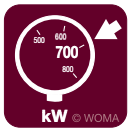
WOMA® Pumps

Ultra-high pressure pumps, M-series
1000 M I 550 M I 400 M I
250 M I 185 M I 150 M I 70 M

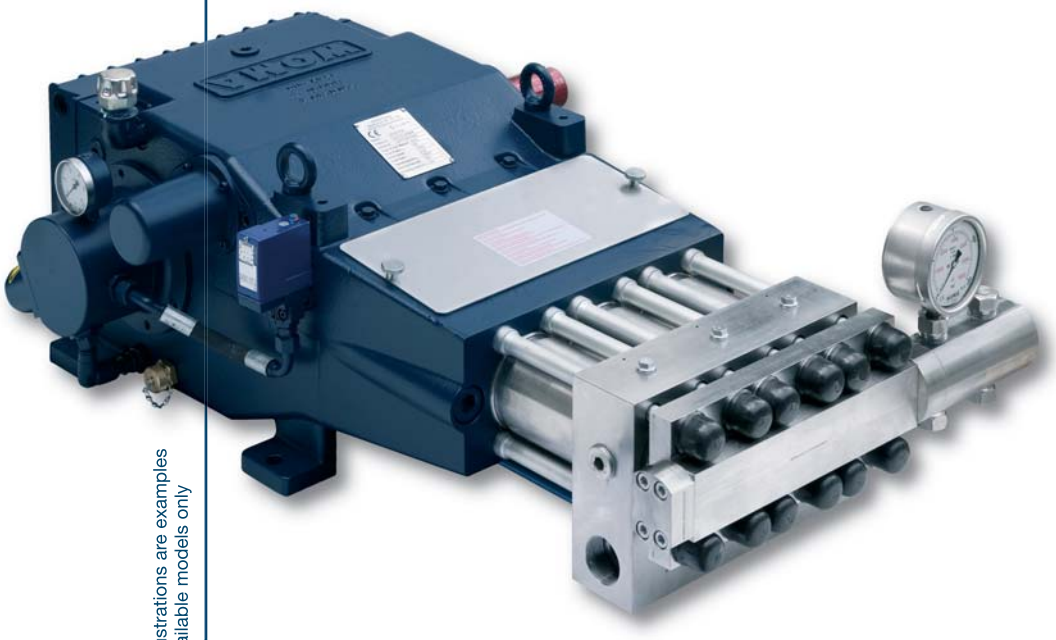
Our M-series high-pressure plunger pumps feature our patented HCV® valve technology and have mastered operating pressures up to 58000 psi/4000 bar. They are ideally suited for cutting and demolition projects as well as for stripping coatings and derusting.

Being slow-speed pumps, their operation is low-wear, resulting in long life and longer operation between maintenance cycles. An auxiliary drive shaft makes it possible to double the output when required, by adding another pump to the drive train. The modular design allows you the flexibility to change the output power specifications by simply replacing an interchangeable plunger conversion set. The M-series has gearbox cooling and satisfies both the ATEX as well as API standard*. Not least of all, this pump series can operate at suction flow temperatures up to 65 °C, and if required even up to 90 °C**.

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



Example of an available model



All illustrations are examples of available models only

WOMA® Ultra-high pressure pump 250 M

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WOMA® Pumps

Technical Features

Basics
- ☐ Two height levels of the drive shaft by repositioning the pump
- ☐ Good accessibility in any assembly situation
- ☐ Very long life

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

Interchangeable plunger set
- ☐ Armoured cylinder
- ☐ Interchangeable plunger set system, equipped with hard metal plungers and dynamic sealing system
- ☐ Newly developed, static metal seals in the zone of dynamic stress
- ☐ Low-pulsation operation thanks to optimised valve kinematics
- ☐ Maintenance-friendly

HCV®-Technology
Hydrostatically Compensated Valves
The unique, patented central valve design
- ☐ Extremely long life
- ☐ Absorption of very high stresses
- ☐ High fatigue
- ☐ Minimal maintenance costs

Additional equipment
- ☐ Pneumatically operated 2/2-way directional bypass valve
- ☐ Check valve for 3/2-way directional functions

Special model
- ☐ Pump head, interchangeable plunger set and valves in special materials for aggressive media being pumped, e.g. sea water
- ☐ Water temperature 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

