

Goulds

Pa PLa PVa

Vertical & Horizontal
Multistage Pumps

Goulds Pumps



ITT Industries
Engineered for life

Goulds Multistage Pumps

Pump sizes 33, 43, 51, 63, 83, 103 and 123

Multistage centrifugal pumps, radially bladed, with diffusers, for water supply in buildings, industries, public installations and agricultural irrigation systems.

Performance range: Capacities up to 400 m³/h,
Head up to 420 mts

Size: 32 to 125 mm outlet

Max. Pressure: Refer to material specification

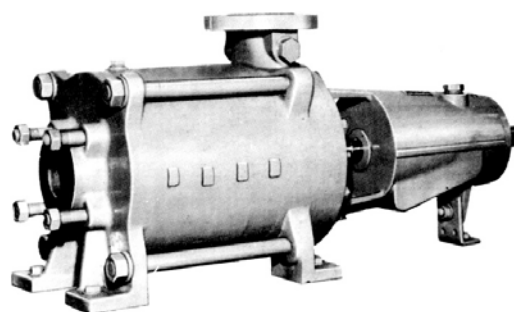
At a suction pressure higher than 10 bar requestion is necessary for design PLa and PVa.

Temperature: Up to 120°C without cooling, up to 140°C with cooling jacket at shaft sealing.

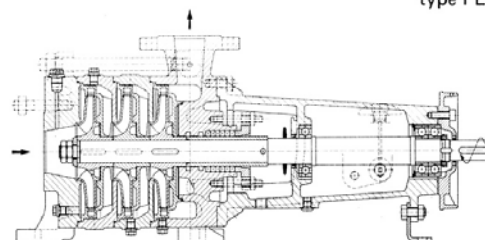
Shaft sealing: Stuffing box, with soft packing(standard, cooled, internally or externally sealed, flushed) mechanical seal (single or double).

Handled liquids: Clear or contaminated liquids such a cold or hot water, condensate, oil, acids and their solutions, lyes brine, etc.

Application: Water supply, irrigation, boiler feeding, booster plants, fire fighting installations, car washing units, etc.



type PLa



Material specification:

mat. code	impeller	diffuser	casing	shaft	shaft sleeve	max.allowable casing pressure		
						design Pa		design PLa, PVa
						up to 100°C	up to 140°C	
N	cast iron	cast iron	cast iron	st.st.1.4021	st.st.1.4021	45	40	35
SN	bronze	cast iron	cast iron	st.st.1.4021	st.st.1.4021	45	40	35
ZN	bronze	cast iron	cast iron	st.st.1.4462	st.st.1.4462	45	40	35
S	bronze	bronze	cast iron	st.st.1.4021	st.st.1.4021	45	40	35
SS	bronze	bronze	bronze	st.st.1.4462	st.st.1.4462	35	-	35
NL	cast iron	cast iron	spheroidal c.i.	st.st.1.4021	st.st.1.4021	50	50	40
NF	cast iron	cast iron	cast steel	st.st.1.4021	st.st.1.4021	50	50	45
VN	st.st.v.4460	st.st.v.4460	cast iron	st.st.1.4021	st.st.1.4021	45	40	35
VV*)	st.st.v.4460	st.st.v.4460	st.st.v.4460	st.st.1.4462	st.st.1.4462	50	50	45

*) by design Pa only

Other materials upon request

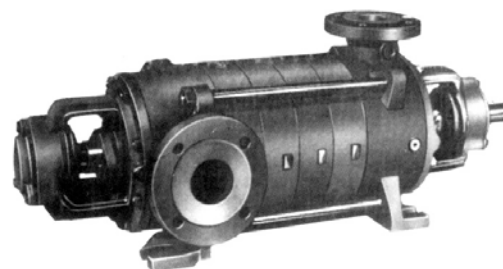
Mechanical design

Type Pa:

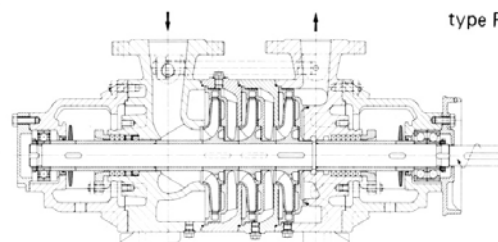
Horizontal shaft with roller bearings at both ends, drive-end at discharge side (standard), rotation clockwise, with suction branch left and discharge brancd radially upwards, grease lubrication (at 123 Pa only oil lubrication). Upon request also with suction branch right or radially upwards; oil lubrication (not at 33 Pa), drive-end at suction side, (rotation anti-clockwise).

