



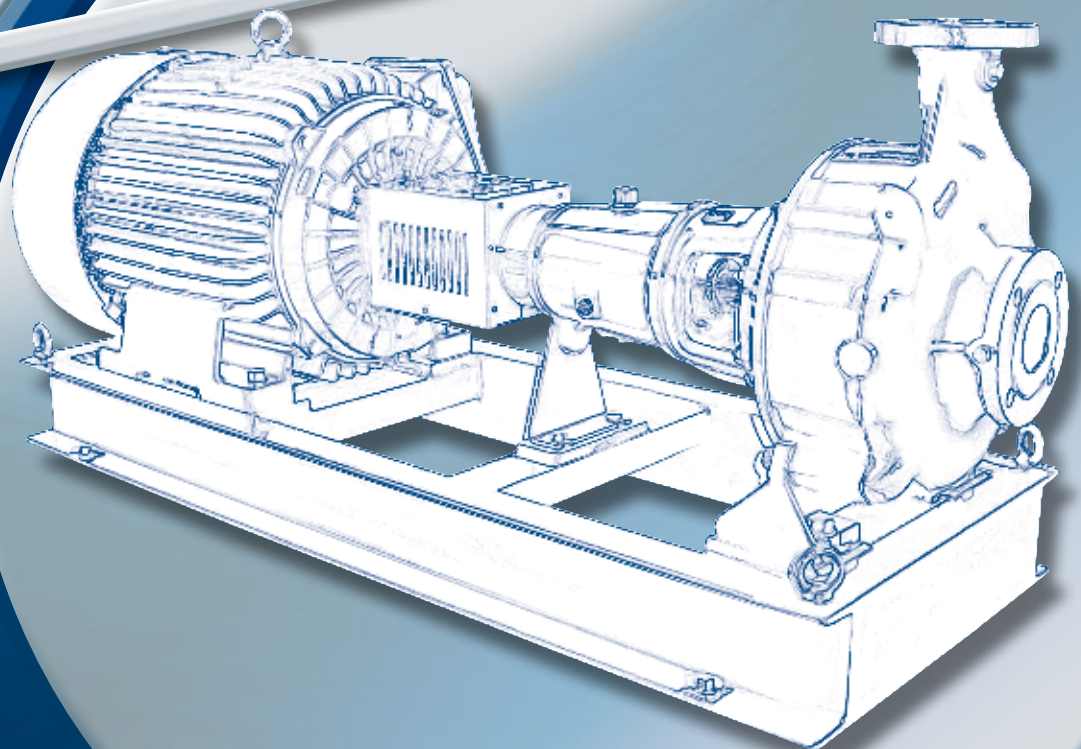
# GARBARINO

PUMPS SINCE 1932

## MCA

Recessed impeller torque flow pumps  
Pompe con girante arretrata ad effetto vortice

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# MCA

## NO CLOGGING RECESSED IMPELLER TORQUE FLOW PUMPS

*POMPE CON GIRANTE APERTA ARRETRATA AD EFFETTO VORTICE*

### DESCRIPTION

Thanks to the shape of the impeller and to its recessed position in the casing, MCA pumps are suitable for pumping viscous and pasty liquids containing suspended solids.

### DESCRIZIONE

*Le pompe centrifughe serie MCA, grazie alla girante aperta ed alla sua posizione arretrata rispetto al corpo a voluta, sono particolarmente adatte al convogliamento di fluidi con corpi solidi in sospensione senza alcun pericolo di intasamento.*

### MAIN FEATURES

#### CARATTERISTICHE COSTRUTTIVE

**IMPELLER:** the impeller is of the open type with radial blades. The impeller is provided with back vanes to balance the axial thrust and the pressure in the stuffing box area.

*GIRANTE:* la girante è aperta a palette radiali.

*Nella parte posteriore è prevista una palettatura per equilibrare la spinta assiale e la pressione esistente nella zona di tenuta.*

**CASING:** volute type with ample section end suction and top discharge nozzles.

The flanges are drilled UNI or DIN NP 10.

*CORPO:* Il corpo è a spirale con un'ampia sezione di passaggio.

*La bocca aspirante è assiale, la bocca di mandata è radiale, rivolta verso l'alto. Le flange d'attacco hanno foratura UNI-DIN-PN 10.*

**SHAFT SEALING:** basic pump version is mechanically sealed but soft packing with external flushing with clean fluid can be fitted. For high temperature the pump can be provided with a cooling chamber. The fitting of single or double acting mechanical seals flushed from external source by suitable media can also be possible.

*TENUTA SULL' ALBERO:* la tenuta prevista di serie è meccanica, ma può essere installata anche la baderna flussata da liquido pulito dall'esterno. Per temperature elevate è prevista l'adozione della camera di raffreddamento a circolazione d'acqua. Possono essere montate tenute meccaniche semplici oppure doppie con flussaggio di sbarramento.

### MATERIALS

Standard constructions are in cast iron, carbon steel, stainless steels. Any other material combinations can be supplied.

### MATERIALI

*Sono previste costruzioni standard in ghisa, acciaio al carbonio, acciai inox. Su richiesta sono realizzabili altre metallurgie.*

### APPLICATIONS

Sewage treatment plants, paper industry, food and sugar industry and generally to convey all liquids with suspended solids.

