

Ultra-high pressure pumps, Z-series
1000 Z | 700 Z | 550 Z | 400 Z
250 Z | 185 Z | 150 Z

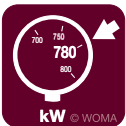
WOMA® Pumps

With operating pressures up to 21 750 psi/1 500 bar and rated volume up to 160 gpm / 605 l/min¹⁾, this series is ideal for hand tool operations like heavy concrete removal, stripping of coatings and de-scaling.

This series offers gear box cooling and being slow speed pumps, are low wear, resulting in long life and longer operation between maintenance cycles. The modular design provides a greater degree of flexibility as you can change the output parameters simply by changing the interchangeable plunger set. An auxiliary shaft end multiplies the possibilities further, because you can connect a second pump and thus double the output. The pumps are designed for suction flow temperatures up to 65 °C or 90 °C* in special cases. The series meets the ATEX standards as well as the API standards**.

* optional, ** pressure-dependent and volume flow-dependent

¹⁾ 1 liter $\hat{=}$ 3.785 US.liq.gal



Example of an available model



All illustrations are examples
of available models only

WOMA® Ultra-high pressure pump 400 Z

Technical Features

Gear Box

- Proven industrial Gear Box with pressurized oil lubrication and 3 available gear ratios (WOMA® standard)

Pump head

- Stress-free pump head in central valve design
- High volumetric efficiency due to minimal dead space
- Low-pulsation operation thanks to optimised valve kinematics
- High life expectancy of all pump head components due to the use of materials with high strength and yield
- Maintenance-friendly due to ease of assembly and access

Interchangeable plunger set

- Interchangeable plunger set system, equipped with ceramic, hard metal or steel plungers and dynamic sealing system

Additional equipment

- Pressure regulation valve with pneumatic activation
- Pneumatically controlled 2/2-way directional relief valve
- Pneumatically actuated check valve for 3/2-way directional function
- Pneumatically controlled high-pressure valves for the simultaneous operation of several users




Special model

- Set and valves in special materials for aggressive media being pumped, e.g. sea water
- Water temperatures above 65°C

Directives and standards



- ATEX 94/9/EC
- API 674 (pressure and volume flow-dependent)
- Quality management system according to DIN ISO EN 9001

Features of the Z-series

	Plunger diameter (mm)	Gear ratio			Crankshaft speed (1/min)	Required driving power (kW)	Max. flow rate (l/min)*	Max. permissible operating pressure (psi / bar)
		Drive speed (1/min) 1500	Drive speed (1/min) 1800	Drive speed (1/min) 2100				
  Installation variations	19	-	-	4.57	460	96	35	21 750/1 500
	19	-	3.69	-	487	101	37	21 750/1 500
	19	-	4.57	-	393	82	30	21 750/1 500
	19	2.96	-	-	506	106	39	21 750/1 500
	19	3.69	-	-	406	85	31	21 750/1 500
	19	4.57	-	-	328	68	25	21 750/1 500
	20	-	-	4.57	460	89	39	18 125/1 250
	20	-	3.69	-	487	93	41	18 125/1 250
	20	-	4.57	-	393	75	33	18 125/1 250
	20	2.96	-	-	506	98	43	18 125/1 250
	20	3.69	-	-	406	77	34	18 125/1 250
	20	4.57	-	-	328	62	27	18 125/1 250
	22	-	-	4.57	460	86	47	14 500/1 000
	22	-	3.69	-	487	91	50	14 500/1 000
	22	-	4.57	-	393	73	40	14 500/1 000
	22	2.96	-	-	506	95	52	14 500/1 000
	22	3.69	-	-	406	77	42	14 500/1 000
	22	4.57	-	-	328	62	34	14 500/1 000
	26	-	-	4.57	460	92	67	10 875/750
	26	-	3.69	-	487	97	71	10 875/750
	26	-	4.57	-	393	79	58	10 875/750
	26	2.96	-	-	506	101	74	10 875/750
	26	3.69	-	-	406	82	60	10 875/750
	26	4.57	-	-	328	66	48	10 875/750
	30	-	-	4.57	460	93	90	8 265/570
	30	-	3.69	-	487	99	95	8 265/570
	30	-	4.57	-	393	80	77	8 265/570
	30	2.96	-	-	506	103	99	8 265/570
	30	3.69	-	-	406	82	79	8 265/570
	30	4.57	-	-	328	67	64	8 265/570
35	-	-	4.57	460	93	123	6 090/420	
35	-	3.69	-	487	99	130	6 090/420	
35	-	4.57	-	393	80	105	6 090/420	
35	2.96	-	-	506	103	136	6 090/420	
35	3.69	-	-	406	83	109	6 090/420	
35	4.57	-	-	328	67	88	6 090/420	
 185 Z	20	-	-	4.57	460	103	38	21 750/1 500
	20	-	3.69	-	488	109	40	21 750/1 500
	20	-	4.57	-	394	88	32	21 750/1 500
	20	2.96	-	-	507	114	42	21 750/1 500
	20	3.69	-	-	407	91	34	21 750/1 500
	20	4.57	-	-	328	73	27	21 750/1 500
	22	-	-	4.57	460	109	46	18 850/1 300
	22	-	3.69	-	488	116	49	18 850/1 300
	22	-	4.57	-	394	93	40	18 850/1 300
	22	2.96	-	-	507	120	51	18 850/1 300
	22	3.69	-	-	407	96	41	18 850/1 300
	22	4.57	-	-	328	78	33	18 850/1 300

