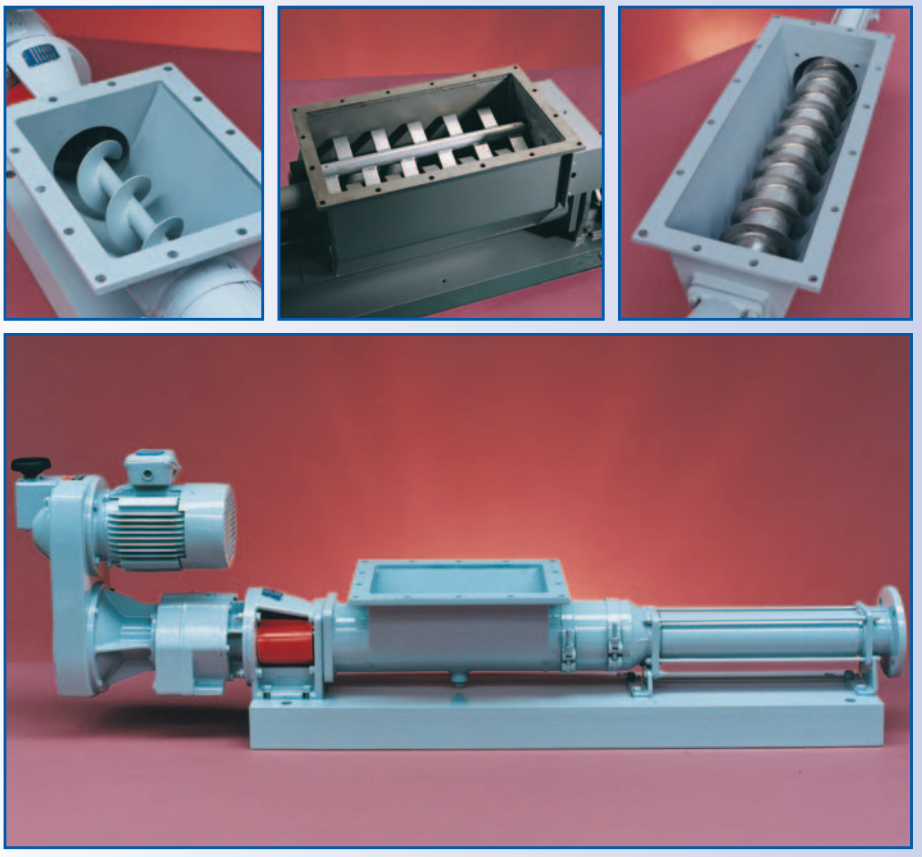
Mono®

A National Oilwell® Company

W RANGE
WIDETHROAT PUMPS



Mono®

The Widethroat W Range

The Mono Pedigree

Mono have been at the forefront of progressing cavity pump design since 1935. With the experience gained from over 65 years we are able to reflect the varying needs of our extensive customer base worldwide. And an all-round efficiency and quality which our customers demand, and to which we are committed.

A long term commitment which is underlined by our attainment, in 2001, of ISO 9001:2000.

The W Range has been developed out of this commitment.

