

INTERNATIONAL SUBMARINE ENGINEERING LTD.

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SUBJECT: STROKE LIMIT SPACER FOR REXROTH A10V-25 OR A10V-28
VARIABLE DISPLACEMENT PRESSURE COMPENSATING PUMPS

USAGE: ALL HYSUB 20 HP POWERPACKS (HYSUB-40 ROV's)
HYDRA AT
MBARI
TRAILBLAZER

BACKGROUND:

Stroke limit spacers are installed to limit the maximum displacement of the pump and allow matching of one common standard pump to various electric motor shaft rpm's and shaft horsepowers. Pump output pressure is also taken into account since $FLUID\ HP = FLOW(gpm) * PRESSURE(psi) / 1714$.

The A10V-25 has recently been replaced in the REXROTH product line by the A10V-28. The difference is 25cc (1.52 cu in) per revolution vs 28cc (1.70 cu in).

The standard spacer lengths for the **A10V-25 pumps** were as follows: (Referenced attached figure for location)

UNIT	SPACER	FLOW	PRESSURE	FHP
20 HP power pack @ 1750rpm	5mm	8.0gpm	3500psi	16.3
HYDRA AT 25HP @ 3450 rpm	8.7mm	10.9gpm	3500psi	22.3
TRAILBLAZER 30HP @ 3450rpm	5mm	15.6gpm	3250psi	29.6
MBARI 40HP @ 3450rpm	1mm	21.1gpm	3000psi	36.9

NOTE: A 20HP power pack with A10V-25 pump operated at 3000 psi could ideally use a 3.8mm spacer for 9.0gpm (15.8 FHP)

A10V-28 PUMP SPACERS

UNIT	SPACER	FLOW	PRESSURE	FHP
20HP power pack @ 1750rpm	5.3mm	9.0gpm	3000psi	15.8
HYDRA AT 25HP @ 3450 rpm	8.6mm	12.8gpm	3000psi	22.3
MBARI 40HP @ 3450 rpm	3.4mm	20.7gpm	3000psi	36.2

FOR OTHER SYSTEMS AND PRESSURES PLEASE CONTACT ISE. IF THERE ARE ANY QUESTIONS ABOUT WHAT THE PUMP IS PRODUCING A QUICK RUN ON A FLOW BENCH AT RATED RPM AND PRESSURE WILL PROVIDE THE ANSWER.