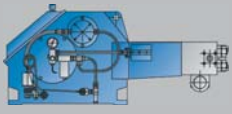
* 1 liter = 3.785 US liq. gal

Features of the Z-series

	Plunger diameter (mm)	Gear ratio			Crankshaft speed (1/min)	Required driving power (kW)	Max. flow rate (l/min)*	Max. permissible operating pressure (psi / bar)	
		Drive speed (1/min) 1500	Drive speed (1/min) 1800	Drive speed (1/min) 2100					
 Installation variations	185 Z	26	-	-	4.57	460	113	66	13775/950
	26	-	3.69	-	488	120	70	13775/950	
	26	-	4.57	-	394	97	57	13775/950	
	26	2.96	-	-	507	125	73	13775/950	
	26	3.69	-	-	407	100	58	13775/950	
	26	4.57	-	-	328	81	47	13775/950	
	28	-	-	4.57	460	112	77	11600/800	
	28	-	3.69	-	488	118	82	11600/800	
	28	-	4.57	-	394	96	66	11600/800	
	28	2.96	-	-	507	123	85	11600/800	
	28	3.69	-	-	407	99	68	11600/800	
	28	4.57	-	-	328	80	55	11600/800	
 Installation variations	250 Z	24	-	-	4.52	464	150	57	21750/1500
	24	-	3.57	-	504	163	62	21750/1500	
	24	-	4.52	-	398	129	49	21750/1500	
	24	3.04	-	-	493	159	60	21750/1500	
	24	3.57	-	-	420	136	51	21750/1500	
	24	4.52	-	-	331	107	40	21750/1500	
	26	-	-	4.52	464	154	67	18850/1300	
	26	-	3.57	-	504	167	73	18850/1300	
	26	-	4.52	-	398	132	57	18850/1300	
	26	3.04	-	-	493	164	71	18850/1300	
	26	3.57	-	-	420	139	60	18850/1300	
	26	4.52	-	-	331	110	48	18850/1300	
	28	-	-	4.52	464	160	78	16675/1150	
	28	-	3.57	-	504	173	84	16675/1150	
	28	-	4.52	-	398	137	67	16675/1150	
	28	3.04	-	-	493	170	83	16675/1150	
	28	3.57	-	-	420	144	70	16675/1150	
	28	4.52	-	-	331	114	55	16675/1150	
	30	-	-	4.52	464	159	91	14500/1000	
	30	-	3.57	-	504	174	99	14500/1000	
	30	-	4.52	-	398	138	78	14500/1000	
	30	3.04	-	-	493	171	96	14500/1000	
	30	3.57	-	-	420	145	82	14500/1000	
	30	4.52	-	-	331	115	65	14500/1000	
	35	-	-	4.52	464	160	123	10440/720	
	35	-	3.57	-	504	173	133	10440/720	
	35	-	4.52	-	398	137	105	10440/720	
	35	3.04	-	-	493	170	130	10440/720	
	35	3.57	-	-	420	144	111	10440/720	
	35	4.52	-	-	331	114	88	10440/720	