Type PLa:

Endsuction type with bearing bracket, horizontal shaft, two roller bearings at drive side, axial suction branch, discharge branch radially upwards, oil lubricated (pump-sizes 43 up to 123).



type Pa



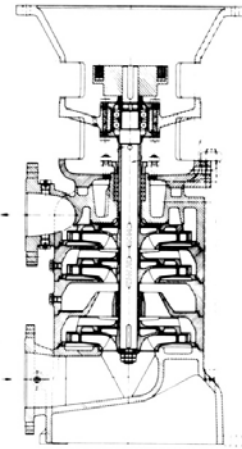
Liability of manufacturer and /or supplier

The mentioned limits of operation and/or application are only a general information and may not be applied for every case. The permitted range of operation and/ or application for the specific case is to be obtained from our acknowledgement of order and/ or the instructions for installations, operation and maintenance, sent with de goods.

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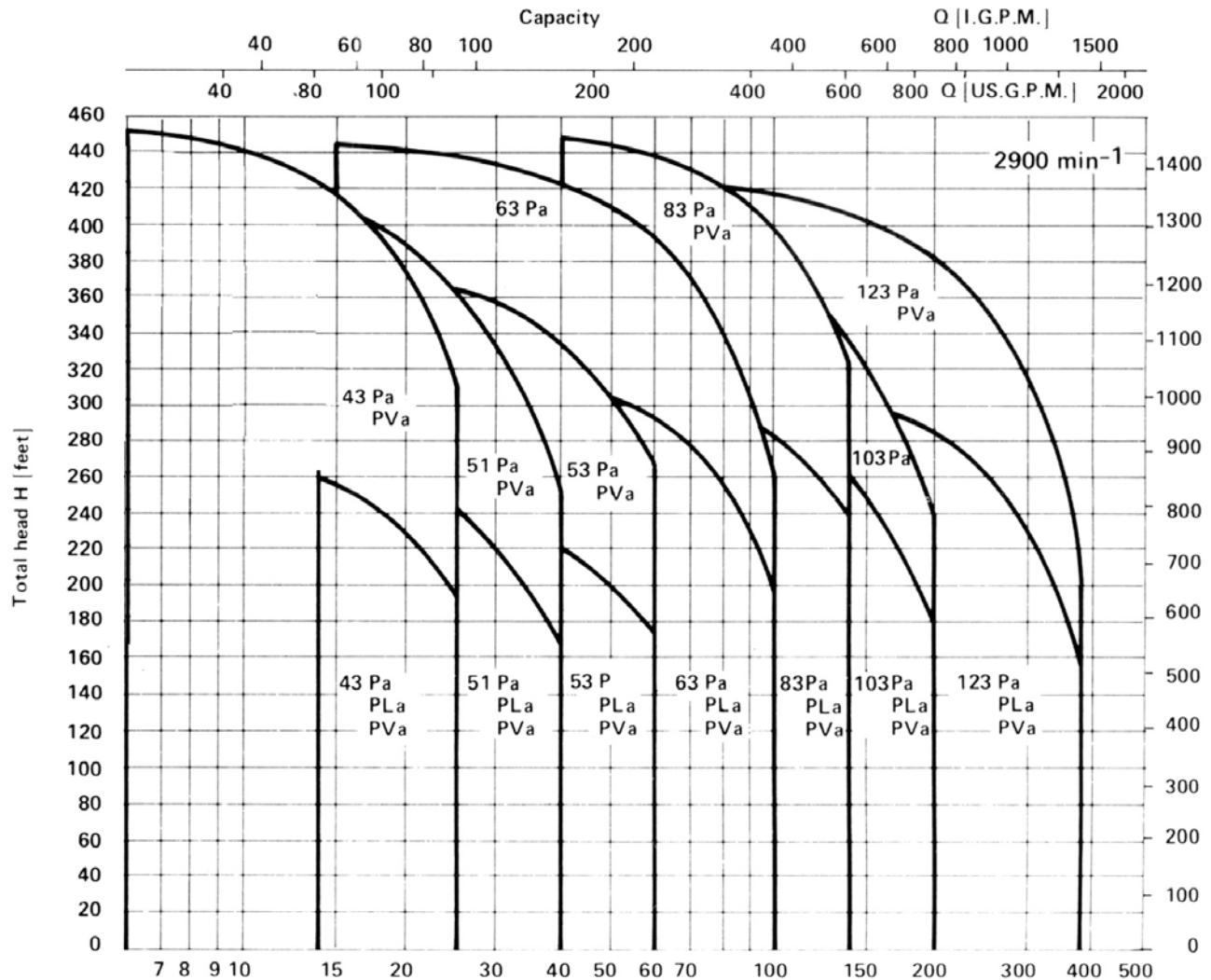
Type PVa: Vertical short shaft, grease lubricated roller bearing at drive side, liquid lubricated internal slide bearing. All right angle positions of branches possible (standard: both at same direction).

