

TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



Capacity up to 500 m³/h
Total head from 16 bar



TCH/TCT/TCA/TCD Series Monostage Centrifugal Pumps



Technical information

The new pumps series TCH and derived series of the same family, reflect the design guidelines given by ISO 5199 class II standards: these norms provide for the introduction of new and severe manufacturing standards applicable to the pumps manufactured according to ISO 2858/DIN 24256 standards in order to get an ideal product for the heaviest uses, especially in the petrochemical industry, following the example of API standards.

These pumps are also the results of Pompetravaini's continuous research and development, of the extensive experience acquired over many years with the previous series MCU-CH applied in numerous installations and fields. Finally we believe these pumps reflect the many suggestions and opinions received from our vast clientele and users.

The TCH pump series is an extremely improved product for:

- Toughness
- Reliability
- Durability
- Efficiency
- Safety
- Lower operating costs

The manufacturing program includes three bearing frame sizes of the "Back pull-out" type, the pump casing is of the spiral type with axial suction flange, the impeller is of the radial type with overhang mounting. All our production is guaranteed by certified quality system according to ISO 9001:2000 standards.

- Handling clean or slightly contaminated liquids, hot, superheated, acidic and caustic in chemical industry, petrochemical, pharmaceutical, food, pulp and paper, environmental, steel, textile, etc.
- Capacity up to 500 m³/h and heads to 16 bar.
- Overall dimensions and performances are in accordance to standards ISO 2858/DIN 24256.
- Materials of construction are numerous, from cast iron to hastelloys.
- High hydraulic efficiencies and low NPSH requirements.
- Shaft sealing by packed stuffing box, single or double mechanical seals (ISO 3069/UNI EN 12756) with every installation option per API requirements.
- Pump casing and seal housing can be provided with heating or cooling chambers, as needed.
- Units up to 30 kW size can be close coupled, with the addition of a support lantern, to motors with B5 flange. This monoblock design offers great alignment advantages, simplicity of assembly and guarantee of perfect alignment even after transportation.
- From the TCH series have derived series TCT, TCA and TCD that are designed for very specific pumping applications; all these series utilise many common components.

TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



Construction TCH /1X



Construction TCT /1X



Construction TCD

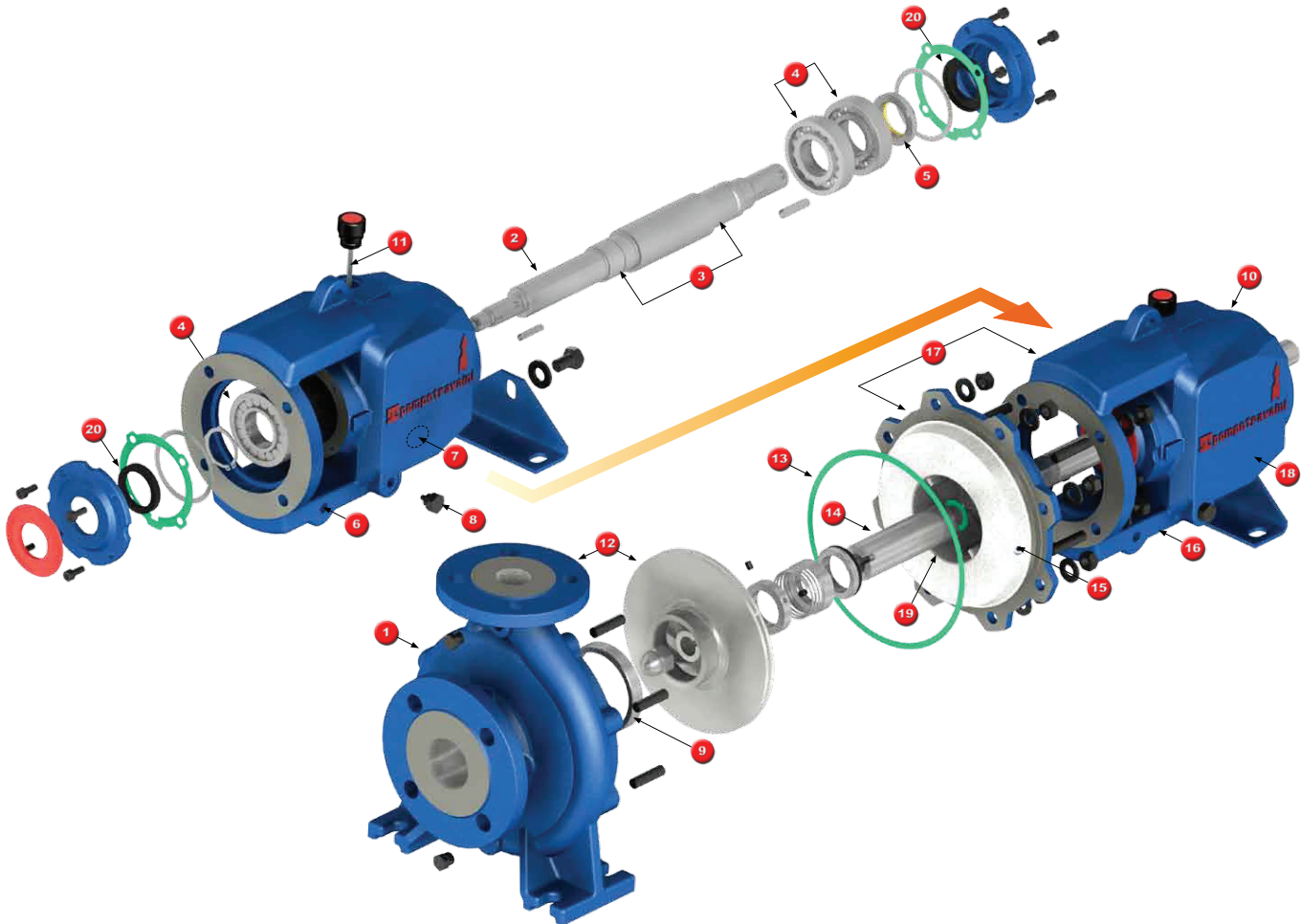


Construction TCA /1X



TCH/TCT/TCA/TCD Series

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Technical specifications according to standards
ISO 5199

- 1 Corrosion allowance in excess of 3 mm
- 2 Oversized shaft minimises shaft deflections (<50 µm) and vibrations thus improves the mechanical seal life
- 3 High bearing span with an optimum value of L^3/D^4
- 4 Bearings are over sized to handle both radial and axial loads with life expectancy over 25000 hours of operation

Dimensions and performances according to standards

ISO 2858 - DIN 24256

- 12 Pump casings and impellers are interchangeable with the previous pump series MCU-CH
- 13 Gasket between pump casing and casing cover is anti "Blow-out" and asbestos free

Mechanical seal dimensions according to standards

ISO 3069 - UNI EN 12756

- 14 Shaft sleeve has minimum diameter so that least expensive mechanical seals and with greater durability can be installed
- 15 Internal seal flushing enhances mechanical seal lubrication
- 16 Ample space is available for installation of various sealing systems

Quality assurance

ISO 9001:2000

- 17 Bearing frame and casing cover are a single part for ease "Back pull-out" disassembly
- 18 Bearing frame with large oil capacity for the lubrication of the submersed bearings
- 19 Wide conical and open seal housing has flow breaking ribs
- 20 Oil seal ring with dual lip seals the oil from the inside and dust from the external environment

Conforming to the Directive by Constructional Safety

ATEX 94/9/CE

Performance test according to standards

ISO 9906

Vibration according to standards

ISO 10816-3

Balancing according to standards

ISO 1940

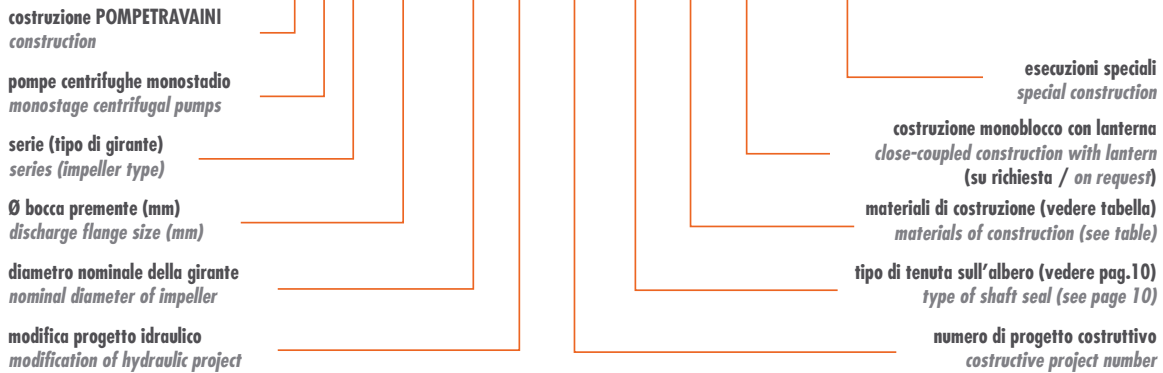
TCH/TCT/TCA/TCD Series

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Example for model designation

T C H 32 - 160 A / 1X - C / A3 - M / U2 - Z ...



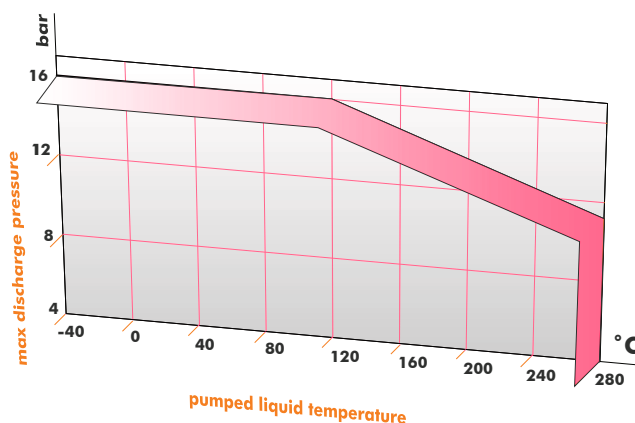
Standard materials of construction

VDMA	Descrizione Description	GS	RA	A3	HC	DU
102	Corpo pompa Pump casing	Ghisa sferoidale Ductile iron		Acciaio inox AISI 316 AISI 316 Stainless steel ASTM - CF8M	Hastelloy C	ASTM-CN7M
135	Piastre di usura Wear plates	-	Ghisa Cast iron			
161	Coperchio corpo Casing cover	Ghisa sferoidale Ductile iron				
210	Albero Shaft					Incoloy 825
230	Girante Impeller	Ghisa Cast iron				ASTM-CN7M
330	Supporto Bearing housing					
524	Bussola albero Shaft sleeve	Acciaio inox AISI 316 / AISI 316 Stainless steel ASTM - CF8M			Hastelloy C	Incoloy 825

Per le pompe serie TCT e TCA la girante VDMA 230 è in materiale Acciaio inox AISI 316 anche nelle costruzioni GS e F.
For pumps series TCT and TCA the material of impeller VDMA 230 is AISI 316 Stainless steel for GS and F constructions.

MATERIALI SPECIALI SU RICHIESTA - Tabella indicativa: per informazioni più dettagliate consultare il ns. Ufficio Commerciale.
SPECIAL MATERIALS AVAILABLE UPON REQUEST - Indicative table: for further information pls consult our Sales Office.