### IMPIEGHI

*Impianti di depurazione, industria cartaria e della cellulosa, industria alimentare e saccarifera, chimica e petrolchimica, tessile, impianti di depurazione ed in generale per convogliare tutti quei liquidi contenenti solidi sospesi.*

### PERFORMANCES

Capacity up to 500 m<sup>3</sup>/h.

Total dynamic head up to 100 meters.

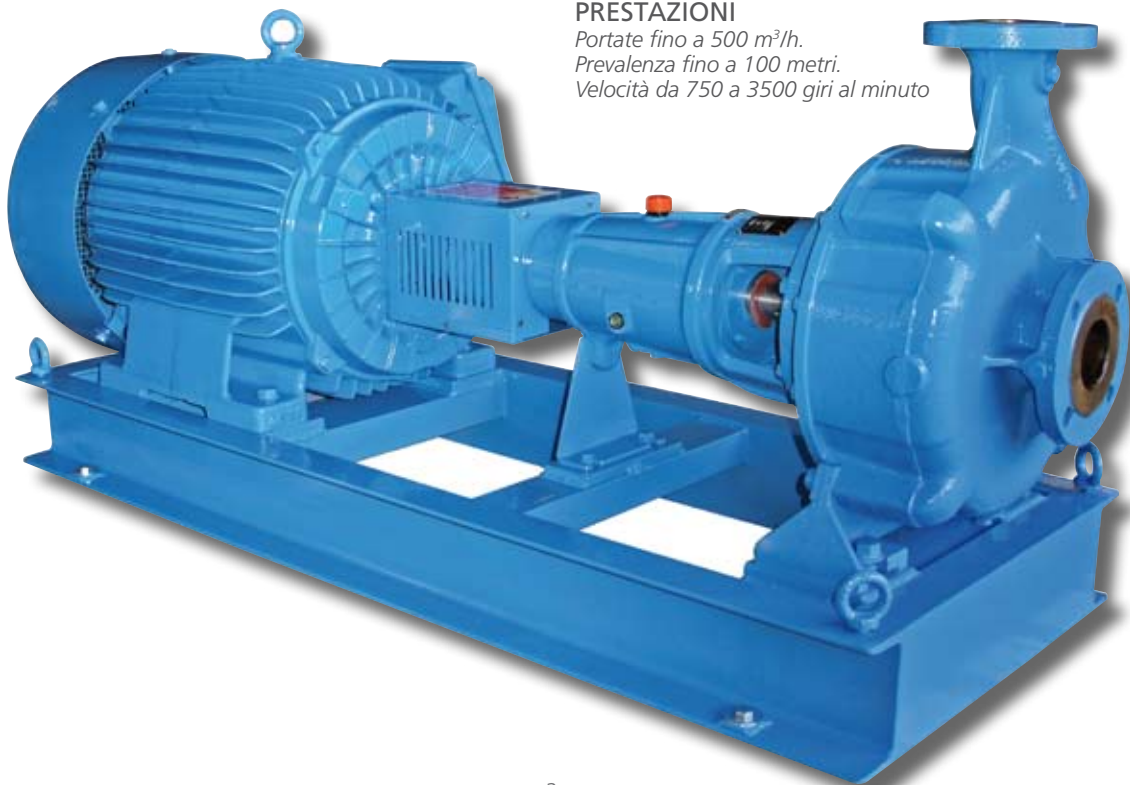
Speed from 750 to 3500 rpm

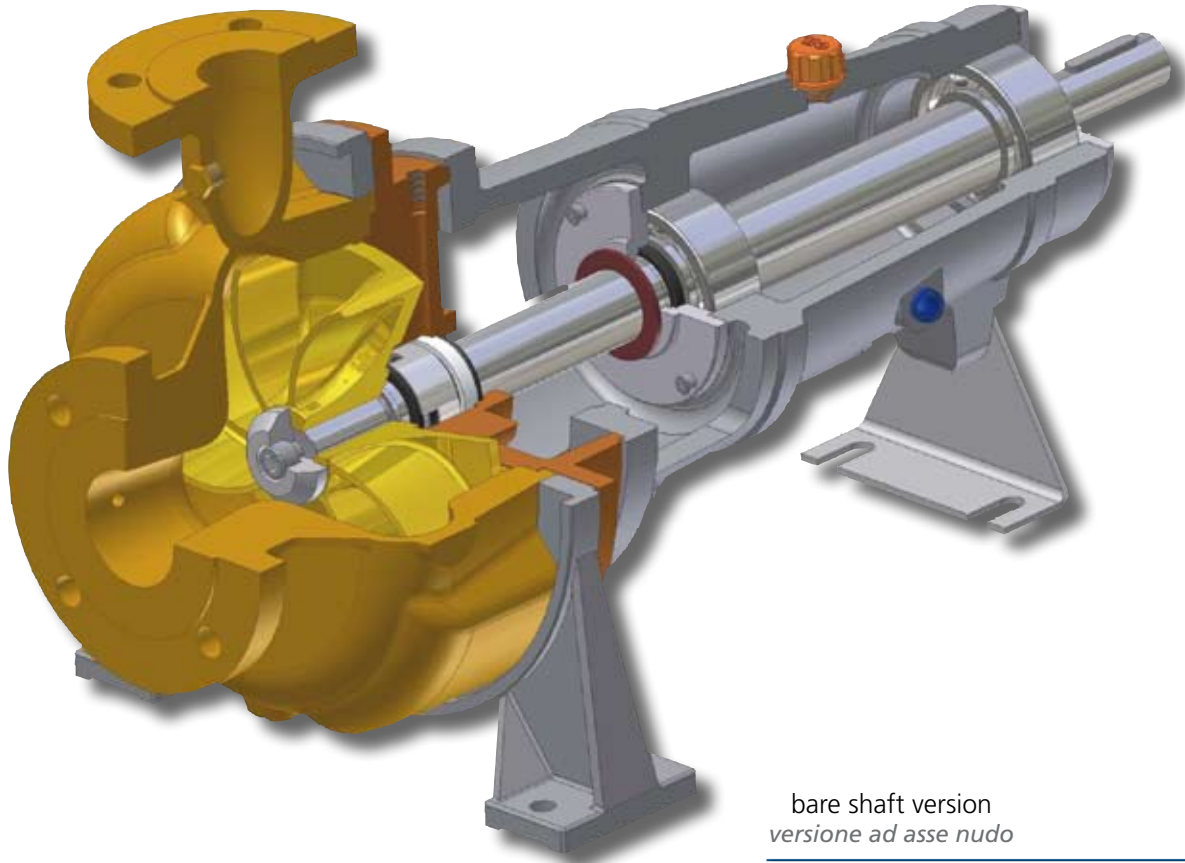