Features and Benefits

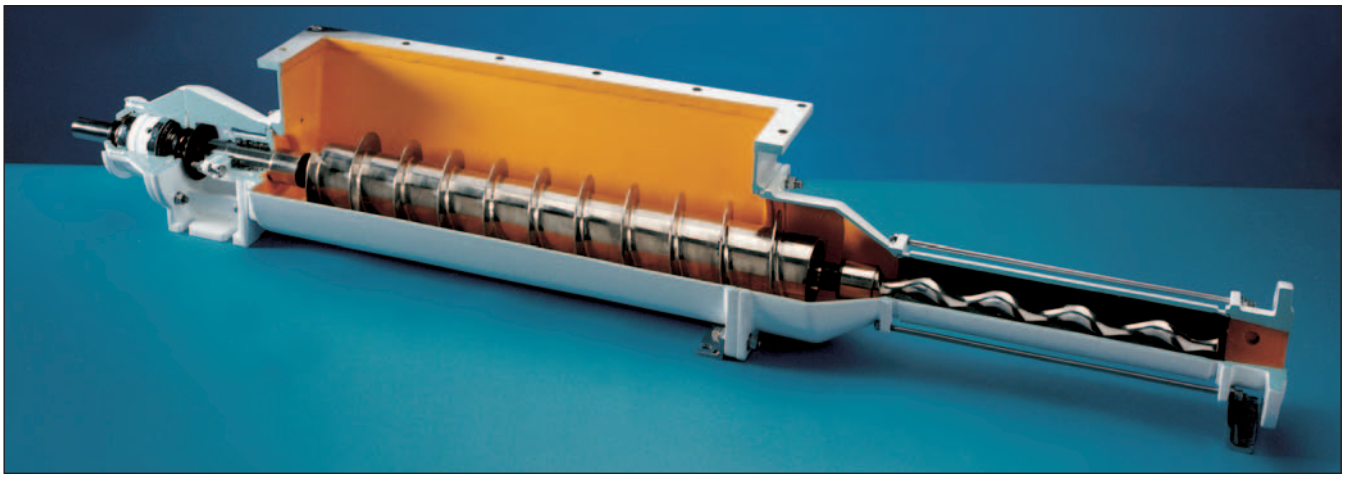
The design of the W range is such that many different applications can be handled. The standard design consists of an enlarged rectangular inlet with a screw conveyor to assist the product into the pumping element. Options exist that can modify the inlet with either large diameter augers, integral bridge breakers or both.

Pumps are available in most cases as Monobloc® (close coupled) or as a bareshaft pump.

Dry solids approaching 40% can be handled by the pumps when fitted with either the integral bridge breakers or large augers.

The pump has been designed to facilitate maintenance through its simple design and the use of a plug in shaft facility.

The pumps are available in a range of materials to ensure a wide variety of products can be handled. Shaft sealing is a hard faced, single mechanical seal, with packed gland available as an option.



Widethroat W Range

The Widethroat range has been designed to handle highly viscous materials such as sludges, slurries, thick non-flowing pastes and de-watered sludge cake with viscosities up to 1,000,000 cP.

The range is based on single, two, four, six and eight stage pumps which can develop pressures up to 48 bar and capacities up to 215m³/h.

For the many difficult and varied applications encountered, the pumps are run at a relatively slow speed, therefore the pump will handle shear sensitive products with minimal product damage, abrasive solids in suspension and highly viscous materials.