Pressure and temperature limitations



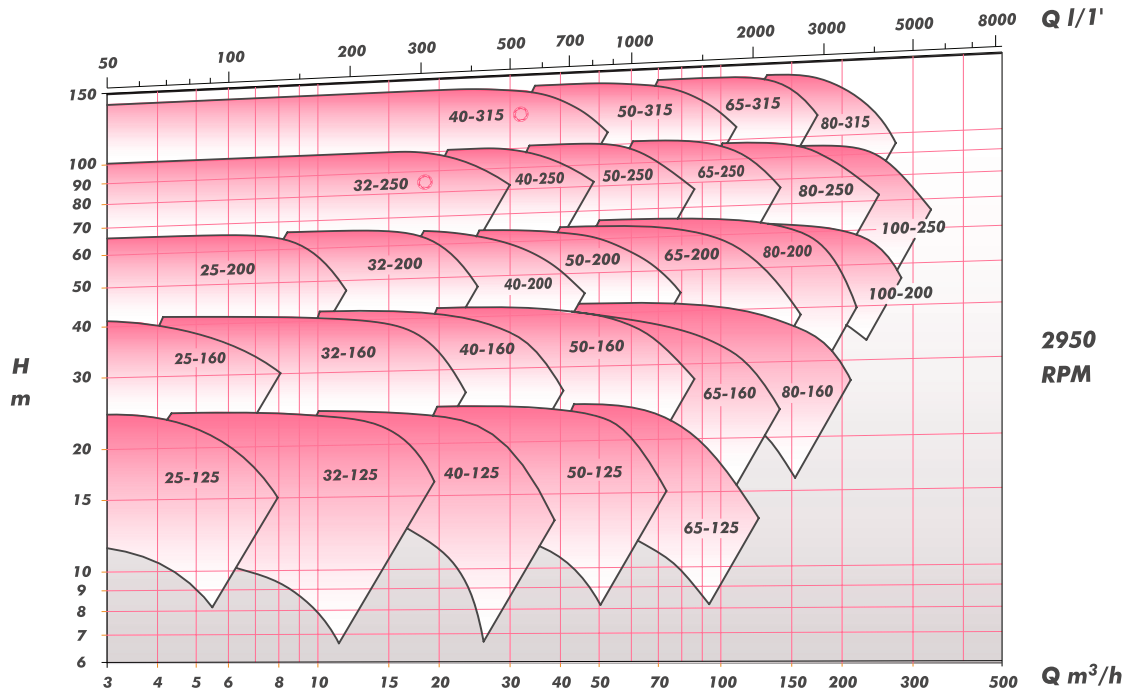
Limitations valid for constructions A3, HC, DU.
For GS and RA constructions the minimum temperature limit is -20°C.
Values not valid for pumping of overheated water and similar liquids.

TCH/TCT/TCA/TCD Series

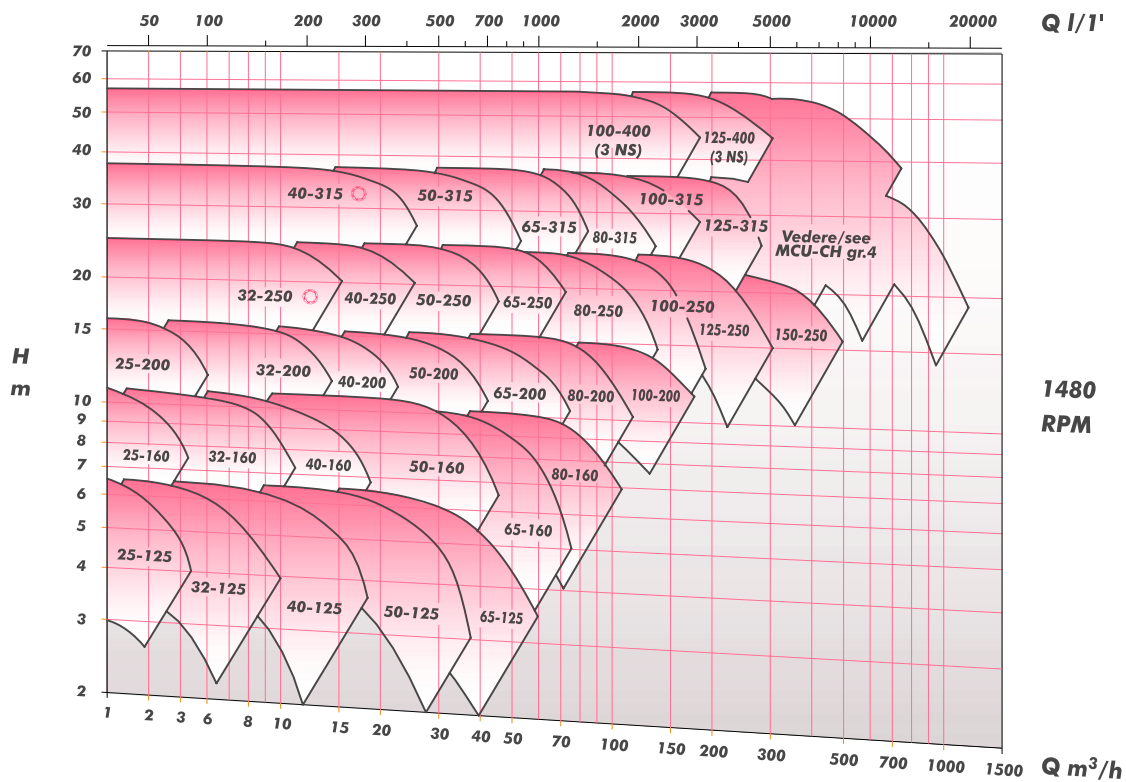
Monostage Centrifugal Pumps



Performance fields closed impellar



Attualmente non disponibili / Actually not available



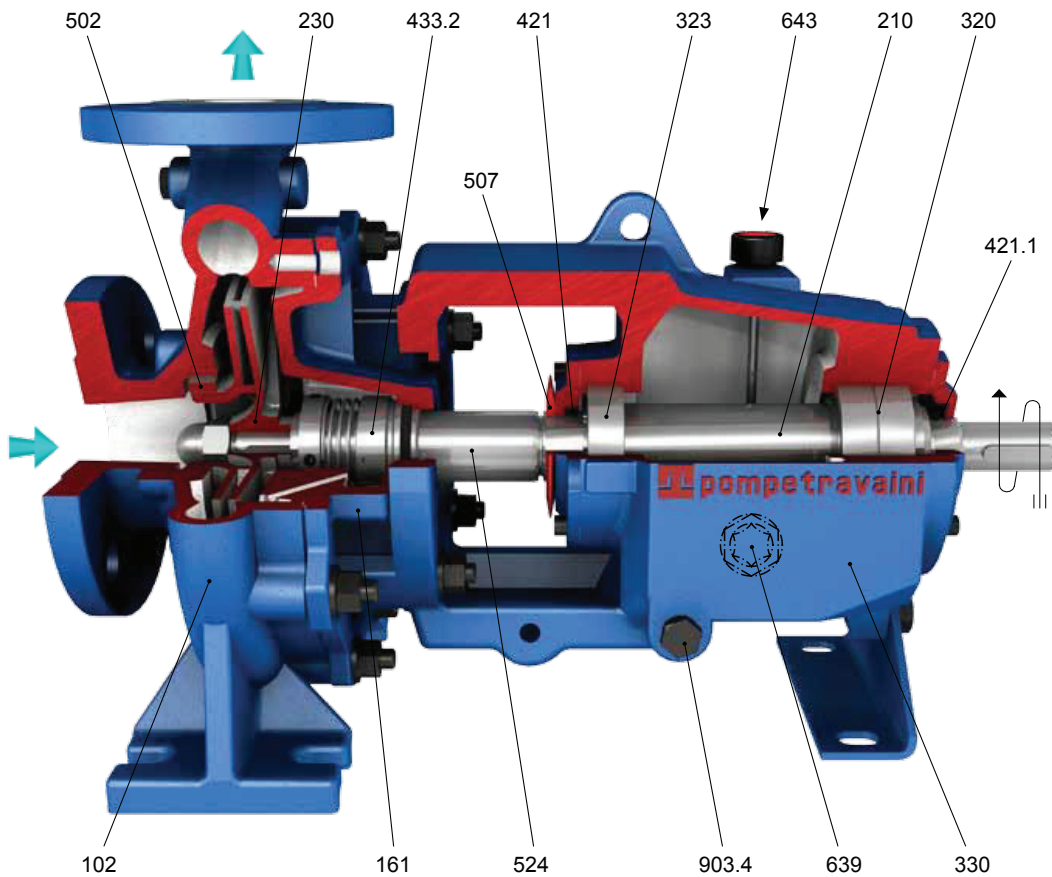
Not binding data refers to water at room temperature. For specific performance curves contact Pompetravaini.

TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



Typical cross section



Construction with bearing designed to ISO 5199 standards and with conical mechanical seal chamber (design .../1X-C = standard for group 3)

VDMA	DESIGNATION
102	Pump casing
161	Casing cover
165	Cooling cover
210	Shaft
230	Impeller
320	Ball bearing
323	Roller bearing
330	Bearing housing
421	Radial shaft seal
421.1	Radial shaft seal
433.2	Mechanical seal
471	Mechanical seal cover
502	Wear ring
507	Thrower
524	Shaft sleeve
639	Sight gauge (optional)
643	Oil filling plug
680	Cooling chamber
903.4	Oil drain plug