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Features of the M-series

	Plunger diameter (mm)	Gear ratio: Drive speed (1/min) 1500	Gear ratio: Drive speed (1/min) 1800	Gear ratio: Drive speed (1/min) 2100	Crankshaft speed (1/min)	Required driving power (kW)	Max. flow rate (l/min)*	Max. permissible operating pressure (psi/bar)
70 M	10	-	-	-	825	39	7.4	43500/3000
	10	-	-	-	750	36	6.7	43500/3000
	12	-	-	-	852	49	11.2	36250/2500
	12	-	-	-	750	44	10.2	36250/2500
150 M	12	-	-	4.57	460	68	12.6	43500/3000
	12	-	3.69	-	488	72	13.4	43500/3000
	12	-	4.57	-	394	58	10.8	43500/3000
	12	2.96	-	-	507	75	13.9	43500/3000
	12	3.96	-	-	407	60	11.1	43500/3000
	12	4.57	-	-	328	48	9.0	43500/3000
Installation variations	14	-	-	4.57	460	79	17.6	36250/2500
	14	-	3.69	-	488	84	18.7	36250/2500
	14	-	4.57	-	394	68	15.1	36250/2500
	14	2.96	-	-	507	88	19.5	36250/2500
	14	3.69	-	-	407	70	15.6	36250/2500
	14	4.57	-	-	328	57	12.6	36250/2500
	16	-	-	4.57	460	85	23.7	29000/2000
	16	-	3.69	-	488	91	25.2	29000/2000
	16	-	4.57	-	394	73	20.3	29000/2000
	16	2.96	-	-	507	94	26.1	29000/2000
	16	3.69	-	-	407	75	21.0	29000/2000
	16	4.57	-	-	328	61	16.9	29000/2000
	18	-	-	4.57	460	83	30.8	21750/1500
	18	-	3.69	-	488	88	32.7	21750/1500
	18	-	4.57	-	394	71	26.4	21750/1500
	18	2.96	-	-	507	92	34.0	21750/1500
	18	3.69	-	-	407	74	27.3	21750/1500
	18	4.57	-	-	328	59	22.0	21750/1500
185 M	14	-	-	4.57	460	93	17.1	43500/3000
	14	-	3.69	-	488	98	18.2	43500/3000
	14	-	4.57	-	394	79	14.7	43500/3000
	14	2.96	-	-	507	102	18.9	43500/3000
	14	3.69	-	-	407	82	15.2	43500/3000
	14	4.57	-	-	328	66	12.2	43500/3000
Installation variations	15	-	-	4.57	460	100	19.9	40600/2800
	15	-	3.69	-	488	108	21.1	40600/2800
	15	-	4.57	-	394	86	17.1	40600/2800
	15	2.96	-	-	507	111	21.9	40600/2800
	15	3.69	-	-	407	89	17.6	40600/2800
	15	4.57	-	-	328	72	14.2	40600/2800
	16	-	-	4.57	460	104	23.0	36250/2500
	16	-	3.69	-	488	110	24.5	36250/2500
	16	-	4.57	-	394	89	19.7	36250/2500
	16	2.96	-	-	507	115	25.4	36250/2500
	16	3.69	-	-	407	92	20.4	36250/2500
	16	4.57	-	-	328	74	16.5	36250/2500

* 1 liter ≙ 3.785 US.liq.gal

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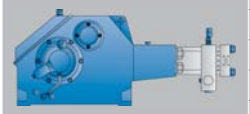
Features of the M-series