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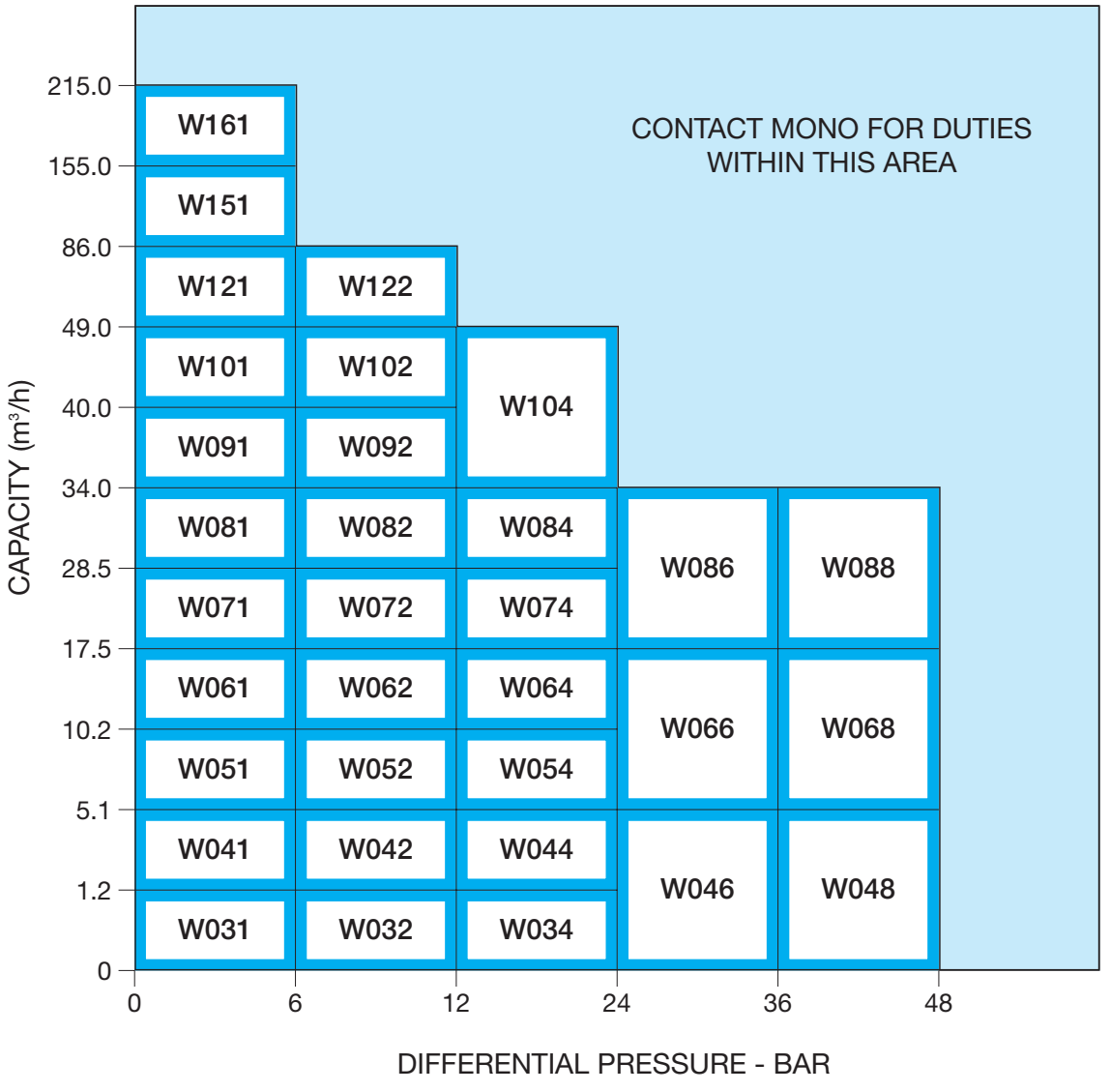
Performance Data

Typical Performance Data for the Widethroat W range



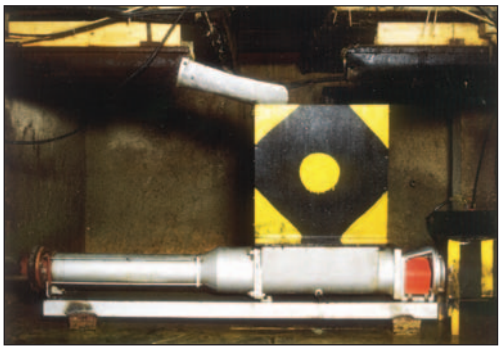
NOTES:

1. The tabulated performance data shown is based upon handling clean water at 20°C.
2. For guidance in selection of a pump for use with other fluids of varying abrasion and viscosity refer to Mono Pumps Ltd., Audenshaw, Manchester.