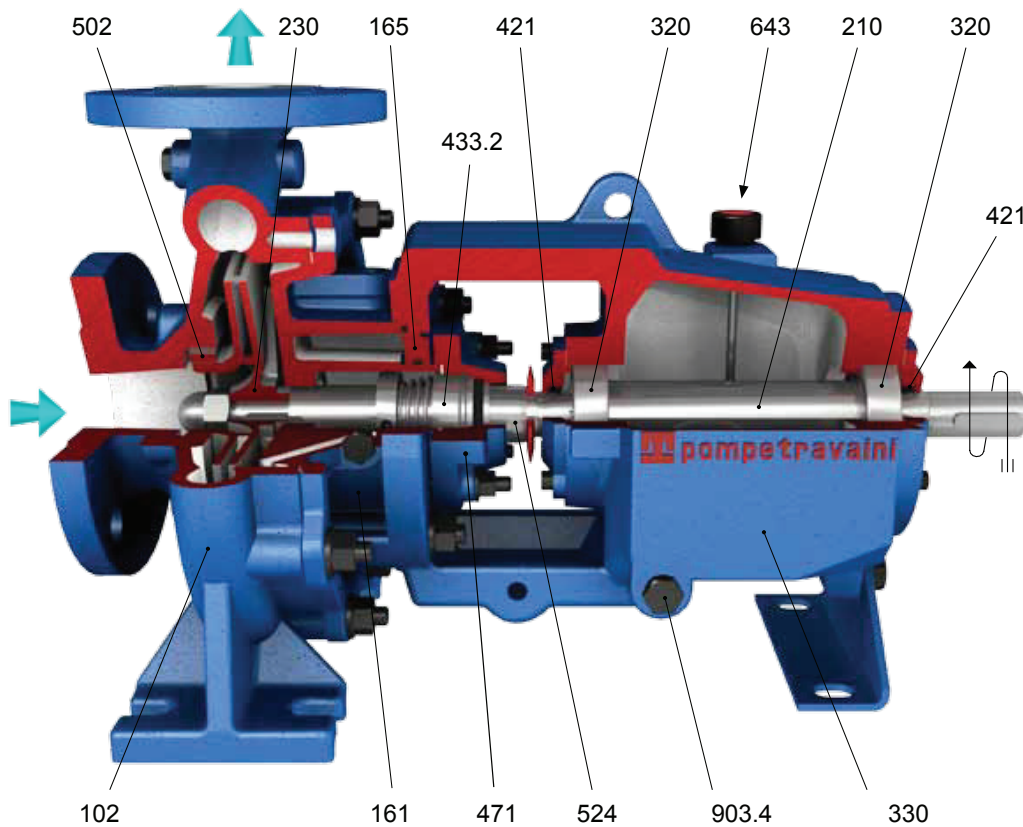
Typical closed impeller

TCH/TCT/TCA/TCD Series

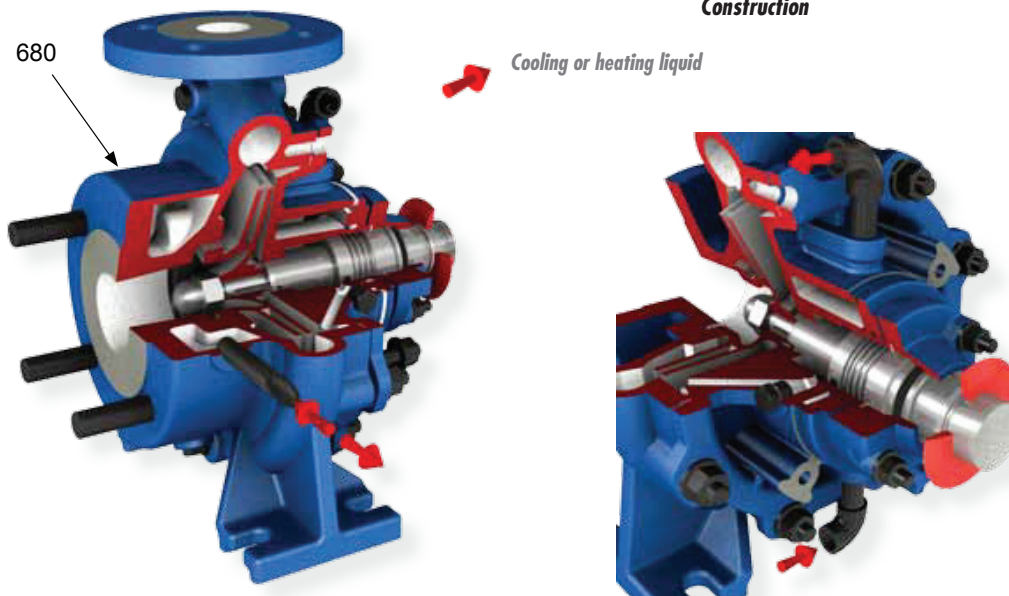
Monostage Centrifugal Pumps



*For lighter duty applications it is possible to have the pump with two ball bearings and smaller shaft diameter that nevertheless, still guarantees reliability and toughness.
This type of rotor support (shaft and bearings) is equal and interchangeable with the previous series MCU-CH and the pump has all the benefits from the TCH series with a lower initial cost (available for group 1 and 2 only).
The figure below is the typical pump with single mechanical seal and cylindrical chamber (design.../1-R).*



Construction



Construction with heated or cooled pump casing and mechanical seal chamber (design .../1X-R/.../T-U2)

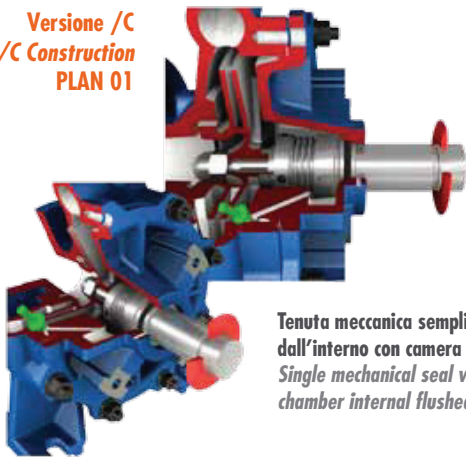
TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



TCH pump series and derived series can be fitted with any type of mechanical seal that is unified to the ISO 3069/UNI EN 12756 standards. Single mechanical seals, double mechanical seals in tandem or back to back arrangements can be fitted with flushing systems to API standards. The pump bearing frame offers versatility and plenty of space to also allow fitting special types of mechanical seals that may not have unified dimensions, i.e.: cartridge type seals.

Versione /C
/C Construction
PLAN 01



Tenuta meccanica semplice flussata dall'interno con camera conica
Single mechanical seal with conical chamber internal flushed

Versione /CD
/CD Construction
PLAN 53-54



Tenuta meccanica a cartuccia con camera conica
Mechanical cartridge seal conical chamber internal flushed

Versione /R
/R Construction
PLAN 01



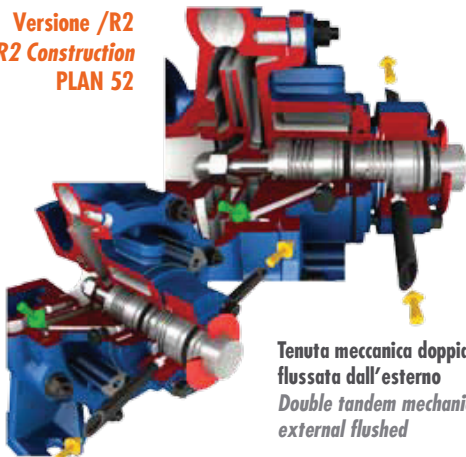
Tenuta meccanica semplice flussata dall'interno con camera cilindrica
Single mechanical seal with cylindrical chamber internal flushed

Versione /RR
/RR Construction
PLAN 54



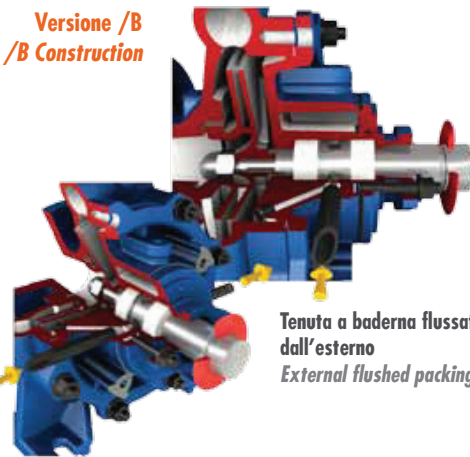
Tenuta meccanica doppia contrapposta flussata dall'esterno
Double back to back mechanical seal external flushed

Versione /R2
/R2 Construction
PLAN 52



Tenuta meccanica doppia in serie flussata dall'esterno
Double tandem mechanical seal external flushed

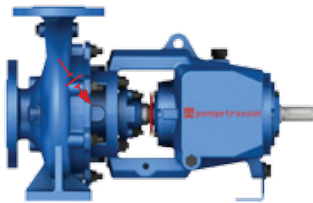
Versione /B
/B Construction



Tenuta a baderna flussata dall'esterno
External flushed packing seal

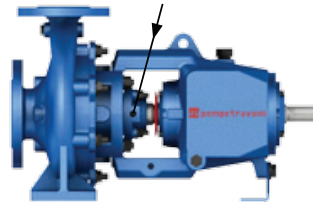
TCH/TCT/TCA/TCD Series

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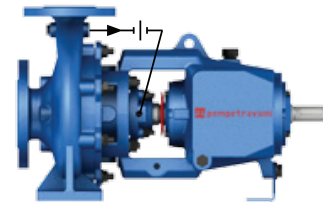
PLAN 01

Circolazione interna dalla mandata della pompa.
Internal circulation from pump discharge to seal.



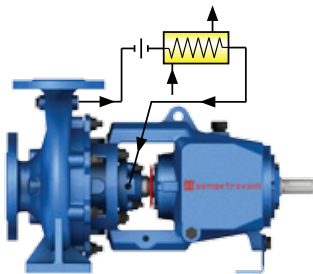
PLAN 02

Camera tenuta "dead-end" senza circolazione di fluido, camicia di raffreddamento, bussola di strozzamento e connessioni tappate per eventuale circolazione.
Dead-end seal box without circulation of fluid, cooling chamber, throat bushing and plugged connections for eventual circulation.



PLAN 11

Circolazione dal corpo pompa attraverso un orifizio.
Circulation from pump casing thru orifice to seal.

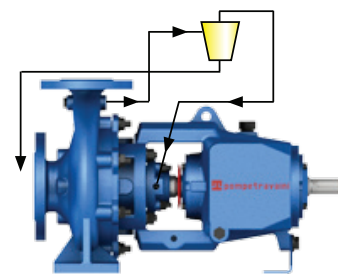


PLAN 21

Circolazione dal corpo pompa attraverso un orifizio ed uno scambiatore di calore.
Circulation from pump casing thru orifice and heat exchanger to seal.

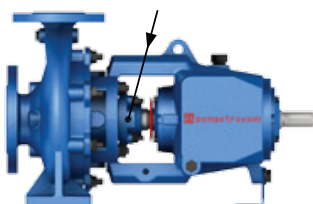
PLAN 01+21
Circolazione di fluido pulito.
Clean pumpage.

PLAN 31+62
Circolazione di fluido sporco o speciale.
Dirty or special pumpage.



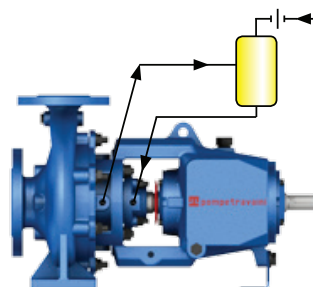
PLAN 31

Circolazione dal corpo pompa attraverso un ciclone separatore.
Circulation from pump casing thru cyclone separator.



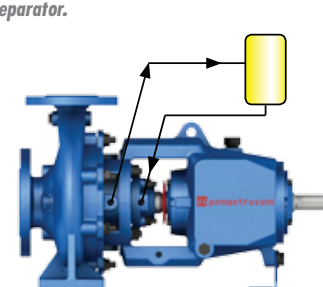
PLAN 32

Iniezione dall'esterno sulla tenuta di un fluido freddo e pulito.
Injection to seal from external source of cool and clean fluid.



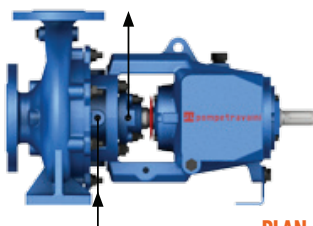
PLAN 52

Serbatoio esterno di fluido non pressurizzato. Circolazione naturale a termosifone o forzata secondo i casi. E' richiesta la tenuta meccanica doppia in serie.
External reservoir of non pressurized fluid. Thermosyphon or forced circulation. It is required double tandem mechanical seal.



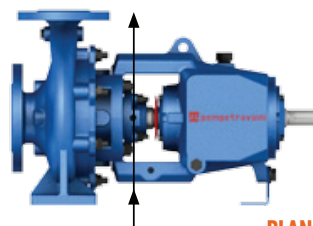
PLAN 53

Serbatoio esterno di fluido pressurizzato. Circolazione naturale a termosifone o forzata secondo i casi. E' richiesta la tenuta meccanica doppia contrapposta.
External reservoir of pressurized fluid. Thermosyphon or forced circulation. It is required double back to back mechanical seal.



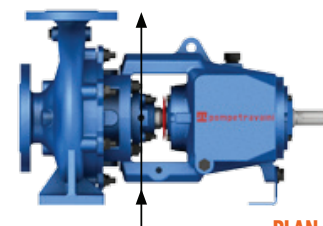
PLAN 54

Circolazione di un fluido pulito da un sistema esterno. Tenuta meccanica doppia contrapposta.
Circulation of clean fluid from an external system. Double back to back mechanical seal.