### PRESTAZIONI

*Portate fino a 500 m<sup>3</sup>/h.*

*Prevalenza fino a 100 metri.*

*Velocità da 750 a 3500 giri al minuto*

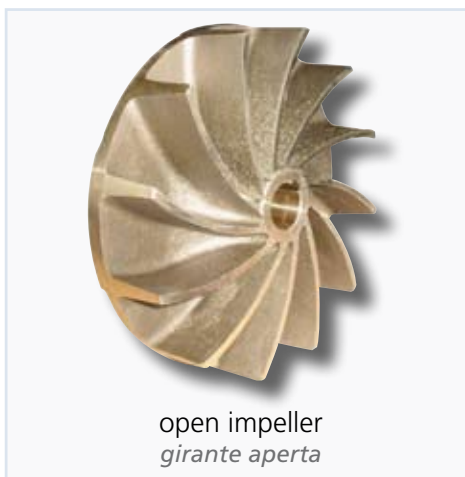




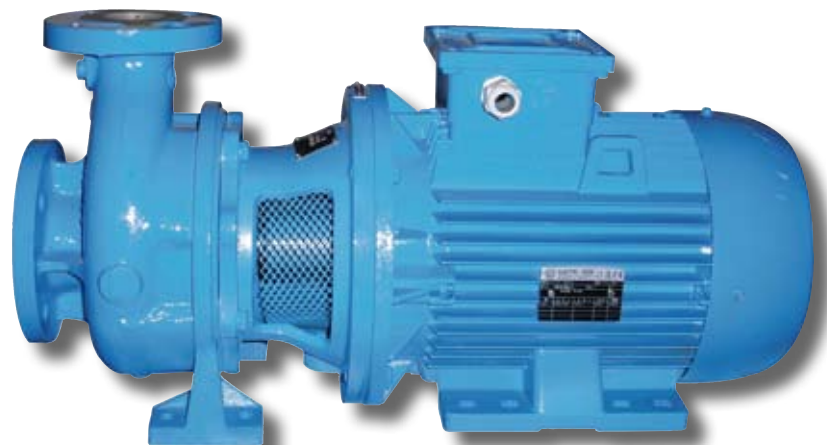
bare shaft version  
versione ad asse nudo

<b>MODELS</b> MODELLI	19
INTERCHANGEABILITY INTERCAMBIABILITÀ	
CASINGS CORPI	19
IMPELLERS GIRANTI	19
SHAFTS ALBERI	3
BEARING BRACKETS SUPPORTI	3
MECHANICAL SEALS TENUTE MECCANICHE	3