Type PTa: Vertical long shaft, grease lubricated roller bearing at drive head, liquid lubricated slide bearings in intermediate bearings, installation length up to 4 mts at 2900 r.p.m., and up to 10 mts at 1450 r.p.m.



type PV, PVa

PERFORMANCE



Ask for detailed documentation.

Pumpsizes 84, 104, 124, 154, 204, 253, 254, 303 and 304, refer to separate brochure L 5218-1

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Goulds Multistage Pumps in Multi-outlet Design

Multistage multi-outlet centrifugal pumps for fire fighting in buildings, industries and public installations, duties on F.O.C.

Performance range: Capacities up to 400m³/h

Head up to 450 mts

Size: 32 to 125 mm outlet

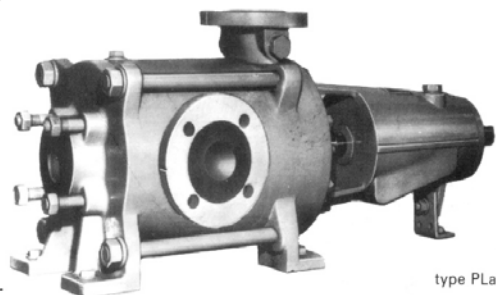
Max. Pressure: refer to material specification

At a suction pressure higher than 10 bar requestion is necessary for design PLa.

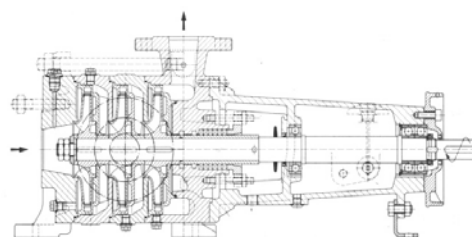
Shaft sealing: Stuffing box with shaft packing, or mechanical seal.

Handled liquids: Cold clear or slightly contaminated water.

Application: Fire fighting installations as main sprinkler pumps and/or jockey-pumps to supply several pressure zones.



type PLa



Material specification:

mat. Code	Impeller	casings	shaft	shaft sleeve	max. casing pressure
SN	bronze	cast iron	stainless steel 1.4021	stainless steel 1.4021	35 bar
SL	bronze	spheroidal c.i.	stainless steel 1.4021	stainless steel 1.4021	40 bar
SF	bronze	cast steel	stainless steel 1.4021	stainless steel 1.4021	45 bar

Other materials upon request

Mechanical design:

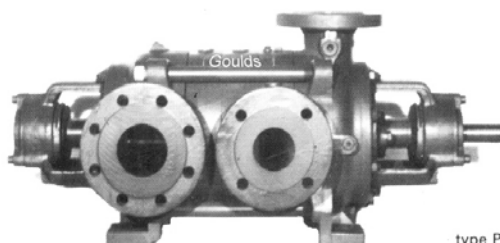
Type Pa, P:

Horizontal shaft with roller bearings at both ends, drive-end at discharge side (standard), rotation clockwise, with suction branch left and discharge branches right and vertically upwards or right, left and vertically upwards, grease lubrication (at 123 Pa and 84-304 P only oil lubrication).

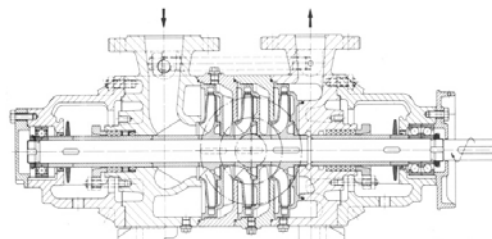
Upon request also with suction branch right or radially upwards; oil lubricated, drive-end at suction side, (rotation anti-clock-wise).