PLAN 61

Connessioni tappate per eventuale Quench posteriore con fluido esterno.
Plugged connections for eventual rear Quench with external fluid.



PLAN 62

Quench posteriore con un fluido esterno.
Rear quench with external fluid.

Oltre ai flussaggi illustrati sono possibili varianti ed applicazioni diverse adatte a soddisfare esigenze particolari.
Besides the showed flushings are possible different variants and appliances suitable to satisfy particular demands.

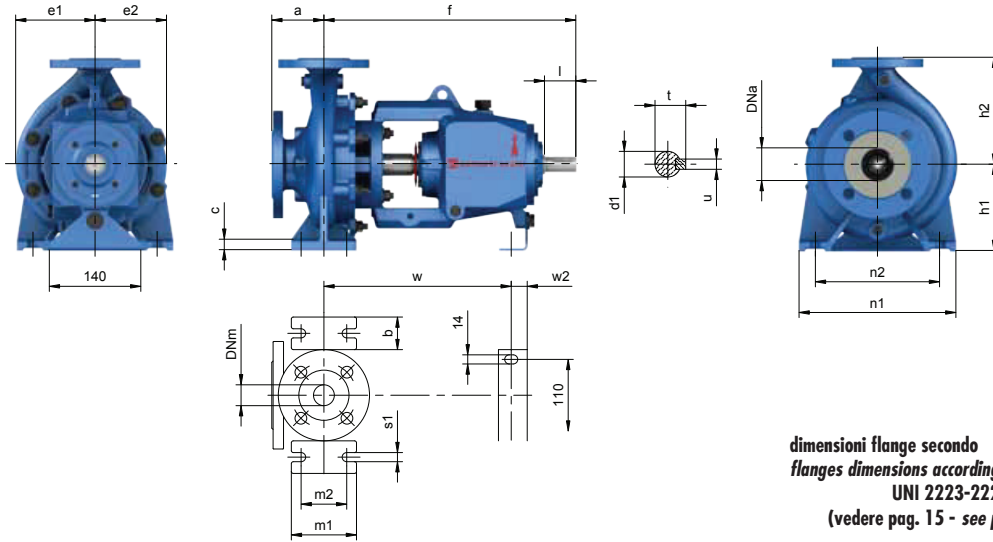
TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



Versione ad ASSE NUDO
Unificata secondo ISO 2858

BARESHAF construction
According to ISO 2858 standards



dimensioni flange secondo
flanges dimensions according to
UNI 2223-2229 PN16
(vedere pag. 15 - see page 15)

Disegno schematico. Dimensioni in mm con tolleranze secondo EN 735-1995. Pesì indicativi in Kg, riferiti a pompe in ghisa esduso motore, non impegnativi.
Schematic drawing. Dimensions in mm with tolerances to EN 735-1995 standards. Weights in Kgs, referred to pumps in cast iron without motor, not certified.



Attualmente non disponibili/Actually not available

POMPA TIPO Pump type	dimensioni costruttive ASSE NUDO											BARESHAF construction dimensions										peso weight	
	gr.	DNa	DNm	a	f	h1	h2	b	c	m1	m2	n1	n2	s1	w	w2	d1	l	t	u	e1		e2
25-125	1	40	25	80	385	112	140	50	15	100	70	190	140	14	285	25	24	50	27	8	95	90	32
25-160	1	40	25	80	385	132	160	50	16	100	70	240	190	14	285	25	24	50	27	8	110	108	36
25-200	1	40	25	80	385	160	180	50	16	100	70	240	190	14	285	25	24	50	27	8	133	128	40
32-125	1	50	32	80	385	112	140	50	15	100	70	190	140	14	285	25	24	50	27	8	105	91	35
32-160	1	50	32	80	385	132	160	50	16	100	70	240	190	14	285	25	24	50	27	8	125	110	38
32-200	1	50	32	80	385	160	180	50	16	100	70	240	190	14	285	25	24	50	27	8	140	130	44
32-250	2	50	32	100	500	180	225	65	18	125	95	320	250	14	370	25	32	80	35	10	166	162	80
40-125	1	65	40	80	385	112	140	50	15	100	70	210	160	14	285	25	24	50	27	8	115	100	36
40-160	1	65	40	80	385	132	160	50	16	100	70	240	190	14	285	25	24	50	27	8	130	115	40
40-200	1	65	40	100	385	160	180	50	16	100	70	265	212	14	285	25	24	50	27	8	146	135	46
40-250	2	65	40	100	500	180	225	65	18	125	95	320	250	14	370	25	32	80	35	10	176	163	82
40-315	2	65	40	125	500	200	250	65	18	125	95	345	280	14	370	25	32	80	35	10	205	200	86
50-125	1	80	50	100	385	132	160	50	16	100	70	240	190	14	285	25	24	50	27	8	130	110	40
50-160	1	80	50	100	385	160	180	50	16	100	70	265	212	14	285	25	24	50	27	8	147	125	45
50-200	1	80	50	100	385	160	200	50	16	100	70	265	212	14	285	25	24	50	27	8	161	146	47
50-250	2	80	50	125	500	180	225	65	18	125	95	320	250	14	370	25	32	80	35	10	183	169	85
50-315	2	80	50	125	500	225	280	65	18	125	95	345	280	14	370	25	32	80	35	10	210	197	82
65-125	1	100	65	100	385	160	180	65	16	125	95	280	212	14	285	25	24	50	27	8	145	117	70
65-160	2	100	65	100	500	160	200	65	16	125	95	280	212	14	370	25	32	80	35	10	160	130	73
65-200	2	100	65	100	500	180	225	65	18	125	95	320	250	14	370	25	32	80	35	10	174	152	80
65-250	2	100	65	125	500	200	250	80	20	160	120	360	280	18	370	25	32	80	35	10	195	175	85
65-315	3	100	65	125	530	225	280	80	20	160	120	400	315	18	370	35	42	110	45	12	226	209	141
80-160	2	125	80	125	500	180	225	65	16	125	95	320	250	14	370	35	32	80	35	10	186	142	78
80-200	2	125	80	125	500	180	250	65	18	125	95	345	280	14	370	35	32	80	35	10	188	158	93
80-250	2	125	80	125	500	225	280	80	20	160	120	400	315	18	370	35	32	80	35	10	225	185	108
80-315	3	125	80	125	530	250	315	80	20	160	120	400	315	18	370	35	42	110	45	12	232	210	142
100-200	2	125	100	125	500	200	280	80	20	160	120	360	280	18	370	35	32	80	35	10	211	170	99
100-250	3	125	100	140	530	225	280	80	20	160	120	400	315	18	370	35	42	110	45	12	215	183	135
100-315	3	125	100	140	530	250	315	80	20	160	120	400	315	18	370	35	42	110	45	12	250	225	157
100-400	3 NS	125	100	140	530	280	355	80	22	200	150	500	400	22	370	35	42	110	45	12	288	265	205
125-250	3	150	125	140	530	250	355	80	20	160	120	400	315	18	370	35	42	110	45	12	245	200	147
125-315	3	150	125	140	530	280	355	100	22	200	150	500	400	22	370	35	42	110	45	12	270	230	183
125-400	3 NS	150	125	140	530	315	400	100	22	200	150	500	400	22	370	35	42	110	45	12	306	275	215
150-250	3	200	150	160	530	280	375	100	22	200	150	500	400	22	370	35	42	110	45	12	300	240	182

Per le caratteristiche costruttive delle pompe gr. 3 NS vedere il catalogo MCU-CH. For technical specifications of gr. 3 NS pumps see MCU-CH catalog.

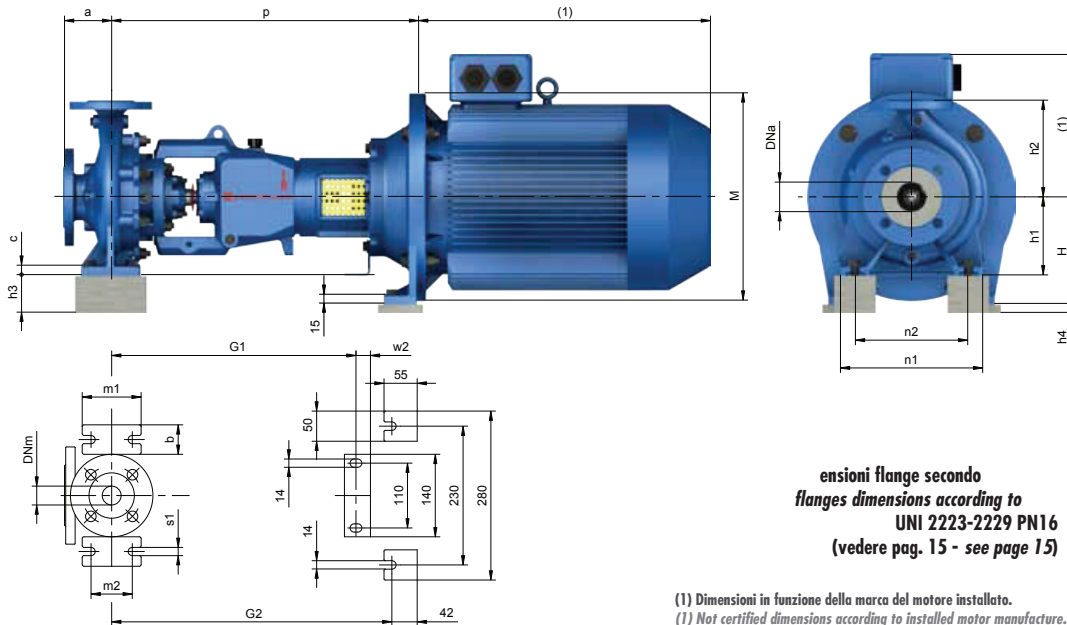
TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



Versione MONOBLOCCO (TCH /M)

CLOSE-COUPLED construction (TCH /M)



(h3-h4) spessori per allineamento motore-pompa esudati da fornitura. (h3-h4) raising pads motor-pump alignment are not supplied by Pompetravaini.

