

Mixing and circulation group

R003



ST.R003.05.26.EN (NC1718)

Description

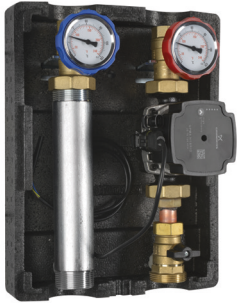
The mixing and circulation groups are used to adjust distribution and temperature of the heat carrying fluid in multi-storey and/or multi-zone systems.

They are ideal for high temperature heating systems. The groups R003 can be installed on a special "inlet-outlet" distribution manifold,(art. 785), after the hydraulic separator.

The groups are supplied with insulation shells and fastening brackets.

Group advantages:

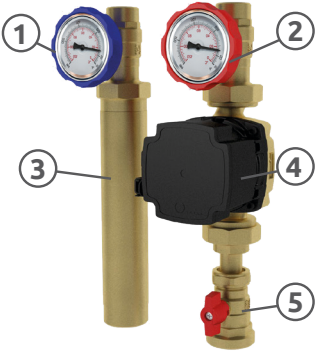
- Right/Left adaptability.
- Compatible with every 125mm axis manifold (With shell type 93).



Components List

Mixing group for high/low direct temperature unit complete with:

1. Ball valve G3/4" or G 1"M with blue hand-wheel for connection to the return pipes, thermometer 0-120°C and incorporated check valve.
2. Ball valve G3/4" or G 1"M with red hand-wheel and thermometer 0-120°C for connection to the return pipes.
3. Steel pipe with ends threaded G1"1/2M.
4. Energy class "A" electronic circulator with variable speed, G1½" threaded connections and a centre-to-centre distance of 130 mm
5. Ball valve with coupling G1"1/2 for connection to the incoming pipe from the boiler.

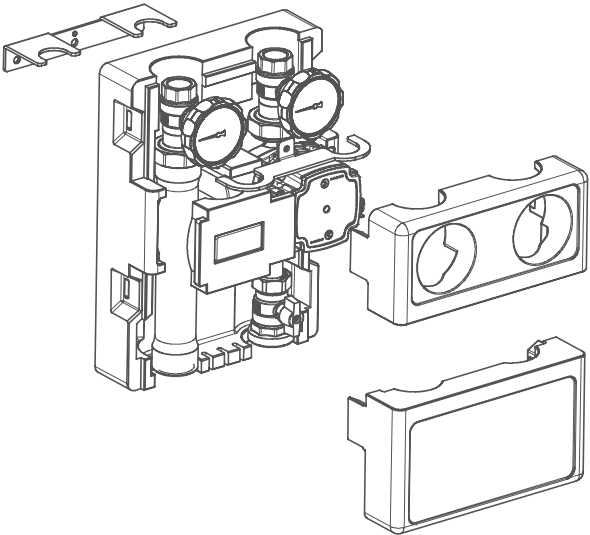


Technical features

TECHNICAL DATA	
Fluids used:	Water and glycol based solutions
Maximum percentage of glycol:	30%
Maximum operating pressure:	10 bar
Working range:	See circulators specifications on page 3
Thermometers scale:	0÷120 °C
Circulators:	See specifications on page 3

MATERIALS	
Bodies:	Brass CW617N - EN 12165
Caps and unions:	Brass CW617N - EN 12165
Stub:	Tropicalized steel
Thermometer:	Steel/Aluminium
Locking brackets:	Galvanized steel
Flat gaskets:	EPDM Perox
Sealing gaskets:	PTFE
Sealing components:	EPDM Perox
Insulation shell:	EPP
Density Ver. 93:	40 kg/m3
Density Ver. 94:	60 kg/m3
Conducibility of shell λ (ΔT) Ver. 93:	0,036 W/(m·k) a 10°C
Conducibility of shell λ (ΔT) Ver. 94:	0,039 W/(m·k) a 10°C