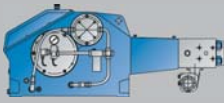
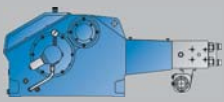
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Features of the Z-series

	Plunger diameter (mm)	Gear ratio			Crankshaft speed (1/min)	Required driving power (kW)	Max. flow rate (l/min)*	Max. permissible operating pressure (psi / bar)
		Drive speed (1/min) 1500	Drive speed (1/min) 1800	Drive speed (1/min) 2100				
400 Z 	26	-	-	4.23	496	258	98	21 750/1 500
	26	-	3.60	-	500	260	99	21 750/1 500
	26	-	4.23	-	425	221	84	21 750/1 500
	26	2.96	-	-	506	263	100	21 750/1 500
	26	3.60	-	-	416	216	82	21 750/1 500
	26	4.23	-	-	354	184	70	21 750/1 500
	28	-	-	4.23	496	262	114	18 850/1 300
	28	-	3.60	-	500	264	115	18 850/1 300
	28	-	4.23	-	425	225	98	18 850/1 300
	28	2.96	-	-	506	267	116	18 850/1 300
	28	3.60	-	-	416	220	95	18 850/1 300
	28	4.23	-	-	354	187	81	18 850/1 300
	30	-	-	4.23	496	268	131	16 675/1 150
	30	-	3.60	-	500	270	132	16 675/1 150
	30	-	4.23	-	425	230	112	16 675/1 150
	30	2.96	-	-	506	274	132	16 675/1 150
	30	3.60	-	-	416	225	110	16 675/1 150
	30	4.23	-	-	354	191	93	16 675/1 150
	35	-	-	4.23	496	274	181	12 325/850
	35	-	3.60	-	500	276	183	12 325/850
	35	-	4.23	-	425	235	155	12 325/850
	35	2.96	-	-	506	280	185	12 325/850
	35	3.60	-	-	416	230	152	12 325/850
	35	4.23	-	-	354	196	129	12 325/850
	45	-	-	4.23	496	271	307	7 250/500
	45	-	3.60	-	500	273	308	7 250/500
	45	-	4.23	-	425	233	263	7 250/500
	45	2.96	-	-	506	277	313	7 250/500
	45	3.60	-	-	416	228	257	7 250/500
	45	4.23	-	-	354	194	219	7 250/500
50	-	-	4.23	496	269	379	5 800/400	
50	-	3.60	-	500	271	382	5 800/400	
50	-	4.23	-	425	231	325	5 800/400	
50	2.96	-	-	506	275	387	5 800/400	
50	3.60	-	-	416	226	318	5 800/400	
50	4.23	-	-	354	192	270	5 800/400	