POMPA TIPO Pump type	motore 80-90				motore 100-112				motore 132				motore 160-180				motore 200					
	gr.	p	G1	peso weight	p	G1	h3	peso weight	p	G1	G2	h3	peso weight	H	h3	h4	p	G2	peso weight	p	G2	peso weight
25-125	1	446	410	38	471	410	20	42	476	410		48	45	180	68	-	516	477	51			
25-160	1	446	410	42	471	410	-	46	476	410		28	49	180	48	-	516	477	55			
25-200	1	446	410	46	471	410	-	50	476	410		-	53	180	20	-	516	477	59			
32-125	1	446	410	41	471	410	20	45	476	410		48	48	180	68	-	516	477	54			
32-160	1	446	410	44	471	410	-	48	476	410		28	51	180	48	-	516	477	57			
32-200	1	446	410	50	471	410	-	54	476	410		-	57	180	20	-	516	477	63			
32-250	2				580	540	-	90	601	562		-	93	200	20	-	630	585	103			
40-125	1	446	410	40	471	410	20	44	476	410		48	47	180	68	-	516	477	55			
40-160	1	446	410	46	471	410	-	50	476	410		28	53	180	48	-	516	477	59			
40-200	1	446	410	52	471	410	-	56	476	410		-	61	180	20	-	516	477	75			
40-250	2				580	540	-	92	601	562		-	95	200	20	-	630	585	105			
40-315	2				580	540	-	96	601	562		-	99	200	-	-	630	585	109			
50-125	1	446	410	46	471	410	-	50	476	410		28	53	180	48	-	516	477	59			
50-160	1	446	410	51	471	410	-	55	476	410		-	58	180	20	-	516	477	64			
50-200	1	446	410	53	471	410	-	57	476	410		-	60	180	20	-	516	477	66			
50-250	2				580	540	-	95	601	562		-	98	200	20	-	630	585	108			
50-315	2				580	540	-	92	601	562		-	95	200	-	25	630	585	105			
65-125	1				471	410	-	80	476	410		-	83	180	20	-	516	477	89			
65-160	2				580	540	-	83	601	562		-	86	200	40	-	630	585	96			
65-200	2				580	540	-	90	601	562		-	93	200	20	-	630	585	103			
65-250	2				580	540	-	95	601	562		-	98	200	-	-	630	585	108			
65-315	3				596	370	-	154	617		573	-	157	-	-	-	646	573	174	649	573	180
80-160	2				580	540	-	88	601	562		-	91	200	20	-	630	585	101			
80-200	2				580	540	-	103	601	562		-	106	200	20	-	630	585	116			
80-250	2				580	540	-	118	601	562		-	121	200	-	25	630	585	131			
80-315	3				596	370	-	155	617		573	-	158	-	-	-	646	573	175	649	573	181
100-200	2				580	540	-	109	601	562		-	112	200	-	-	630	585	122			
100-250	3				596	370	-	149	617		573	-	151	-	-	-	646	573	168	649	573	175
100-315	3				596	370	-	174	617		573	-	177	-	-	-	646	573	194	649	573	200
100-400	3 NS																					
125-250	3				596	370	-	161	617		573	-	163	-	-	-	646	573	180	649	573	187
125-315	3				596	370	-	199	617		573	-	202	-	-	-	646	573	219	649	573	225
125-400	3 NS																					
150-250	3				596	370	-	196	617		573	-	198	-	-	-	646	573	215	650	574	222

Per le caratteristiche costruttive delle pompe gr. 3 NS vedere il catalogo MCU-CH. For technical specifications of gr. 3 NS pumps see MCU-CH catalog.

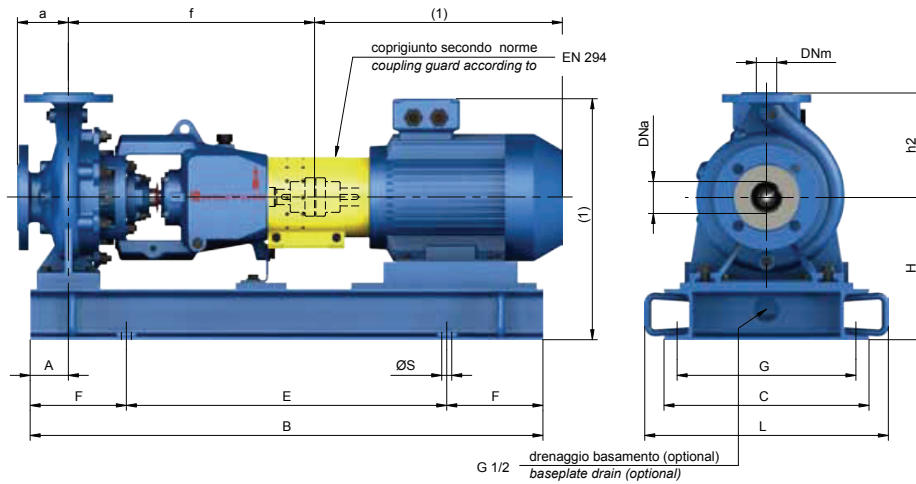
TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



Versione ACCOPPIATA (BASE-GIUNTO)

COUPLED construction (BASEPLATE-COUPLING)



Disegno schematico. Dimensioni in mm con tolleranze secondo EN 735-1995. Pesì indicativi in Kg, riferiti a pompe in ghisa esduso motore, non impegnativi.
Schematic drawing. Dimensions in mm with tolerances to EN 735-1995 standards. Weights in Kgs, referred to pumps in cast iron without motor, not certified.

Attualmente non disponibili / Actually not available

(1) Dimensioni in funzione della marca del motore installato.
(1) Not certified dimensions according to installed motor manufacture.

POMPA TIPO Pump type	dimensioni - dimensions							MOTORE ELETTRICO - ELECTRIC MOTOR																	
	gr.	DN α	DNm	a	f	h2	A	80			90S/90L			100L			112M			132S/132M			160M/160L		
								N°	H	peso weight	N°	H	peso weight	N°	H	peso weight	N°	H	peso weight	N°	H	peso weight	N°	H	peso weight
25-125	1	40	25	80	385	140	60	C01	202	65	C01	202	64,5	C01	202	63,5	C01	202	62	C03	222	80			
25-160	1	40	25	80	385	160	60	C01	222	69	C01	222	68,5	C01	222	69	C01	222	68,5	C03	222	81			
25-200	1	40	25	80	385	180	60	C01	250	73	C01	250	72,5	C01	250	73	C01	250	70	C03	250	85			
32-125	1	50	32	80	385	140	60	C01	202	68	C01	202	67,5	C01	202	66,5	C01	202	65	C03	222	83			
32-160	1	50	32	80	385	160	60	C01	222	71	C01	222	70,5	C01	222	71	C01	222	70,5	C03	222	83			
32-200	1	50	32	80	385	180	60	C01	250	75,5	C01	250	77	C01	250	76	C01	250	77	C03	250	93	C03	250	89
32-250	2	50	32	100	500	225	75				C03	270	127	C03	270	127	C03	270	128	C03	270	128	C05	270	132
40-125	1	65	40	80	385	140	60	C01	202	69	C01	202	68,5	C01	202	67,5	C01	202	66	C03	222	84	C03	250	84
40-160	1	65	40	80	385	160	60	C01	222	73	C01	222	72,5	C01	222	73	C01	222	72,5	C03	222	87	C03	250	90
40-200	1	65	40	100	385	180	60	C01	250	78	C01	250	79	C01	250	79	C01	250	79	C03	250	95	C03	250	91
40-250	2	65	40	100	500	225	75				C03	270	129	C03	270	129	C03	270	130	C03	270	130	C05	270	134
40-315	2	65	40	125	500	250	75				C03	290	133	C03	290	133	C03	290	134	C03	290	134	C05	290	138
50-125	1	80	50	100	385	160	60	C01	222	73	C01	222	72,5	C01	222	73	C01	222	72,5	C03	222	87	C03	250	90
50-160	1	80	50	100	385	180	60	C01	250	77	C01	250	78	C01	250	78	C01	250	78	C03	250	94	C03	250	90
50-200	1	80	50	100	385	200	60	C01	250	79	C01	250	80	C01	250	80	C01	250	80	C03	250	96	C03	250	92
50-250	2	80	50	125	500	225	75				C03	270	131	C03	270	131	C03	270	133	C03	270	133	C05	270	139
50-315	2	80	50	125	500	280	75				C03	315	132	C03	315	131	C03	315	131	C03	315	130	C05	315	138
65-125	1	100	65	100	385	180	75	C03	250	117	C03	250	117	C03	250	117	C03	250	118	C03	250	115	C03	250	115
65-160	2	100	65	100	500	200	75				C03	250	120	C03	250	121	C03	250	121	C03	250	122	C05	250	121
65-200	2	100	65	100	500	225	75				C03	270	135	C03	270	136	C03	270	136	C03	270	136	C05	270	142
65-250	2	100	65	125	500	250	90				C05	290	139	C05	290	139	C05	290	140	C05	290	140	C05	290	141
65-315	3	100	65	125	530	280	90												C05	315	205	C05	315	200	
80-160	2	125	80	125	500	225	75				C03	270	129	C03	270	125	C03	270	122	C05	270	133			
80-200	2	125	80	125	500	250	75				C03	270	141	C03	270	140	C03	270	140	C05	270	148			
80-250	2	125	80	125	500	280	90												C05	315	163	C05	315	162	
80-315	3	125	80	125	530	315	90												C05	340	210	C05	340	210	
100-200	2	125	100	125	500	280	90				C05	290	165	C05	290	164	C05	290	164	C05	290	163			
100-250	3	125	100	140	530	280	90												C05	315	200	C05	315	195	
100-315	3	125	100	140	530	315	90												C05	340	225	C05	340	225	
100-400	3 NS	125	100	140	530	355	110												C13	413	332	C13	413	331	
125-250	3	150	125	140	530	355	90												C05	340	215	C05	340	215	
125-315	3	150	125	140	530	355	110															C13	413	340	
125-400	3 NS	150	125	140	530	400	110															C13	448	342	
150-250	3	200	150	160	530	375	110															C13	413	340	

Per le caratteristiche costruttive delle pompe gr. 3 NS vedere il catalogo MCU-CH. For technical specifications of gr. 3 NS pumps see MCU-CH catalog.

TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



motori elettrici / electric motors

Grandezza Frame size IEC	Giri/min RPM 960		Giri/min RPM 1450		Giri/min RPM 2900	
	kW	HP	kW	HP	kW	HP
80			0.55 - 0.75	0.7 - 1	0.75 - 1.1	1 - 1.5
90S	0.75	1	1.1	1.5	1.5	2
90L	1.1	1.5	1.5	2	2.2	3
100L	1.5	2	2.2	3	3	4
			3	4		
112M	2.2	3	4	5.5	4	5.5
132S	3	4	5.5	7.5	5.5 - 7.5	7.5 - 10
132M	4 - 5.5	5.5 - 7.5	7.5	10	-	-
160M	7.5	10	11	15	11 - 15	15 - 20
160L	11	15	15	20	18.5	25
180M	-	-	18.5	25	22	30
180L	15	20	22	30	-	-
200L	18.5 - 22	25 - 30	30	40	30 - 37	40 - 50
225S	-	-	37	50	-	-
225M	30	40	45	60	45	60
250M	37	50	55	75	55	75
280S	45	60	75	100	75	100
280M	55	75	90	125	90	125
315S	75	100	110	150	110	150
315M	90	125	132	180	132	180

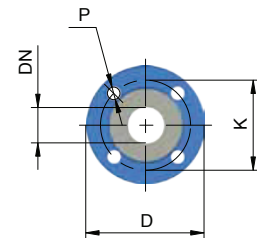
dimensioni BASAMENTO / BASE PLATES dimensions

N°	B	C	E	F	L	G	ØS	N° fori holes
C01	800	320	500	150	380	280	16	4
C03	1000	385	600	200	445	345	16	4
C05	1200	420	800	200	480	380	16	4
C11	1350	500	950	200	570	452	18	4
C13	1650	640	1050	300	710	592	18	4

flange / flanges

DNa - DNm	D	K	P	N° fori holes
25	115	85	14	4
32	140	100	18	4
40	150	110	18	4
50	165	125	18	4
65	185	145	18	4
80	200	160	18	8
100	220	180	18	8
125	250	210	18	8
150	285	240	22	8
200	340	295	22	12