CONNECTIONS	
Upper connections:	G 3/4" F - 1"M
Lower connections:	G 1"1/2 M



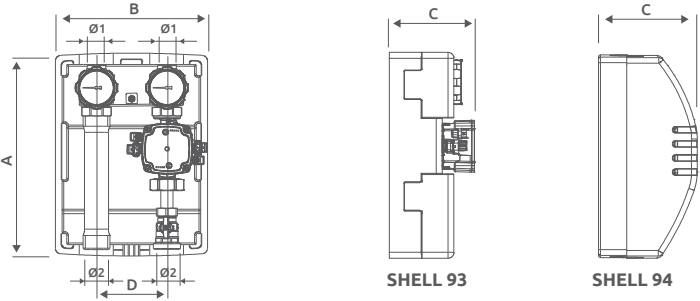
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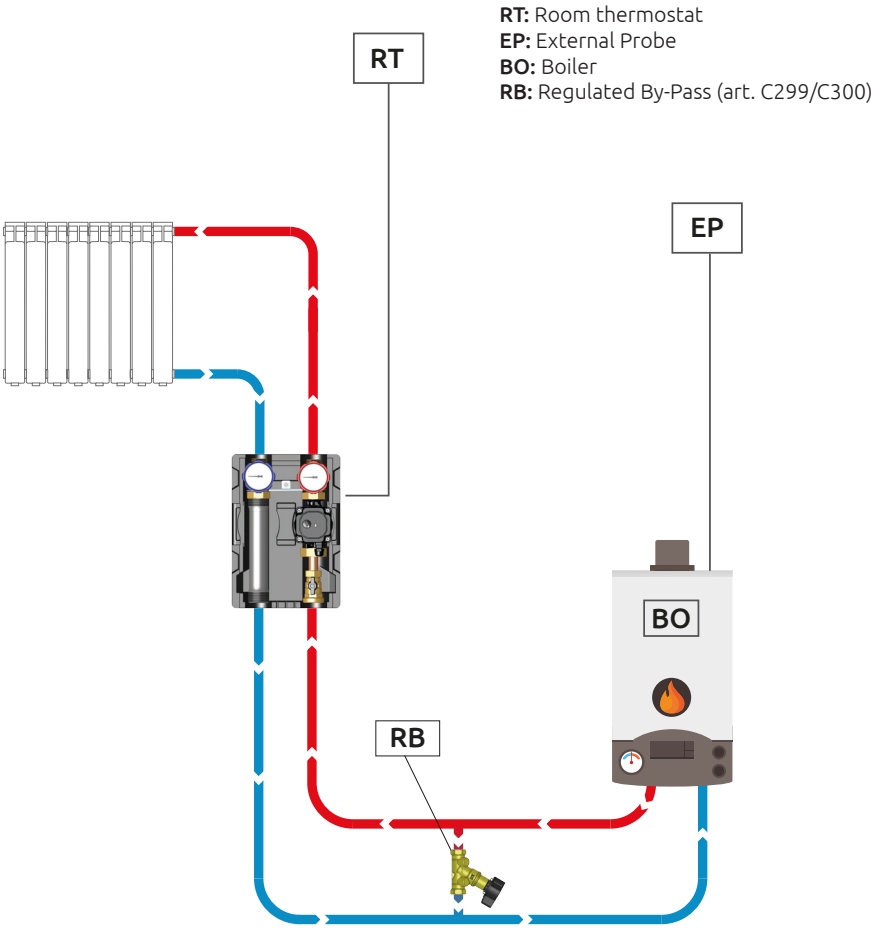
Dimensions



ART.	A		B		C		D	Ø 1		Ø 2
	93	94	93	94	93	94		93	94	
R003	350	360	248	270	200	180	125	3/4" F	G 1" M	G 1 1/2 M

Functioning

The Fixed point mixing and circulation group art. R003, in combination with the thermostat RT, switches on the pump directly, starting the system only when the room temperature is lower than the set temperature. It has neither mixer-valve nor remote sensor. The delivery temperature of the heat-transfer fluid is equal to the boiler outlet temperature. (A right-configuration R003 is shown as example below).



/ Group customization

Shells



Version 93



Version 94

Circulation pumps



Art. P330 - Circulator with fixed ΔP , variable ΔP and 3 constant speed:

TECHNICAL SPECIFICATIONS:	
Brand:	Wilo
Model:	PARA RS 25/7 130
Centre to centre distance:	130 mm
Connections:	G 1" 1/2 M
Electrical power supply:	230V – 50/60Hz
Operating temperature:	Ambient. temp. 50°C = 2 ÷ 105°C Ambient. temp. 55°C = 2 ÷ 90°C Ambient. temp. 60°C = 2 ÷ 77°C Ambient. temp. 65°C = 2 ÷ 60°C
Max operating pressure:	10 bar
Minimum pressure on the intake side:	0,5 bar
Max. percentage of glycol:	50%
Protection level:	IPx4D
Energy Class (EEI):	≤0.21



Art. P327 - Circulator with ΔP constant and ΔP variable:

TECHNICAL SPECIFICATIONS:	
Brand:	Wilo
Model:	PARA RS 25/8 130
Centre to centre distance:	130 mm
Connections:	G 1" 1/2 M
Electrical power supply:	230V – 50/60Hz
Operating temperature:	Ambient. temp. 50°C = 2 ÷ 105°C Ambient. temp. 55°C = 2 ÷ 90°C Ambient. temp. 60°C = 2 ÷ 77°C Ambient. temp. 65°C = 2 ÷ 66°C
Max operating pressure:	10 bar
Minimum pressure on the intake side:	0,5 bar
Max. percentage of glycol:	50%
Protection level:	IPx4D
Energy class (EEI):	≤0.21

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Art. P329 - Circulator with nr. 2 proportional-pressure curves, nr. 2 constant-pressure curves, min-max mode – Fixed speed

TECHNICAL SPECIFICATIONS:

Brand:	Taco
Model:	ES2 25-70/130
Centre to centre distance:	130 mm
Connections:	G 1"1/2 M
Electrical power supply:	230V – 50/60Hz
Operating temperature:	Ambient. temp. 30°C = 30 ÷ 95°C Ambient. temp. 35°C = 35 ÷ 90°C Ambient. temp.
Max operating pressure:	6 bar
Minimum pressure on the intake side:	50°C = 0,3 bar 95°C = 1,0 bar
Max. percentage of glycol:	30%
Protection level:	IP44
Energy Class (EEI):	≤0.21



Art. P331 - Wet-rotor circulator driven by a permanent magnet motor. Features a self-adaptive mode, enabled by default

TECHNICAL SPECIFICATIONS:

Brand:	Shinoo
Model:	GPA 25/70 III
Centre to centre distance:	130 mm
Connections:	G 1"1/2 M
Electrical power supply:	230V – 50/60Hz
Operating temperature:	Ambient. temp. . 30°C = 30 ÷ 110°C Ambient. temp. . 50°C = 50 ÷ 110°C Ambient. temp. . 70°C = 70 ÷ 110°C
Max operating pressure:	10 bar
Minimum pressure on the intake side:	75°C = 0,05 bar 95°C = 0,5 bar 110°C = 1,08 bar
Max. percentage of glycol:	50%
Protection level:	IP44
Energy Class (EEI):	≤0.2

Accessories



Art. 785

Modular brass double chamber manifold equipped with black EPP insulation shell, suitable for circulation modules art. R001-R002-R003-R004. Manifolds art. 785 can be used as single units or connected in series up to a maximum of 6 (Nuts, bolts and two O-ring included in the package)



Art. 789

G 1" F X G 1" 1/2 F plane seat union with nut and gasket. It reduces from G 1" 1/2 F to G 1" F.



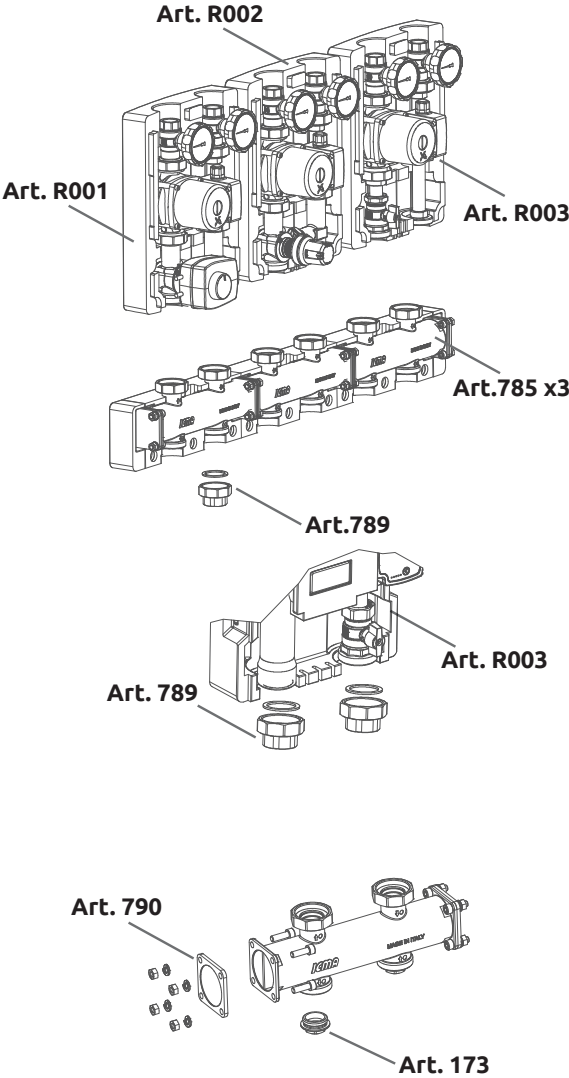
Art. 790

Head cap for manifold art. 785.



Art. 173

End cap with O-ring to close 1" exits of manifold art. 785.