Widethroat W Range Applications

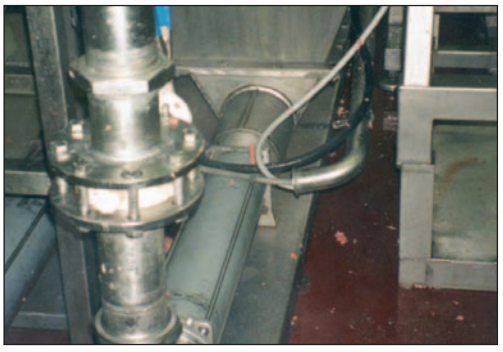
A W064 model installed at a sewage treatment works to control sewage odours, caused by a belt press feeding dewatered sludge cake directly onto an open-air conveyor and into an open skip for disposal. The cast iron W064, with an integral bridge breaker fitted as an option, delivers the sludge cake at the required rate of 2.5m³/h and pressures of up to 12 bar. It operates eight hours per day, six days a week and daily fills up the four enclosed skips with sludge cake.

Problems arose at a water treatment works with the discharge of sludge cake by chute into a mobile skip for disposal on landfill sites. As the sludge is a relatively immobile solid, the only way to load the skip evenly was by manually raking it out. The installation of a W054 pump loads the skip via a 15 metre long, 150mm diameter flexible hose, and the non-pulsating nature of the pump provides an even output of 1.5m³/h. As the pump operates at a pressure of 1 bar, it compresses the cake still further. Significant cost savings are achieved as a result - the skip now holds 6 tonnes rather than 4.5.



A custom-built W082 is speeding up waste disposal at a Scottish tannery. Previously the 'fleshings' were shovelled manually from the processing area to a skip, this method was highly labour intensive. The cast iron W range pump with large auger and hopper were specially modified in order to handle this difficult material. The fleshings waste is gravity fed into the hopper, then pumped at 5.5m³/h at a pressure of 3 bar, along 30m of pipe direct to an outside skip for disposal.

A total of 9 stainless steel W range pumps have been installed at a plant in Greenwich to handle highly viscous materials and transfer it along several hundred metres of pipework. Operating at speeds of between 123rpm and 196rpm, delivering gluten at a capacity of 4.5m³/h to 40.5m³/h and pressures of 3 to 8 bar. Extreme reliability was specified by the customer, as the pumps have to operate 24 hours a day, seven days a week with minimum downtime for repairs.



A customer, producing mechanically deboned meats, which are frozen before export to food manufacturers worldwide, has installed a stainless steel W062 pump. The meat puree is gravity fed into the inlet hopper for transfer to the freezer plates. The efficiency of the freezing system relies on a constant flow rate of 5 tonnes per hour, to prevent the plates standing idle or a delay further up the line.

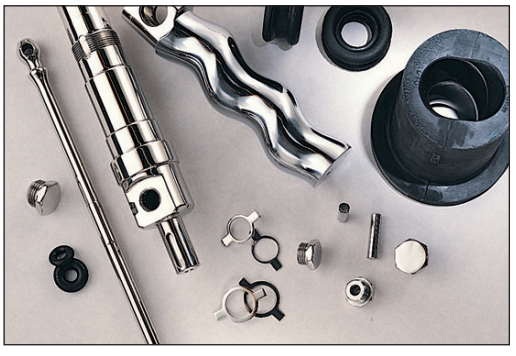
This site's sludge dewatering unit, installed at a large sewage treatment works, is a belt thickening system, comprising 3 x 3m wide belt of 0.7mm mesh, located above a collection sump. As the dewatered sludge reaches the end of the belt it is deposited into the inlet hopper of the W072 pump and transferred to holding tanks at 14m^3/h. Ideal for thick non-flowing sludges and slurries the W range incorporates an auger system which help to feed the sludge to the pumping element without bridging or blocking.

A leading designer and manufacturer of machinery for producing savoury pies, pasties and sausage rolls is incorporating stainless steel W032 pumps into its sausage roll manufacturing machines. Transferring prepared sausage meat in a continuous uniform length to the pastry casing at a capacity of between 5-10m^3/h, the W range features an auger feeding system to ensure the sausage meat is consistently fed from the extended hopper inlet to the pumping element.