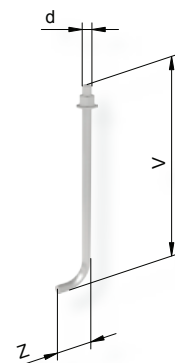
MOTORE ELETTRICO - ELECTRIC MOTOR																	
180M/180L			200L			225S/225M			250M			280S/280M			315S/315M		
N°	H	peso weight	N°	H	peso weight	N°	H	peso weight	N°	H	peso weight	N°	H	peso weight	N°	H	peso weight
C05	270	130															
C05	270	97															
C05	270	131															
C05	290	136	C11	330	176												
C05	270	96															
C05	270	98	C11	330	137												
C05	270	136	C11	330	138	C11	355	140	C13	383	171	C13	413	175			
C05	315	138	C11	355	176	C11	355	172	C13	383	206	C13	413	208			
C05	270	127	C11	330	198												
C05	270	139	C11	330	173	C11	355	173	C13	383	203	C13	413	204			
C05	290	138	C11	330	177	C11	355	180	C13	383	211	C13	413	214			
C05	315	200	C11	355	230	C11	355	230	C13	383	295	C13	413	295	C13	448	315
C05	270	130	C11	330	173	C11	355	175	C13	383	203						
C05	270	147	C11	330	188	C11	355	190	C13	383	218	C13	413	220			
C05	315	162	C11	355	203	C11	355	201	C13	383	233	C13	413	235			
C05	340	200	C11	380	230	C11	380	235	C13	383	290	C13	413	310	C13	448	310
C05	290	163	C11	330	204	C11	355	202	C13	383	234	C13	413	236			
C05	315	195	C11	355	225	C11	355	225	C13	383	290	C13	413	290	C13	448	310
C05	340	215	C11	380	245	C11	380	250	C13	383	305	C13	413	325	C13	448	325
C13	413	331	C13	413	330	C13	413	330	C13	413	329	C13	413	328			
C05	340	205	C11	380	235	C11	380	240	C13	383	300	C13	413	315	C13	448	315
C13	413	340	C13	413	335	C13	413	340	C13	413	350	C13	413	335	C13	448	350
C13	448	340	C13	448	340	C13	448	340	C13	448	339	C13	448	338			
C13	413	340	C13	413	335	C13	413	340	C13	413	350	C13	413	335			



dimensioni flange secondo
flanges dimensions according to
UNI 2223-2229 PN16

bulloni di fondazione / foundation bolts

dimensioni - dimensions		
d	v	z
M14	280	50
M16	350	60
M20	400	80



TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



Le pompe della serie TCT sono principalmente studiate per il pompaggio di liquidi contenenti solidi o filamenti in sospensione, fanghi e liquidi viscosi, evitando intasamenti.

La girante è del tipo a vortice arretrato ed il liquido viene pompato tramite il momento vorticoso impressogli dalla girante stessa senza venirne direttamente a contatto.

La costruzione prevede l'utilizzo dei corpi, dei coperchi corpo e delle supportazioni della serie TCH e di tutte le sue varianti, mantenendo le stesse elevate caratteristiche ed usufruendo così della possibilità di gestire un ridotto numero di componenti di ricambio.

Le dimensioni non sono unificate secondo le norme ISO 2858/DIN 24256 solo per quanto riguarda la lunghezza totale, che risulta maggiore; sono comunque unificate tutte le altre misure principali.

Portate fino a 250 m³/h e prevalenze fino a 7 bar.

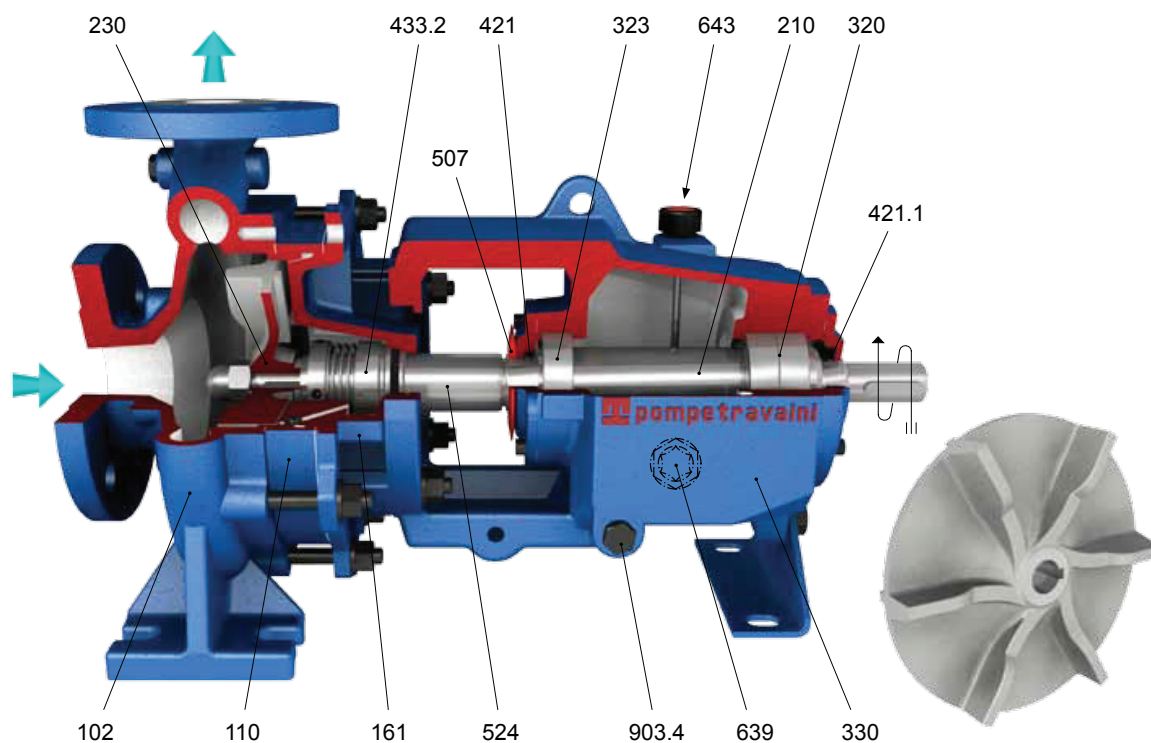
TCT pump series are capable of handling without clogging liquids with suspended solids or filaments, as well as muddy and viscous liquids.

The impeller is of the internal vortex type. The liquid is handled by means of the vortex motion created by the impeller that do not come in direct contact with the pumped liquid.

The construction utilises the pump casing, casing cover and bearing frame from the series TCH and derived series. The highly efficient characteristics are therefore retained, with the added bonus of reduced number of spare parts to be stocked.

Dimensions are unified to ISO 2858/DIN 24256 except for the overall length that is greater.

Capacity up to 250 m³/h and heads to 7 bar.



Esecuzione con supportazione secondo le norme ISO 5199 e camera tenuta meccanica conica (costruzione .../1X-C).
Construction with bearing designed to ISO 5199 standards and with conical mechanical seal chamber (design .../1X-C)

Per le dimensioni d'ingombro contattare la Pompetravaini. For overall dimensions contact Pompetravaini.

NOMENCLATURA / COMPONENTS

VDMA	DENOMINAZIONE	DESIGNATION
102	Corpo pompa	Pump casing
110	Distanziale	Spacer
161	Coperchio corpo	Casing cover
210	Albero	Shaft
230	Girante	Impeller
320	Cuscinetto a sfere	Ball bearing
323	Cuscinetto a rulli	Roller bearing
330	Supporto	Bearing housing

VDMA	DENOMINAZIONE	DESIGNATION
421	Anello di tenuta radiale	Radial shaft seal
421.1	Anello di tenuta radiale	Radial shaft seal
433.2	Tenuta meccanica	Mechanical seal
507	Anello paraspruzzi	Thrower
524	Bussola di protezione	Shaft sleeve
639	Indicatore di livello (optional)	Sight gauge (optional)
643	Tappo di riempimento olio	Oil filling plug
903.4	Tappo di scarico olio	Oil drain plug

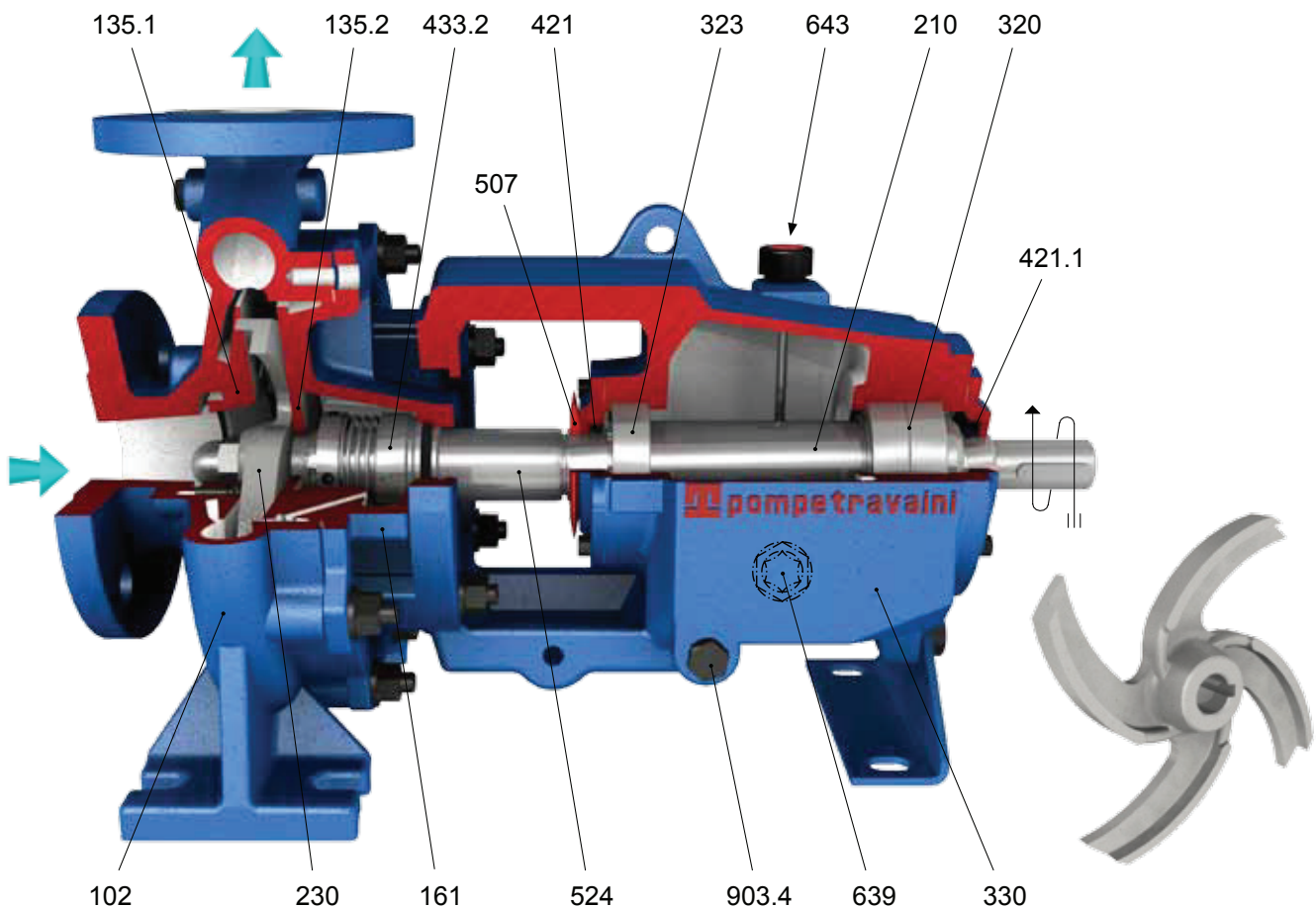
TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



Le pompe della serie TCA sono principalmente studiate per il pompaggio di liquidi altamente abrasivi e contenenti solidi in sospensione. La girante è del tipo completamente aperto e ruota tra due piastre di usura, anteriore e posteriore. Il particolare profilo idraulico a quattro pale permette il raggiungimento di elevati rendimenti idraulici e bassi valori di NPSH. La costruzione prevede l'utilizzo dei corpi, dei coperchi corpo e delle supportazioni delle prime due grandezze della serie TCH e di tutte le sue varianti, mantenendo le stesse elevate caratteristiche ed usufruendo così della possibilità di gestire un ridotto numero di componenti di ricambio. Le dimensioni sono identiche a quelle della serie TCH e quindi unificate secondo le norme ISO 2858/DIN 24256. Portate fino a 100 m³/h e prevalenze fino a 10 bar.