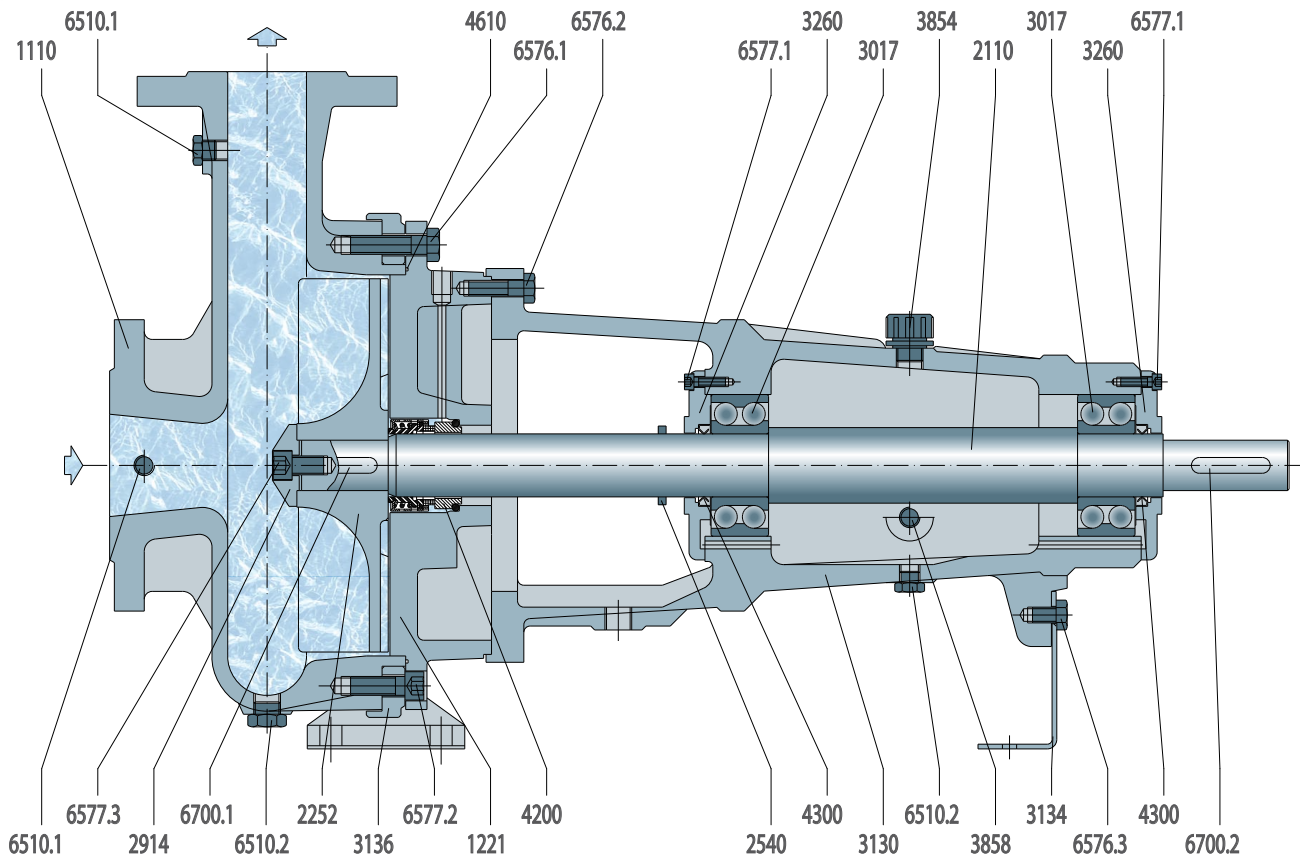
<b>MATERIALS</b> MATERIALI	<b>MAX. WORKING PRESSURE</b> PRESSIONE MAX. ESERCIZIO
CAST IRON GHISA	10 bar
STAINLESS STEEL, BRONZE, SPECIAL ALLOY ACCIAIO INOX, BRONZO, LEGHE SPECIALI	16 bar
<b>NOTE: SPECIAL EXECUTIONS EXCEEDING THE ABOVE LIMITS AVAILABLE ON REQUEST</b> NOTA: ESECUZIONI SPECIALI AL DI FUORI DEI LIMITI SOPRAESPOSTI REALIZZATE SU RICHIESTA	



