# FINN-POWER

**P20** and **P32** 

MID-RANGE SWAGING
POWER FROM AN
INTERNATIONAL SPECIALIST
MAX. FITTING SIZE 1½" and 2"





FINN-POWER's P20 and P32 series of swaging machines are mid-range in terms of power, but compact from the point of view of space requirements.

While even the biggest model weighs only 178 kg, its 2000 kN force produces high-quality swaging power for years and years of serial manufacturing. Maximum hose size is  $1\frac{1}{4}$ " (P20) or 2" (P32).

Depending on the main type of application, the optimal control solution can be chosen among three alternatives. This ensures maximum operator ease and productivity, whatever the nature of the swaging task.

The die set rack for P20/21 has plastic sleeves for 12 die sets and the P32 rack for 16 die sets (picture on the right). Quick change tool comes with the rack.

















FINN-POWER provides swaging capacity for most varied applications and production types. To ensure that specific application requirements are met, alternative control types are available.

## **MS MODELS**

In MS models, the diameter is set using a 10-turn vernier dial. One turn is equivalent to a 1 mm change in swaging diameter. The diameter can be set with an accuracy of 0.01 mm.

MS models are especially well suited for single piece production e.g. in repair shops.

## IS MODELS

IS control is ideal for serial swaging operations, but it can also be used for single piece manufacturing in special cases.

IS is an analogical control which features easy, stepless adjustment of swaging diameter. Potentiometers are used for setting both swaging and retraction diameters.

IS is a user-friendly, reliable solution for swaging control. Manual, semiautomatic or automatic control modes can be selected. Mode selector offers also swaging delay which occurs after the swaging diameter has been reached.

#### **VS MODELS**

VS control is a modern user interface based on icons, a selector and clear, visual indication of all swaging parameters. When the desired swaging diameter is given, the interactive VS automatically recommends a die set among those stored in its tool management memory.

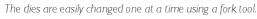
Swaging parameters are specified at a tolerance of 0.1 mm. Fine adjustment can be done at a tolerance of 0.01 mm. Up to 200 combinations of retraction diameter/correction requirements/swaging diameter/die set/ delay adjustment, can be stored for immediate availability.

VS control makes set-up change a simple matter of seconds. For example, it gives step-by-step instruction for die set change. This means additional flexibility in the manufacturing of short, repeatable series.

IS and VS models feature automatic back gauges as standard.

# DIE SET CHANGE - SIMPLE AND EASY







The quick change tool, available as an option for the swagers, allows the whole die set to be changed in one easy operation. The pins on the tool engage the holes in the dies. As the swaging head closes/opens the dies are secured to/released from the master dies. The dies are held together by a magnet in the tool until the set is placed back in the rack. This way the dies are kept in complete sets at all times and are always used in the same order.

Standard die sets*					
	Code	Swaging	I (mm)		
		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 - 54.0	85		
	32-10	10.0 - 12.0	55		
	32-12	12.0 - 14.0	55		
	32-14	14.0 - 16.0	55		
	32-16	16.0 - 19.0	55		
	32-19	19.0 - 22.0	55		
	32-22	22.0 - 26.0	70		
	32-26	26.0 - 30.0	70		
	32-30	30.0 - 34.0	70		
	32-34	34.0 - 39.0	75		
	32-39	39.0 - 45.0	75		
	32-45	45.0 - 51.0	90		
	32-51	51.0 - 57.0	90		
	32-57	57.0 - 63.0	100		
	32-63	63.0 - 69.0	110		
	32-69	69.0 - 75.0	110		
	32-74	74.0 - 80.0	110		
	32-78	78.0 - 87.0	110		

Technical specifications		P20 MS / IS / VS	P32 MS / IS / VS	
Hose size		11/4"	2"	
Swaging range Ø (mm)		454	487	
Die type (1)		20	32	
Max opening (mm) (2)		25	33	
Master die shoe length (mm)		80	80	
Motor (kW) (3)		3	4	
Standard voltages (V) (4) (5)		230 or 400	230 or 400	
Swaging force (kN)		1370	2000	
Number of swagings/hour (6) (7)		850	850	
Noise level (dB(A))		71	71	
Protection class		IP54	IP54	
Overall dimensions:	length (mm)	600	600	
	width (mm)	475	540	
	height (mm)	610	630	
Weight without oil (kg)		130	178	
(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 phase 230 V
- (5) Other voltages upon request
- (6) Theoretical with  $\frac{1}{2}$ " hose  $\Delta \emptyset$  10 mm
- (7) Single phase 250 swagings (P20) and 200 swagings (P32) per hour

#### Options:

- mechanical back gauges foot pedal (IS; VS models)
- quick change tool and die set base or die set rack
- ★ In addition to the standard dies, a wide range of special die sets for different diameter, length and form are available.

Subject to changes without prior notice.



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