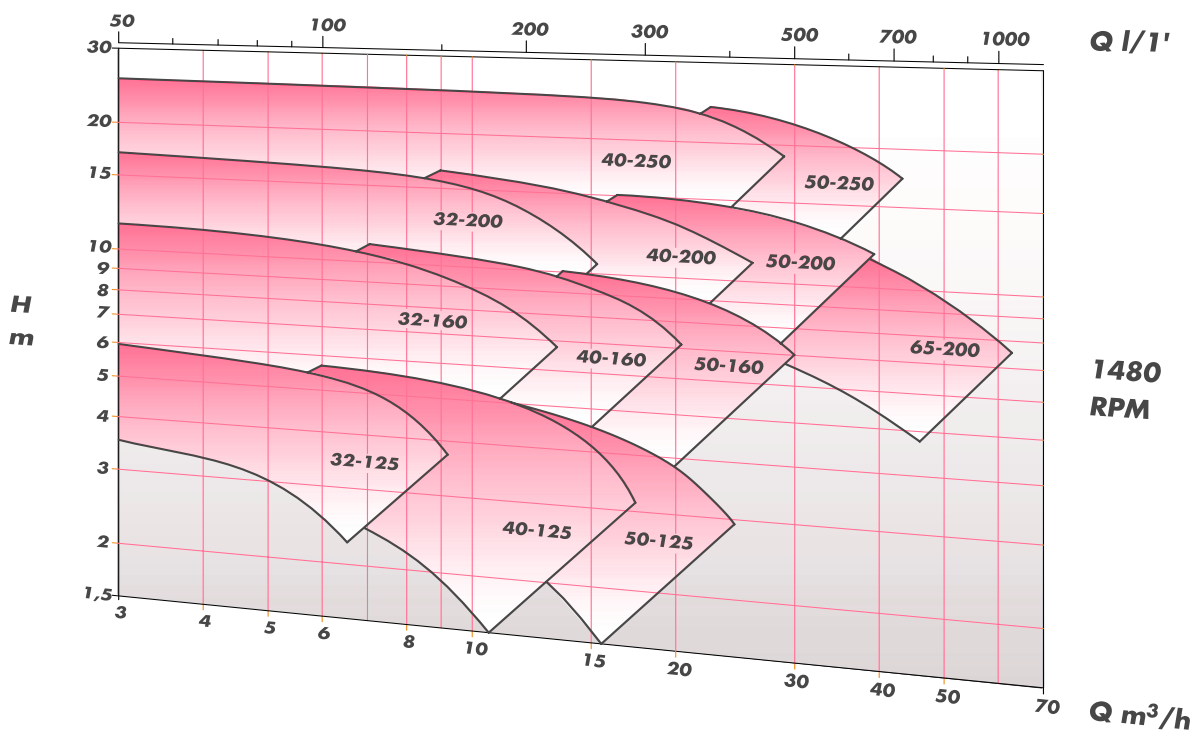
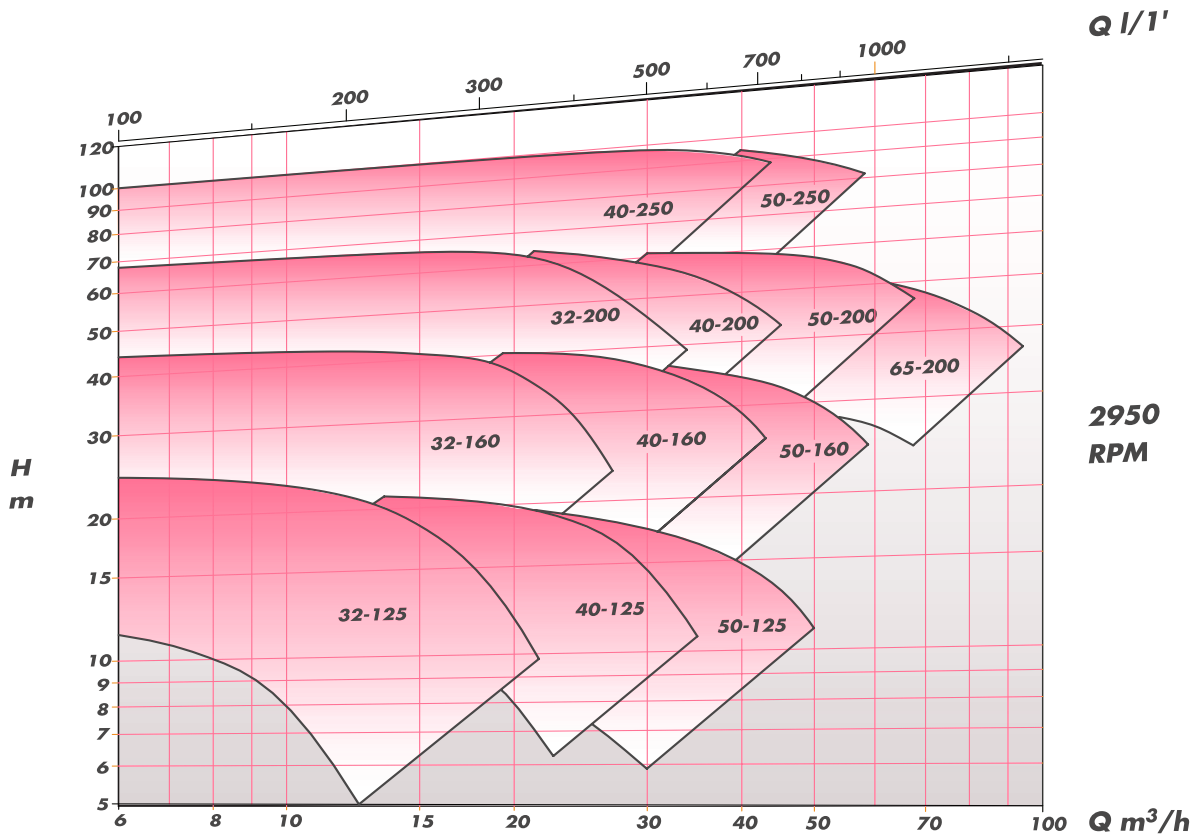
TCA pump series are primarily designed to handle highly abrasive liquids and having suspended solids. The impeller is of the open type, rotating between two wear plates, front and back. The four blades special hydraulic profile offers high hydraulic efficiencies and low NPSH requirements. The construction utilises the pump casing, casing cover and bearing frame from the series TCH and derived series. The highly efficient characteristics are therefore retained, with the added bonus of reduced number of spare parts to be stocked. Dimensions are unified to ISO 2858/DIN 24256 and are identical to those of pump series TCH. Capacity up to 100 m³/h and heads to 10 bar.



Esecuzione con supportazione secondo le norme ISO 5199 e camera tenuta meccanica conica (costruzione .../1X-C).
Construction with bearing designed to ISO 5199 standards and with conical mechanical seal chamber (design .../1X-C)

TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



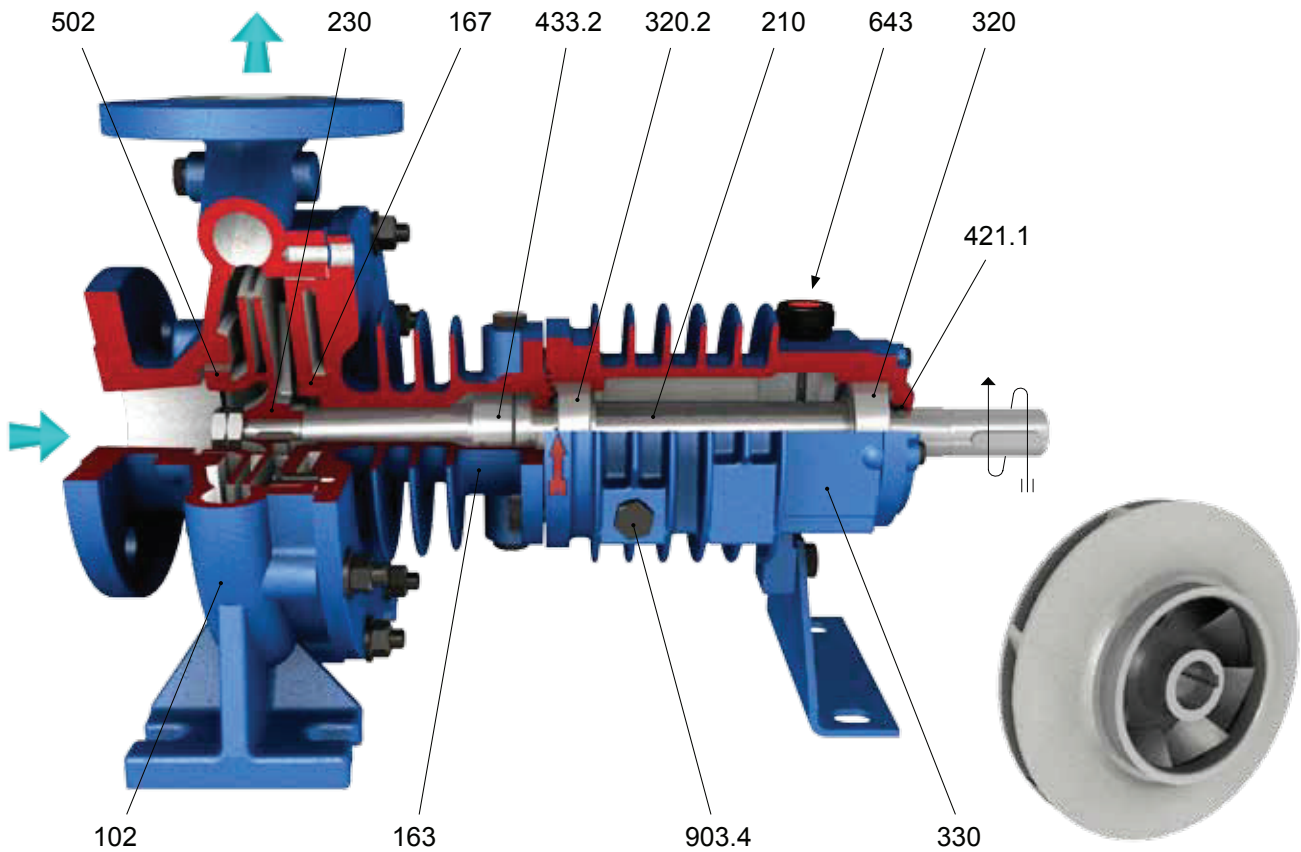
Not binding data refers to water at room temperature. For specific performance curve contact Pompetravaini.

TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



TCD pump series (see cross section below) are specifically designed to handle thermal fluids up to 320°C without special cooling systems. The heat from the pumped product is greatly blocked by special "heat barrier" chamber located between the pump casing and the impeller. The bearing frame has been especially designed with cooling fins to effectively dissipate the heat coming from the pump casing so that standard, simple and single mechanical seal can be safely used. The rotor is supported with oversized ball bearings of the C3 series that are lubricated with oil of medium viscosity. Pump casings and impellers are the same as for pump series TCH smaller two frames. Materials of construction are Ductile iron or Stainless steel AISI 316. For the latter construction it is possible to have a special seal arrangement "SP" (see page at side). Pump dimensions and characteristics are in accordance to ISO 2858/DIN 24256 standards and are the same as for the correspondent models from the TCH series. Capacity up to 350 m³/h and head to 10 bar.