open impeller  
girante aperta

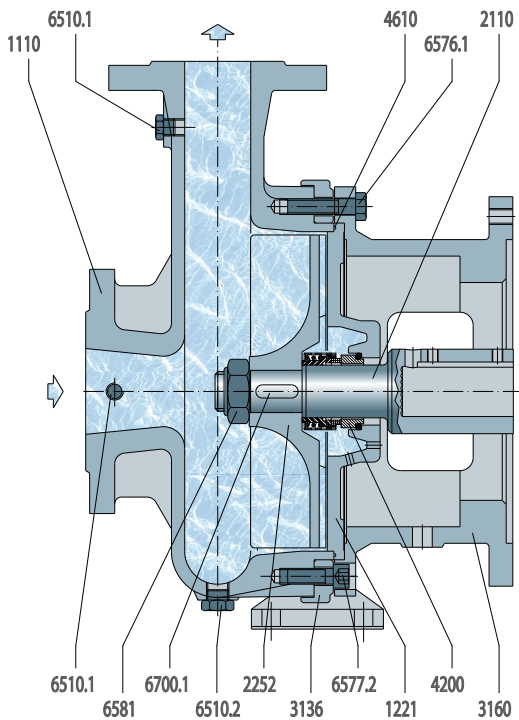


close coupled version  
versione monoblocco



### LONGITUDINAL SECTION

SEZIONE LONGITUDINALE



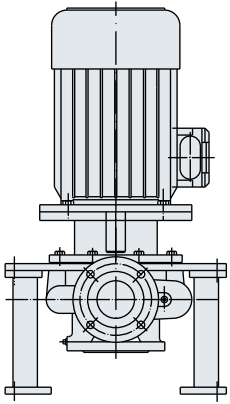
### CLOSE COUPLED VERSION

VERSIONE MONOBLOCCO

Pos	Description <i>Descrizione</i>
1110	Pump casing <i>Corpo pompa</i>
1221	Casing cover <i>Coperchio del corpo</i>
2110	Pump shaft <i>Albero della pompa</i>
2252	Radial impeller open <i>Girante radiale aperta</i>
2540	Deflector <i>Deflettore</i>
2914	Impeller hub cap <i>Ogiva della girante</i>
3017	Ball bearing <i>Cuscinetto a sfere</i>
3130	Shaft sleeve <i>Camicia d'albero</i>
3130	Bearing bracket <i>Supporto doppio</i>
3134	Support foot <i>Piede del supporto</i>
3136	Adjustable foot <i>Piede orientabile</i>
3160	Motor stool <i>Lanterna motore</i>
3260	Bearing cover <i>Coperchio supporto</i>
3854	Oil filler plug <i>Tappo per l'olio</i>
3858	Oil level <i>Spia dell'olio</i>

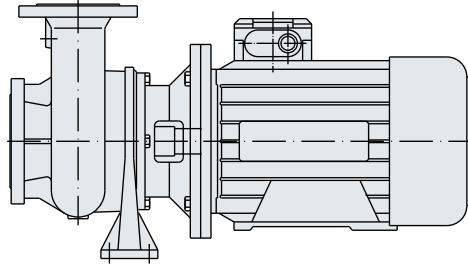
Pos	Description <i>Descrizione</i>
4200	Mechanical seal <i>Tenuta meccanica</i>
4300	Radial shaft seal <i>Anello di tenuta</i>
4610	O-Ring <i>O-Ring</i>
6510.1	Plug <i>Tappo</i>
6510.2	Plug <i>Tappo</i>
6576.1	Screw <i>Vite</i>
6576.2	Screw <i>Vite</i>
6576.3	Screw <i>Vite</i>
6577.1	Screw <i>Vite</i>
6577.2	Screw <i>Vite</i>
6577.3	Screw <i>Vite</i>
6581	Impeller nut <i>Dado girante</i>
6700.1	Key <i>Chiavetta</i>
6700.2	Key <i>Chiavetta</i>

## MAIN VERSIONS PRINCIPALI VERSIONI



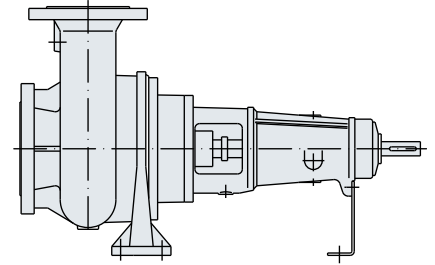
### MCA-VM

vertical close coupled version  
*versione verticale monoblocco*



### MCA-M

close coupled version  
*versione monoblocco*



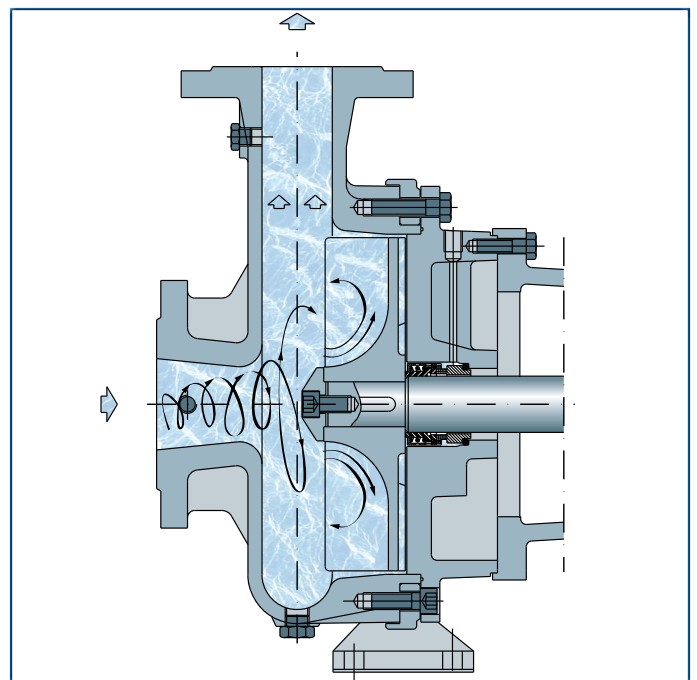
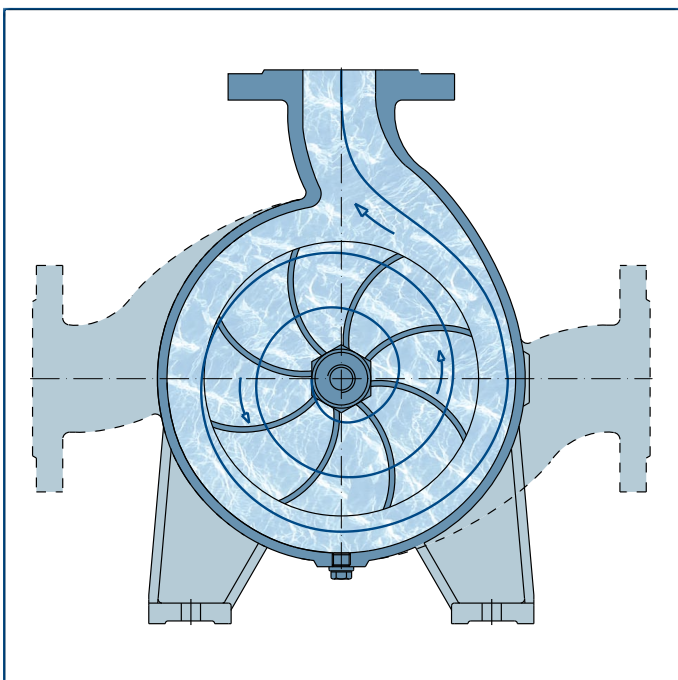
### MCA

