>								
	standard	80	2	50	1	65	2	50	1
	bow control b and s contr.	70 50	2 1	40 -	1 -	50 40	2 1	- -	- -
4	<b>74-98.999</b>								
	standard	90	2	55	2	75	2	50	2
	bow control b and s contr.	80 50	2 1	50 -	1 -	60 50	2 1	35 -	1 -
5	<b>99-124.999</b>								
	standard	100	2	65	2	90	2	50	2
	bow control b and s contr.	80 50	2 1	50 -	1 -	70 50	2 1	40 -	1 -
6	<b>125-159.999</b>								
	standard	120	3	60	2	110	3	55	2
	bow control b and s contr.	100 80	2 2	50 -	1 -	85 75	2 2	45 -	1 -
7	<b>&gt; 160.000</b>								
	standard	130	3	70	2	120	3	65	2
	bow control b and s contr.	110 85	2 2	60 50	2 1	100 80	2 2	50 40	1 1

Bow and stern control: Latitudinal thrusters, alternative two independent propulsion propellers with two independent rudders, or other arrangements as DP, SSP-POD Azimuth, all with sufficient performance in accordance with the ships characterization. If bow and stern control is insufficient or not working, the ship is to be consider as a vessel without such control. Vessels with reversible propulsion plant shall always have at least one tug on arrival and departure in group 0 and is consider as a standard vessel in all the other groups.