NOMENCLATURA / COMPONENTS

VDMA	DENOMINAZIONE	DESIGNATION
102	Corpo pompa	Pump casing
163	Lanterna coperchio	Casing cover
167	Piastra di raffreddamento	Cooling plate
184	Coperchio intermedio	Intermediate cover
210	Albero	Shaft
230	Girante	Impeller
320	Cuscinetto a sfere	Ball bearing
320.2	Cuscinetto a sfere	Ball bearing

VDMA	DENOMINAZIONE	DESIGNATION
330	Supporto	Bearing housing
421	Anello di tenuta radiale	Radial shaft seal
421.1	Anello di tenuta radiale	Radial shaft seal
433.2	Tenuta meccanica	Mechanical seal
502	Anello di usura	Wear ring
643	Tappo di riempimento olio	Oil filling plug
903.4	Tappo di scarico olio	Oil drain plug

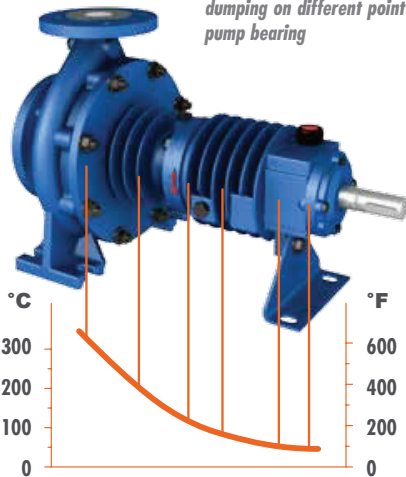
TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



Diagramma dimostrativo dell'abbattimento del calore nei vari punti della supportazione

Diagrams showing the heat dumping on different points of pump bearing

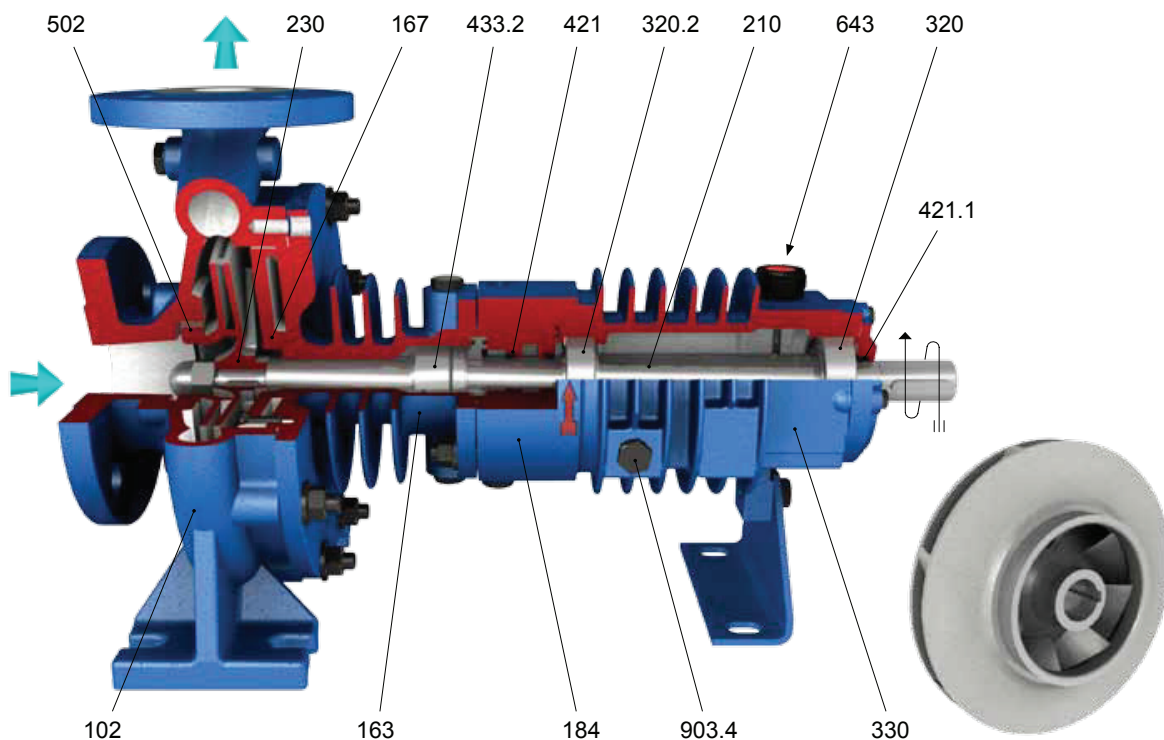


ESECUZIONE SPECIALE / SPECIAL CONSTRUCTION

TCD /SP

Questa speciale esecuzione serie TCD/SP (vedere la sezione sottostante) è stata studiata per il pompaggio di oli vegetali alimentari. Rispetto alla versione standard viene aggiunto, dietro la tenuta meccanica, un coperchio intermedio, che funge da spaziatore, collegato ad un barilotto contenente olio compatibile con quello pompato. Questo accorgimento evita che, in caso di avaria della tenuta meccanica, non possa entrare aria nella pompa ossidando irreparabilmente l'olio pompato, oppure che l'olio dei cuscinetti entri nel circuito di pompaggio o viceversa.

TCD/SP pump series (see cross section below) has been especially designed to handle vegetable oils. The design varies from the standard TCD series only in the mechanical seal area; an intermediate cover has been added beyond the mechanical seal. This intermediate cover should be connected to a reservoir containing oil compatible with the pumped fluid. This device avoids that, in case of mechanical seal breakdown, air can enter into the pump irreparably oxidating the pumped oil or that oil of bearings enter into pumping circuit or vice versa.



Per i campi di scelta orientativi e le dimensioni d'ingombro vedere i corrispondenti della serie TCH.
For indicative performance fields and overall dimensions, see the correspondent of TCH series.

Le pompe serie TCD e TCD/SP sono costruite nei seguenti tipi. Pumps series TCD and TCD/SP are manufactured in following types.

serie / series 125 gr.1	25-125	32-125	40-125	50-125	65-125		
serie / series 160 gr.1-2	25-160	32-160	40-160	50-160	65-160	80-160	
serie / series 200 gr.1-2	25-200	32-200	40-200	50-200	65-200	80-200	100-200
serie / series 250 gr.2		32-250	40-250	50-250	65-250	80-250	



Attualmente non disponibili/Actually not available

TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



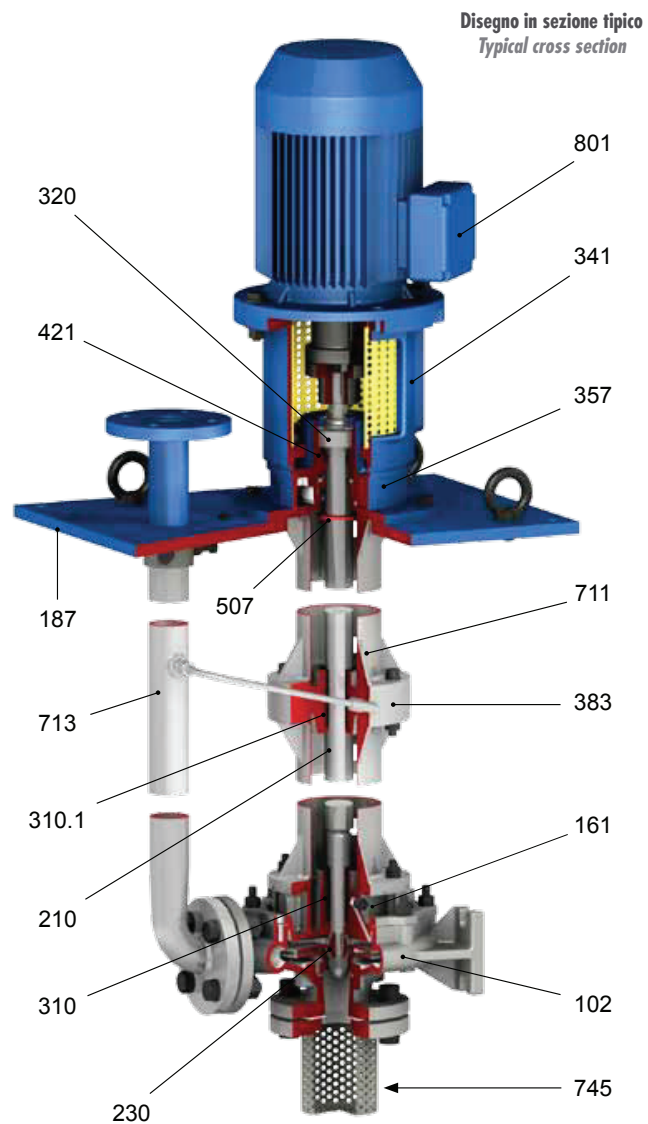
TCHV - TCTV - TCAV (derivate dalla serie ad asse orizzontale / derived from horizontal pump series)

L TCH, TCT, TCA pump series are available for vertical installation with lateral discharge flange.

The main design features are:

- Lengths are from approximately 500 mm to 3000 mm with or without intermediate support sleeve.
- Available materials of constructions are same as for the horizontal mounted pumps.
- Depending upon the applications the sleeve bearings can be carbon, bronze or impregnated Teflon materials.
- Pump casing, impeller and casing cover are the same as for the series TCH, TCT, TCA.
- The standard rectangular base can be modified to accommodate specific requirements.
- Standard shaft sealing is by radial seal rings. Packed stuffing box or mechanical seal shaft sealing are available upon request.
- Lantern for monoblock design is available for B5 or V1 motors up to 110 kW.
- Internal sleeve bearing flushing is standard but provision for flushing from an outside source is provided.
- Filter screen can be fitted at suction side upon request.

Per le dimensioni d'ingombro contattare la Pompetravaini.
For overall dimensions contact Pompetravaini.



NOMENCLATURA / COMPONENTS

VDMA	DENOMINAZIONE	DESIGNATION
102	Corpo pompa	Pump casing
161	Coperchio corpo	Casing cover
187	Piastra di appoggio	Support plate
210	Albero	Shaft
230	Girante	Impeller
310	Bronzina	Bearing
310.1	Bronzina	Bearing
320	Cuscinetto a sfere	Ball bearing
341	Lanterna motore	Motor lantern

VDMA	DENOMINAZIONE	DESIGNATION
357	Scatola cuscinetto	Ball bearing housing
383	Guida intermedia	Intermediate guide
421	Anello di tenuta radiale	Radial shaft seal
507	Anello paraspruzzi	Thrower
711	Tubo di sostegno	Support column
713	Tubo di mandata	Discharge pipe
745	Filtro	Filter
801	Motore elettrico	Electric motor

TCH/TCT/TCA/TCD Series

Monostage Centrifugal Pumps



Pompa centrifuga serie TCH in esecuzione monoblocco con motore B5.
TCH series centrifugal pump in monoblock design with B5 motor.



Pompa centrifuga serie TCH accoppiata su basamento.
TCH series centrifugal pump base mounted.



Pompa centrifuga serie TCH con barilotto di flussaggio alle doppie tenute meccaniche.
TCH series centrifugal pump with double mechanical seals with buffer liquid system.

Available in New Zealand from:

Prime Fluid Management

Head Office: 10 Chesterfield St

Greymouth, West Coast

0800 482 747

primefluid.co.nz