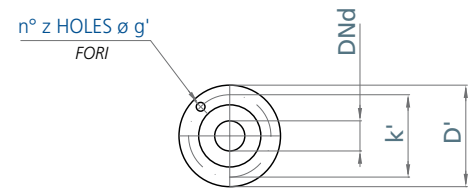
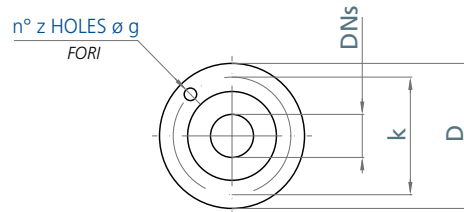
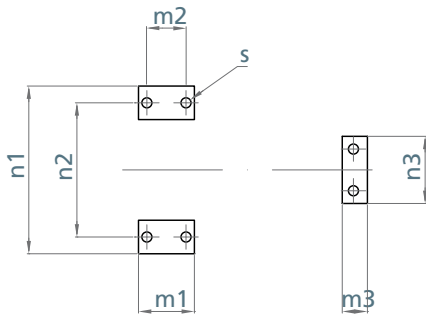
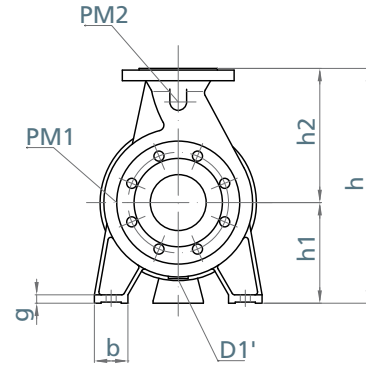
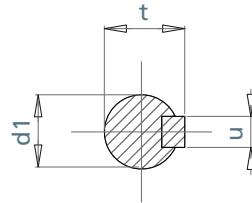
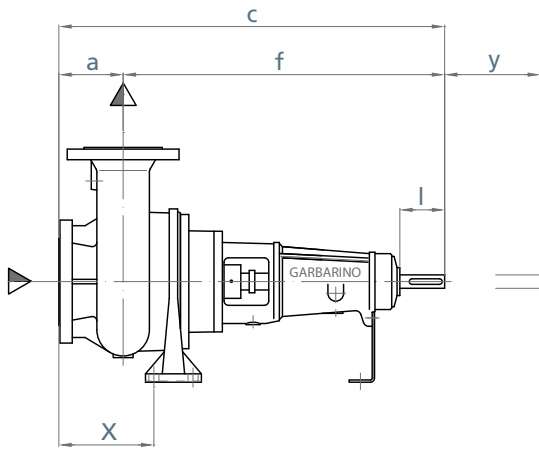
bare shaft version  
*versione ad asse nudo*

## WORKING PRINCIPLE PRINCIPIO DI FUNZIONAMENTO

The special impeller shape and its position in back part of casing operate in such a way that solid particles in suspension flow through the casing without touching the impeller directly.

*La particolare forma della girante e la sua posizione arretrata rispetto alla voluta fanno sì che le particelle solide in sospensione attraversino il corpo senza toccare la girante.*