Type PLa:

Endsuction type with bearing bracket, horizontal shaft, two roller bearings at drive side, axial suction branch, discharge branches right and vertically upwards or right, left and vertically upwards, oil lubricated (only pump-sizes 43 up to 123).



type Pa

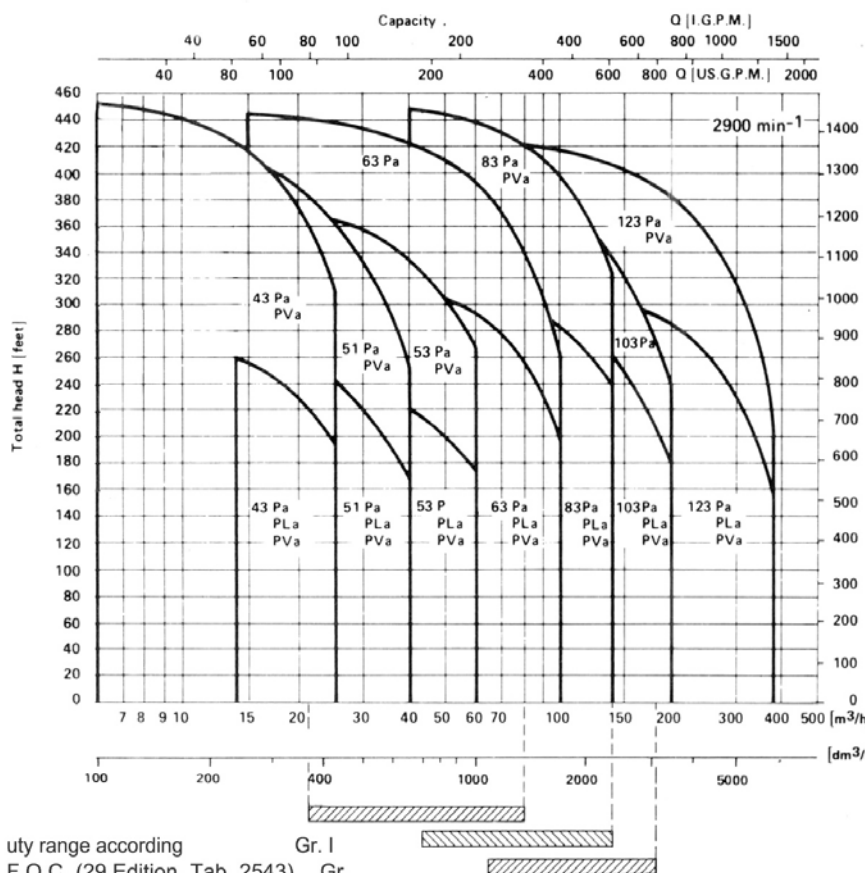


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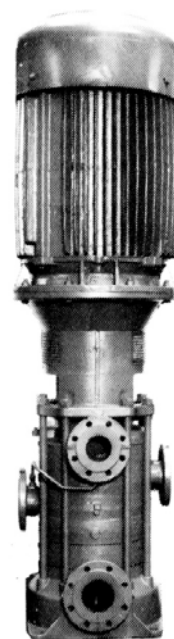
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PERFORMANCE

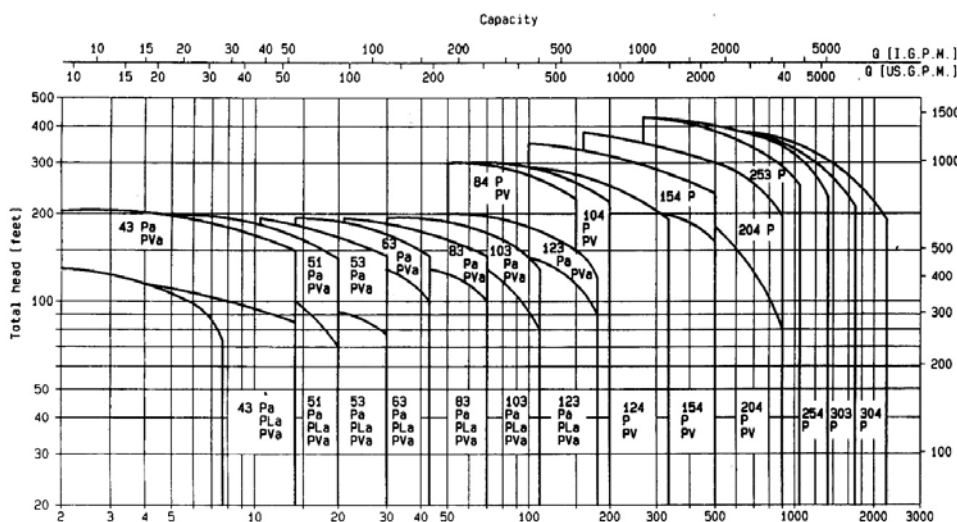


Type PVA:

Vertical short shaft, grease lubricated roller bearing at drive side, liquid lubricated internal slide bearing. All right angle positions of branches possible.



type PVA



Stable curves allow two or more pumps to work in parallel also operating at small discharge. The selection charts permit only a general view of the possible working points of the different pump sizes.

Ask for detailed documentation.

Pumpsizes 84-304, refer to separate brochure L 5218-1

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