Total Quality- Guaranteed

It is the policy of Mono Pumps Ltd. to achieve Total Quality performance in every aspect of customer service.

This commitment to quality, which has been recognised by our attainment of ISO 9001 Part 1 of Lloyds Register of Quality Assurance, can be seen in the high standards of pre and post sales support which we offer.



We use the latest technology, such as computer-based flexible manufacturing systems, computerised bar stores and information systems.

These control systems are supported by advanced manufacturing facilities, for example, a comprehensive stator manufacturing plant, to ensure that we always produce pumps and parts to a consistently high standard.

By using only genuine Mono spares you automatically reduce the risk of pump breakdown and preserve the full Mono guarantee. Mono spares result in lower fitting costs, greater efficiency, reduced running costs and longer pump life - as well as guaranteed quality and value for money.

MONO PUMPS LIMITED
GENUINE PARTS

W Range Pump Coding

FEATURES	DESCRIPTION	BASIC PUMP CODING									STD. VAR.				
		1	2	3	4	5	6	7	8	9	10 /	12	13	14	15
BODY MATERIALS	Cast Iron	C													
	Stainless Steel	S													
PUMP DESIGN	Widethroat		W												
NOMINAL PUMP CAPACITY AT MAXIMUM SPEED AND ZERO PRESSURE	1.2m³/h @ 350 rev/min			0	3										
	5.1m³/h @ 350 rev/min			0	4										
	10.2m³/h @ 350 rev/min			0	5										
	17.5m³/h @ 350 rev/min			0	6										
	28.5m³/h @ 350 rev/min			0	7										
	34m³/h @ 300 rev/min			0	8										
	40m³/h @ 250 rev/min			0	9										
	49m³/h @ 200 rev/min			1	0										
	86m³/h @ 200 rev/min			1	2										
	155m³/h @ 200 rev/min			1	5										
	215m³/h @ 200 rev/min			1	6										
PUMP STAGES	One					1									
	Two					2									
	Four					4									
	Six					6									
	Eight					8									
PRIME MOVER ARRANGEMENTS AND BUILD SELECTION	Monobloc Body Options						A								
							B								
							C								
							D								
	Bareshaft						H								
MECHANICAL SEAL PUMP DESIGN	Standard Auger							J							
	Large Auger							H							
	Bridge Breaker Drive Options							D							
								E							
PACKED GLAND PUMP DESIGN	Standard							S							
	Large Auger							L							
	Bridge Breaker Drive Options							B							
								C							
DESIGN NUMBER									1						
STATOR MAT'L	RA, RR etc.									A					
ROTATING PARTS	1, 3, 4, 5, 8										3				
TYPICAL BASIC PUMP CODING	Cast Iron Widethroat size 06 four stage. Mechanical seal, Monobloc Build C with Bridge Breaker option E, Natural rubber stator, Code 4 rotating parts	C	W	0	6	4	C	E	1	A	4				
PRIME MOVER AND PORT OPTIONS	'G' - Standard Bloc	C	W	0	6	4	C	E	1	A	4 /	G			
	'H' - Standard Bareshaft														
	'C' - Bareshaft - Mono Australia Only														
	'A' - ANSI + Access Ports														
	'E' - Standard ANSI														
	'J' - Japan														
FULL PUMP CODING TO BE STAMPED ON PUMP NAMEPLATE															

Stators:

Various options available including Natural (A) and Nitrile (R) rubber. Special materials can be supplied for difficult applications.

Rotors:

Standard rotors are available in either tool steel with hard chrome plate (hcp) and stainless steel with or without hcp. Special rotor materials can be supplied to suit the product being pumped.

Sealing:

Hard faced, single mechanical seal is standard, packed gland available as an option.

Drives:

Close coupled (Monobloc) or direct drive fixed and v/speed motors available.

Options:

Integral bridge breakers, large auger conveyors and hopper sizes to suit application.

