

CUSTOMER PROFILE

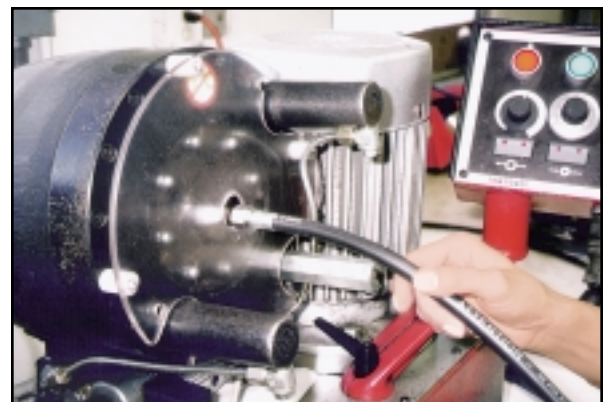
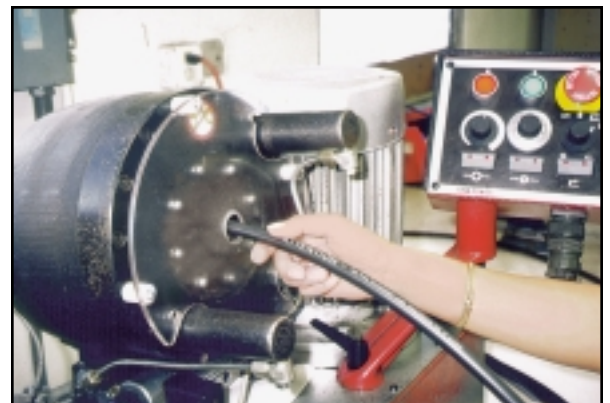
Finn-Power Crimper Puts the Squeeze on Costs for Diving Equipment Manufacturer

Aqua Lung, U.S. Divers, Santa Ana, CA, produces recreational diving equipment such as regulators; buoyancy gear; Micra air systems--fully independent back-up, emergency breathing systems; dive cylinders; masks, snorkels; fins; etc. As part of the Aqua Lung Group, once headed by the late Jacques Cousteau, the company has a well-earned reputation for producing diving equipment that is known for its innovation, safety, and performance.

Nearly four years ago, the company purchased all its hose assemblies for its regulators, buoyancy gear, and Micra air systems--which consisted of literally hundreds of thousands of hose assemblies each year. In order to try to cut costs and produce these assemblies in-house while increasing the amount of control the company had in the area of quality, Karen Mead, Aqua Lung's plant

manager, undertook a year-long research project. She attended trade shows, visited manufacturers, and studied piles of literature on various machines. The result of her year-long efforts was the recommendation for her company to purchase the Finn-Power USA P20 crimper to attach the fitting to the hose assemblies.

The P20 features an electronic control with feedback of the master die position which allows part crimp dimensions to be changed within seconds. The P20's electronic control system also includes a feedback device for monitoring the opening stroke, which allows the opening stroke to be set to an exact position. This greatly enhances the cycle time of the machine, as it is not necessary to run the machine fully open or fully closed. The unit provides 135 tons of crimping force and has a master die travel of 25



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mm. The P20 is accurate and repeatable to .004". Aqua Lung has modified the dies to allow the month and year to be marked on the crimped piece for quality control purposes.

Mead contends that the cost of the Finn-Power P20 was minimal compared to the results it has given her company. "We fell in love with the machine because of the money it has saved us in producing our own hose assemblies. It has paid for itself 10 times over."



Testing is conducted on the hose assemblies prior to final production.

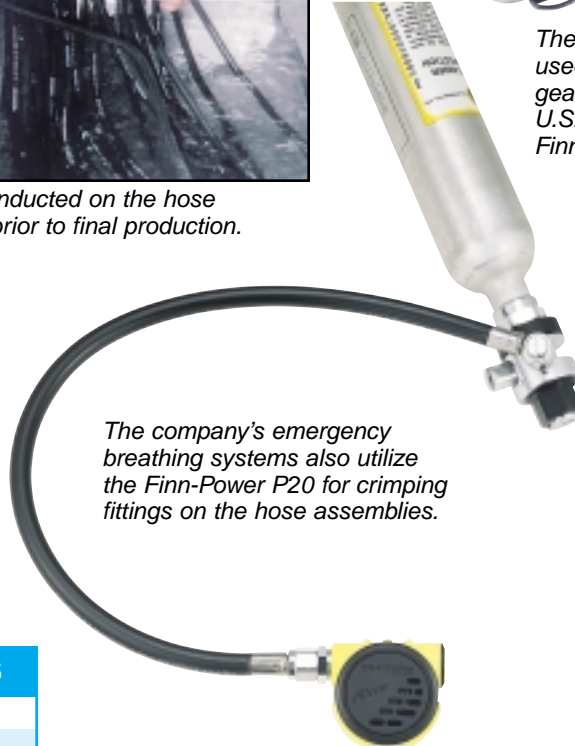


The hose assemblies used on the buoyancy gear from Aqua Lung, U.S. Divers, utilize the Finn-Power P20 crimper.

Standard Die Sets

Code	Swaging Diameter (mm)	L (mm)
20-10	10.0 - 12.0	55
20-12	12.0 - 14.0	55
20-14	14.0 - 16.0	55
20-16	16.0 - 19.0	55
20-19	19.0 - 23.0	55
20-23	23.0 - 27.0	55
20-27	27.0 - 31.0	70
20-31	31.0 - 36.0	70
20-36	36.0 - 41.0	75
20-41	41.0 - 47.0	75
20-47	47.0 - 454.0	85

In addition to the standard die sets, a wide variety of special dies is available.



The company's emergency breathing systems also utilize the Finn-Power P20 for crimping fittings on the hose assemblies.

Technical Specifications

P20 MS/IS/VS

Hose Size	1 1/4"
Swaging Range (mm)	ø 10...54
Die Type ⁽¹⁾	20
Max Opening ⁽²⁾	+25 mm
Master Die Shoe Length	80 mm
Motor ⁽³⁾	3 kW
Voltage	230/400
Pump ⁽⁴⁾	8 l/min
Swaging Force	1370 kN
Number of Swagings/Hour ⁽⁵⁾	850
Noise Level	71 dB(A)
Protection Class	IP54
Overall Dimensions	Length: 600 mm Width: 75 mm Height: 610 mm
Weight Without Oil	130 kg

(1) See table for standard die set data

(2) this tabular value must be added to min. swaging dia of die set

(3) single phase, 1.5 kW

(4) single stage 2.8 l/min

(5) theoretical with 1/2" hose Δø 10 mm



Hundreds of thousands of hose assemblies are produced by Aqua Lung, U.S. Divers, each year.



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