PUMP DIMENSIONS DIMENSIONI POMPA														PUMP TYPE POMPA TIPO		FLANGES DIMENSIONS DIMENSIONI FLANGE (UNI 2223-2229 PN 10 UNI 2223-2229 PN 16*)						DRAINAGE DRENAGGIO	VACUUM GAUGE MANOVUOTOMETRO	PRESSURE GAUGE MANOMETRO	PUMP WEIGHT PESO POMPA								
a	b	c	f	g	h1	h2	h	m1	m2	m3	n1	n2	n3	l	d1	t	u	s	x	y	DNs	DNd	D	D'	K	K'	z/g	z/g'	D1	PM1	PM2	Kg	
78	60	555	475	15	160	180	340	100	70	50	300	240	150	50	24	27	8	16	82	140	32-200	50	32	165	140	125	100	4/18	4/18	1/4"	1/4"	1/4"	51
90	50	555	465	15	150	190	340	100	70	50	240	190	150	50	24	27	8	14	105	140	50-125	65	50	185	165	145	125	4/18	4/18	1/4"	1/4"	1/4"	47
100	50	630	530	15	150	190	340	100	70	50	240	190	150	50	24	27	8	14	135	140	50-140	65	50	185	165	145	125	4/18	4/18	1/4"	1/4"	1/4"	65
100	50	630	530	15	150	210	360	100	70	50	240	190	150	50	24	27	8	14	135	140	50-160	65	50	185	165	145	125	4/18	4/18	1/4"	1/4"	1/4"	70
100	60	750	650	15	180	225	405	100	70	50	300	240	150	80	32	35	10	14	140	140	50-200	65	50	185	165	145	125	4/18	4/18	1/4"	1/4"	1/4"	105
100	60	750	650	15	180	250	430	100	70	50	300	240	150	80	32	35	10	14	140	140	50-250	65	50	185	165	145	125	4/18	4/18	3/8"	1/4"	1/4"	120
105	90	765	660	18	220	310	530	120	90	50	370	290	150	80	32	35	10	18	156	140	50-280	65	50	185	165	145	125	4/18	4/18	3/8"	1/4"	1/4"	135
115	60	660	545	15	180	240	420	100	70	50	300	240	150	50	24	27	8	14	165	140	80-160	100	80	220	200	180	160	8/18	4/18	1/4"	1/4"	1/4"	80
125	60	800	675	15	180	250	430	100	70	50	300	240	150	80	32	35	10	14	190	140	80-200	100	80	220	200	180	160	8/18	4/18	1/4"	1/4"	1/4"	115
125	70	800	675	20	225	300	525	120	80	50	340	270	150	80	32	35	10	18	185	140	80-250	100	80	220	200	180	160	8/18	4/18	3/8"	1/4"	1/4"	130
125	90	800	675	18	220	335	585	120	90	50	370	290	150	80	32	35	10	18	191	140	80-280	100	80	220	200	180	160	8/18	4/18	3/8"	1/4"	1/4"	150
125	80	955	830	20	280	355	635	160	120	50	435	355	150	110	48	51,5	14	18	175	140	80-335	100	80	220	200	180	160	8/18	4/18	3/8"	1/4"	1/4"	245
140	70	825	685	20	225	280	505	120	80	50	340	270	150	80	32	35	10	18	210	140	100-200	125	100	250	220	210	180	8/18	8/18	3/8"	1/4"	1/4"	130
140	70	825	685	20	225	300	525	120	80	50	340	270	150	80	32	35	10	18	210	140	100-250	125	100	250	220	210	180	8/18	8/18	3/8"	1/4"	1/4"	165
140	80	980	840	20	250	355	605	160	120	50	400	315	150	110	48	51,5	14	18	200	140	100-280	125	100	250	220	210	180	8/18	8/18	3/8"	1/4"	1/4"	210
140	80	980	840	20	280	415	695	160	120	50	435	355	150	110	48	51,5	14	18	200	140	100-335	125	100	250	220	210	180	8/18	8/18	3/8"	1/4"	1/4"	260
165	80	875	710	20	280	370	650	160	120	50	400	315	150	80	32	35	10	18	240	100	150-250	200	150	340	285	295	240	8/22	8/22	3/8"	1/4"	1/4"	180
165	80	1030	865	20	280	395	675	160	120	50	435	355	150	110	48	51,5	14	18	250	140	150-280	200	150	340	285	295	240	8/22	8/22	3/8"	1/4"	1/4"	240
165	120	1030	865	24	320	435	755	130	80	50	520	400	150	110	48	51,5	14	18	270	140	150-335	200	150	340	285	295	240	8/22	8/22	3/8"	1/4"	1/4"	315