Accessories:

Relief valves and product sensing equipment can be readily supplied.

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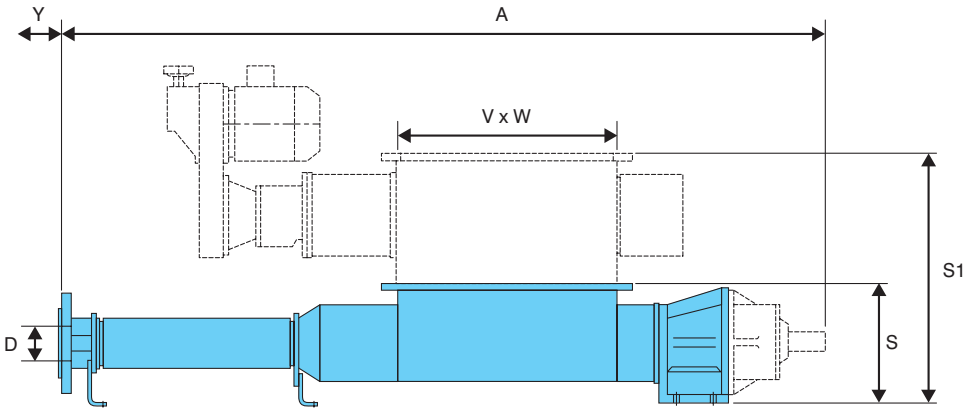
W Range Dimensions



MODEL	STANDARD + BRIDGE BREAKER			STD	BRIDGE BREAKER	LARGE AUGER				ALL MODELS
	Y	A	V x W	S	S1	Y	A	V x W	S	D
W032	720	1216	320 x 170	185						40
W034	750	1638	320 x 170	212						50
W041	835	1324	350 x 250	232						65
W042	835	1523	350 x 250	232	412	770	1842	750 x 250	282	65
W044	890	1987	350 x 250	245	425	880	2293	750 x 250	295	80
W051	1045	1594	350 x 250	247						80
W052	1050	1859	500 x 250	260	435	770	2010	750 x 250	310	80
W054	1100	2500	500 x 250	285	460	765	2657	750 x 250	335	100
W061	1265	1845	650 x 360	285						100
W062	1270	2249	650 x 360	310	515	1030	2484	1000 x 360	375	100
W064	1330	2964	650 x 360	320	525	1035	3212	1000 x 360	395	125
W071	1300	2034	650 x 360	330						125
W072	1300	2402	650 x 360	330	525	1025	2675	1000 x 360	415	125
W074	1410	3395	650 x 360	405	600	1035	3665	1000 x 360	465	125
W081	1300	2078	650 x 360	330						125
W082	1370	2581	650 x 360	340	550	1040	2865	1000 x 360	505	125
W084	1440	3590	650 x 360	405	615	1030	3847	1000 x 360	505	150
W091	1550	2407	800 x 450	360						150
W092	1550	2869	800 x 450	360	575	1045	3053	1000 x 450	505	150
W101	1550	2485	800 x 450	360						150
W102	1625	3153	800 x 450	405	655	1042	3410	1000 x 450	550	150
W121	1600	2784	800 x 450	450						200

NOTES:-

1. All dimensions in millimetres unless otherwise stated and for guidance only.
   For full certified drawings refer to Mono Pumps Ltd., Audenshaw, Manchester.
2. Shaft diameters are to BS 4506: 1970 and keyways to ISO R773.
3. End Cover dimensions to BS4504.
4. Dimension Y is the preferred dismantling space. Consult Mono Pumps Ltd. Audenshaw, Manchester for minimum dismantling space.
5. Please refer to Mono Pumps Ltd. Audenshaw, Manchester, for hopper drilling details.
6. V&W - Standard hopper size. For extended hopper sizes, please refer to Mono Pumps Ltd.
7. For models and dimensions not shown above, please contact Mono Pumps Ltd.