	Plunger diameter (mm)	Gear ratio: Drive speed (1/min) 1500	Gear ratio: Drive speed (1/min) 1800	Gear ratio: Drive speed (1/min) 2100	Crankshaft speed (1/min)	Required driving power (kW)	Max. flow rate (l/min)*	Max. permissible operating pressure (psi/bar)
185 M	18	-	-	4.57	460	108	30.0	29000/2000
	18	-	3.69	-	488	115	31.8	29000/2000
	18	-	4.57	-	394	93	25.7	29000/2000
	18	2.96	-	-	507	119	33.1	29000/2000
	18	3.69	-	-	407	96	26.5	29000/2000
	18	4.57	-	-	328	77	19.0	29000/2000
250 M	15	-	-	4.52	464	108	20	43500/3000
	15	-	3.57	-	504	117	22	43500/3000
	15	-	4.52	-	398	92	18	43500/3000
	15	3.04	-	-	493	114	21	43500/3000
	15	3.57	-	-	420	97	19	43500/3000
	15	4.52	-	-	331	77	15	43500/3000
 Installation variations	16	-	-	4.52	464	116	23	40600/2800
	16	-	3.57	-	504	126	26	40600/2800
	16	-	4.52	-	398	99	20	40600/2800
	16	3.04	-	-	493	123	25	40600/2800
	16	3.57	-	-	420	105	21	40600/2800
	16	4.52	-	-	331	82	17	40600/2800
	18	-	-	4.52	464	133	29	36250/2500
	18	-	3.57	-	504	144	32	36250/2500
	18	-	4.52	-	398	114	26	36250/2500
	18	3.04	-	-	493	141	31	36250/2500
	18	3.57	-	-	420	120	27	36250/2500
	18	4.52	-	-	331	95	21	36250/2500
	20	-	-	4.52	464	135	37	29000/2000
	20	-	3.57	-	504	147	40	29000/2000
	20	-	4.52	-	398	116	32	29000/2000
	20	3.04	-	-	493	144	40	29000/2000
	20	3.57	-	-	420	122	34	29000/2000
	20	4.52	-	-	331	96	27	29000/2000
400 M	18	-	-	4.23	496	243	45	43500/3000
	18	-	3.60	-	500	243	45	43500/3000
	18	-	4.23	-	425	209	38	43500/3000
	18	2.96	-	-	506	249	46	43500/3000
	18	3.60	-	-	416	205	37	43500/3000
	18	4.23	-	-	354	174	31	43500/3000
	20	-	-	4.23	496	254	56	36250/2500
	20	-	3.60	-	500	254	56	36250/2500
	20	-	4.23	-	425	209	46	36250/2500
	20	2.96	-	-	506	259	57	36250/2500
	20	3.60	-	-	416	204	45	36250/2500
	20	4.23	-	-	354	177	39	36250/2500
	22	-	-	4.23	496	239	69	29000/2000
	22	-	3.60	-	500	241	70	29000/2000
	22	-	4.23	-	425	205	60	29000/2000
	22	2.96	-	-	506	244	70	29000/2000
	22	3.60	-	-	416	201	58	29000/2000
	22	4.23	-	-	354	171	50	29000/2000

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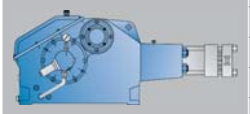
550 M 	22	-	-	4.60	456	336	62	43500/3000
	22	-	3.96	-	454	335	62	43500/3000
	22	-	4.60	-	391	288	53	43500/3000
	22	3.30	-	-	454	335	62	43500/3000
	22	3.96	-	-	378	279	51	43500/3000
	22	4.60	-	-	326	240	44	43500/3000
	24	-	-	4.60	456	343	76	36250/2500
	24	-	3.96	-	454	342	75	36250/2500
	24	-	4.60	-	391	294	65	36250/2500
	24	3.30	-	-	454	342	75	36250/2500
	24	3.96	-	-	378	285	63	36250/2500
	24	4.60	-	-	326	245	54	36250/2500
	26	-	-	4.60	456	403	89	36250/2500
	26	-	3.96	-	454	401	88	36250/2500
	26	-	4.60	-	391	345	76	36250/2500
	26	3.30	-	-	454	401	88	36250/2500
	26	3.96	-	-	378	334	74	36250/2500
	26	4.60	-	-	326	288	63	36250/2500
	28	-	-	4.60	456	385	106	29000/2000
	28	-	3.96	-	454	383	105	29000/2000
	28	-	4.60	-	391	330	91	29000/2000
	28	3.30	-	-	454	383	105	29000/2000
	28	3.96	-	-	378	319	88	29000/2000
	28	4.60	-	-	326	275	76	29000/2000
1000 M 	22	-	-	4.23	496	679	125	43500/3000
	22	-	3.69	-	488	668	123	43500/3000
	22	-	4.23	-	425	582	107	43500/3000
	22	3.00	-	-	500	684	126	43500/3000
	22	3.69	-	-	406	556	102	43500/3000
	22	4.23	-	-	354	485	89	43500/3000
	24	-	-	4.23	496	694	153	36250/2500
	24	-	3.69	-	488	682	150	36250/2500
	24	-	4.23	-	425	594	131	36250/2500
	24	3.00	-	-	500	699	154	36250/2500
	24	3.69	-	-	406	568	125	36250/2500
	24	4.23	-	-	354	495	109	36250/2500
	26	-	-	4.23	496	670	185	29000/2000
	26	-	3.69	-	488	658	182	29000/2000
	26	-	4.23	-	425	574	158	29000/2000
	26	3.00	-	-	500	675	186	29000/2000
	26	3.69	-	-	406	548	151	29000/2000
	26	4.23	-	-	354	478	132	29000/2000

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