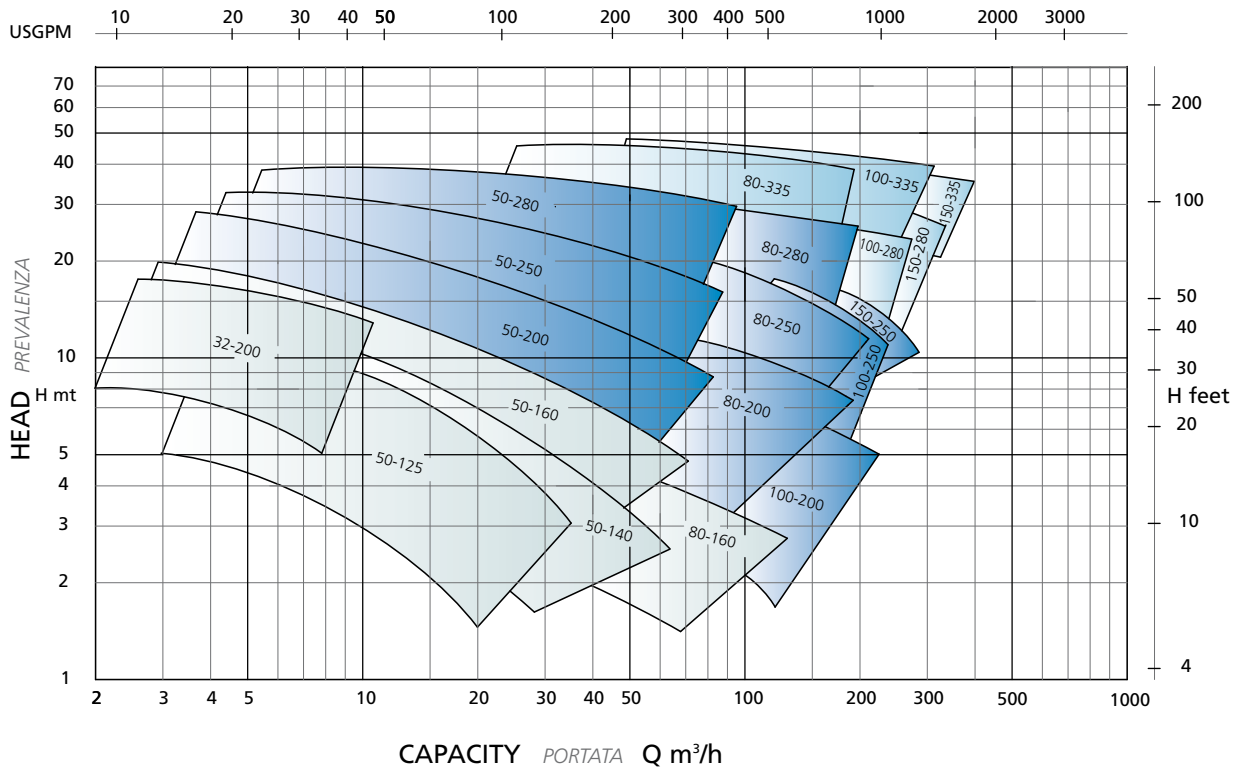
GR.24

GR.32

GR.48

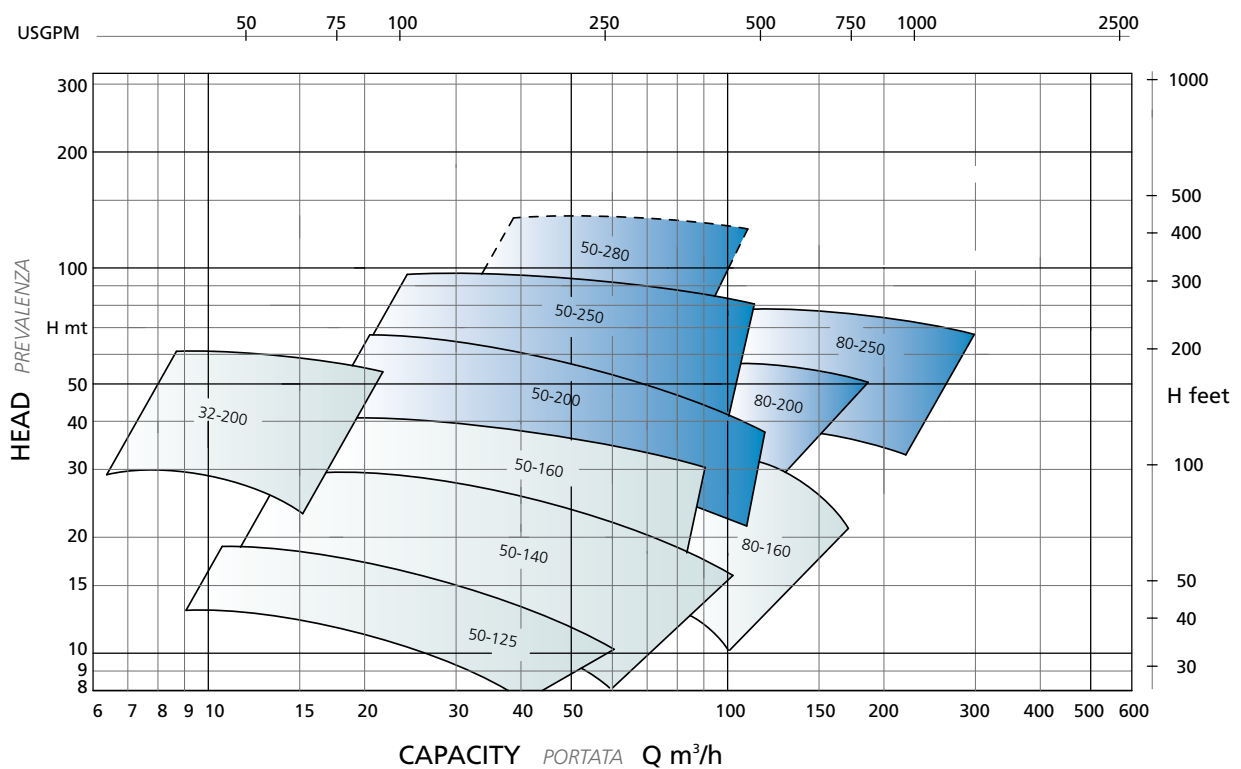
## PERFORMANCES PRESTAZIONI

### 1450 RPM



## PERFORMANCES PRESTAZIONI

### 2900 RPM



Operating diagrams at 60 Hz for MCA pumps also available. Contact our main office.  
 I campi di lavoro delle pompe MCA sono disponibili anche a 60 Hz. Contattare il nostro ufficio.



**ISO 9001**  
Certification No. 38329



ATEX on request



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