* 1 liter = 3.785 US.liq.gal

Features of the Z-series

	Plunger diameter (mm)	Gear ratio			Crankshaft speed (1/min)	Required driving power (kW)	Max. flow rate (l/min)*	Max. permissible operating pressure (psi /bar)
		Drive speed (1/min) 1500	Drive speed (1/min) 1800	Drive speed (1/min) 2100				
550 Z 	30	-	-	4.60	457	340	125	21 750/1 500
	30	-	3.96	-	455	339	125	21 750/1 500
	30	-	4.60	-	391	292	107	21 750/1 500
	30	3.30	-	-	455	339	125	21 750/1 500
	30	3.96	-	-	379	282	104	21 750/1 500
	30	4.60	-	-	326	243	89	21 750/1 500
	35	-	-	4.60	457	406	172	18 850/1 300
	35	-	3.96	-	455	404	172	18 850/1 300
	35	-	4.60	-	391	348	148	18 850/1 300
	35	3.30	-	-	455	404	172	18 850/1 300
	35	3.96	-	-	379	337	143	18 850/1 300
	35	4.60	-	-	326	290	123	18 850/1 300
	40	-	-	4.60	457	414	229	14 500/1 000
	40	-	3.96	-	455	412	228	14 500/1 000
	40	-	4.60	-	391	355	196	14 500/1 000
	40	3.30	-	-	455	412	228	14 500/1 000
	40	3.96	-	-	379	344	190	14 500/1 000
	40	4.60	-	-	326	296	163	14 500/1 000
	45	-	-	4.60	457	424	293	11 600/800
	45	-	3.96	-	455	422	291	11 600/800
	45	-	4.60	-	391	363	251	11 600/800
	45	3.30	-	-	455	422	291	11 600/800
	45	3.96	-	-	379	352	243	11 600/800
	45	4.60	-	-	326	303	290	11 600/800
	50	-	-	4.60	457	428	364	9 425/650
	50	-	3.96	-	455	427	362	9 425/650
	50	-	4.60	-	391	367	312	9 425/650
	50	3.30	-	-	455	427	362	9 425/650
	50	3.96	-	-	379	355	302	9 425/650
	50	4.60	-	-	326	306	260	9 425/650
700 Z 	30	-	-	3.96	530	395	145	21 750/1 500
	30	-	3.45	-	522	389	143	21 750/1 500
	30	3.30	-	-	455	339	125	21 750/1 500
	30	-	3.30	-	545	407	150	21 750/1 500
	35	-	-	3.96	530	472	200	18 850/1 300
	35	-	3.45	-	522	464	197	18 850/1 300
	35	3.30	-	-	455	404	172	18 850/1 300
	40	-	-	3.96	530	481	266	14 500/1 000
	40	-	3.45	-	522	473	261	14 500/1 000
	40	3.30	-	-	455	412	228	14 500/1 000
	45	-	-	3.96	530	492	340	11 600/800
	45	-	3.45	-	522	484	334	11 600/800
	45	3.30	-	-	455	422	291	11 600/800
	50	-	-	3.96	530	498	423	9 425/650
	50	-	3.45	-	522	490	416	9 425/650
	50	3.30	-	-	455	427	362	9 425/650

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Features of the Z-series

	Plunger diameter (mm)	Gear ratio			Crankshaft speed (1/min)	Required driving power (kW)	Max. flow rate (l/min)*	Max. permissible operating pressure (psi / bar)
		Drive speed (1/min) 1500	Drive speed (1/min) 1800	Drive speed (1/min) 2100				
1000 Z 	30	-	-	4.23	496	712	262	21 750/1 500
	30	-	3.69	-	488	702	258	21 750/1 500
	30	-	4.23	-	425	609	224	21 750/1 500
	30	3.00	-	-	500	718	264	21 750/1 500
	30	3.69	-	-	406	582	214	21 750/1 500
	30	4.23	-	-	354	509	187	21 750/1 500
	35	-	-	4.23	496	712	357	15 950/1 100
	35	-	3.69	-	488	700	351	15 950/1 100
	35	-	4.23	-	425	610	306	15 950/1 100
	35	3.00	-	-	500	718	360	15 950/1 100
	35	3.69	-	-	406	582	292	15 950/1 100
	35	4.23	-	-	354	507	254	15 950/1 100
	40	-	-	4.23	496	718	466	12 325/850
	40	-	3.69	-	488	706	458	12 325/850
	40	-	4.23	-	425	615	399	12 325/850
	40	3.00	-	-	500	724	470	12 325/850
	40	3.69	-	-	406	587	381	12 325/850
	40	4.23	-	-	354	512	332	12 325/850
	45	-	-	4.23	496	761	600	10 150/700
	45	-	3.69	-	488	750	591	10 150/700
	45	-	4.23	-	425	652	514	10 150/700
	45	3.00	-	-	500	768	605	10 150/700
	45	3.69	-	-	406	623	491	10 150/700
	45	4.23	-	-	354	543	428	10 150/700

* 1 liter = 3.785 US liq. gal

Example of an available model

All illustrations are examples of available models only



Setup example:
Ultra-high pressure water jet system
with 1000 Z boxer pump