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/ Shell Composition, Version 93



/ Shell Composition, Version 94



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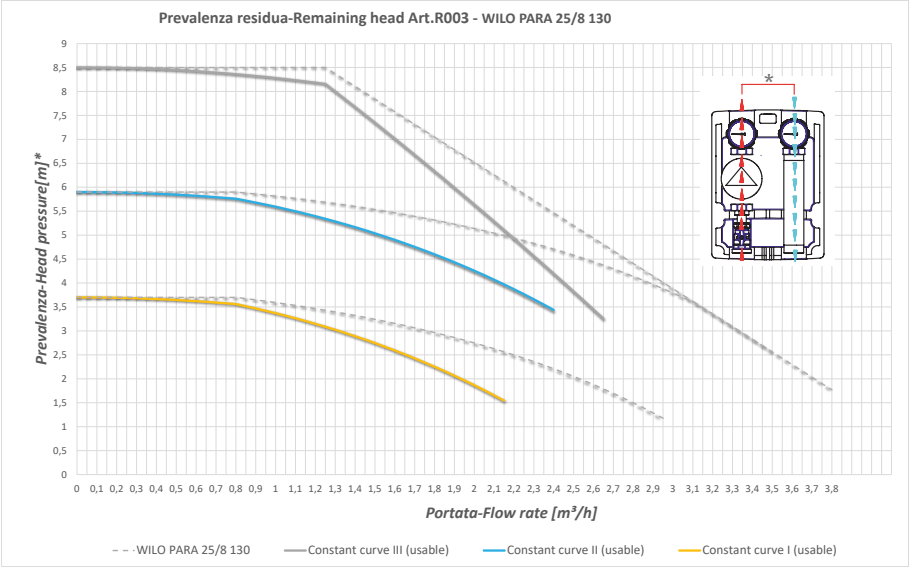
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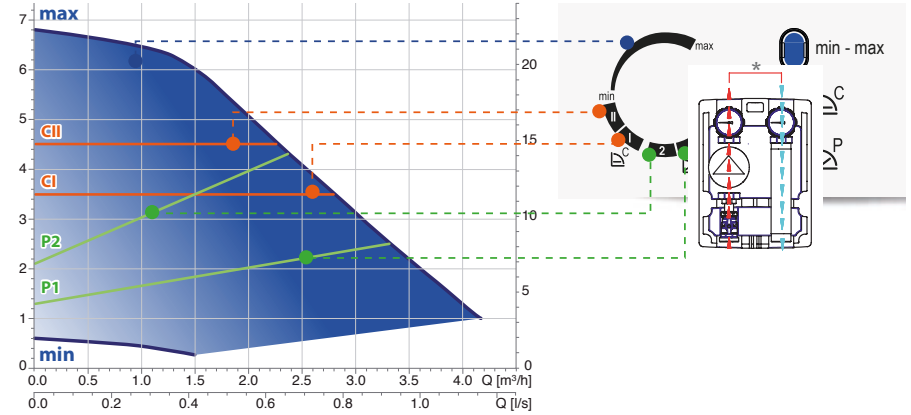
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Hydraulic Specifications

Art. **P327**



Art. **P329**



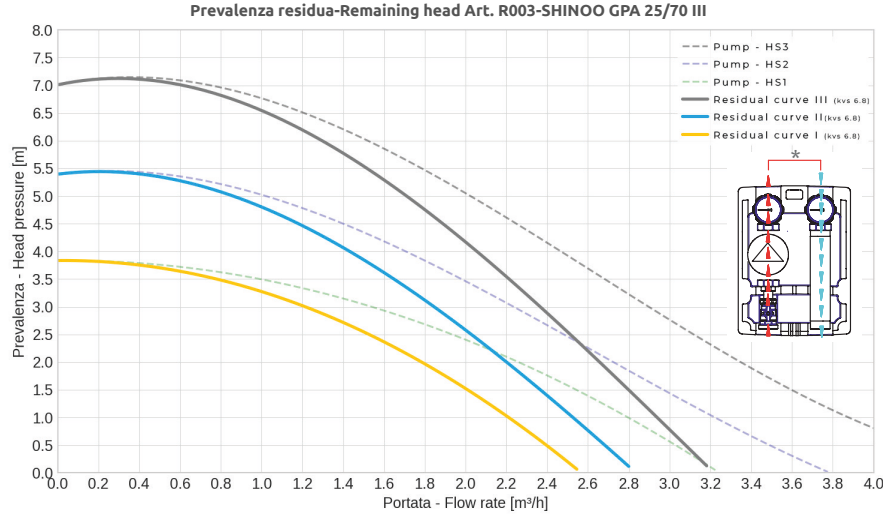
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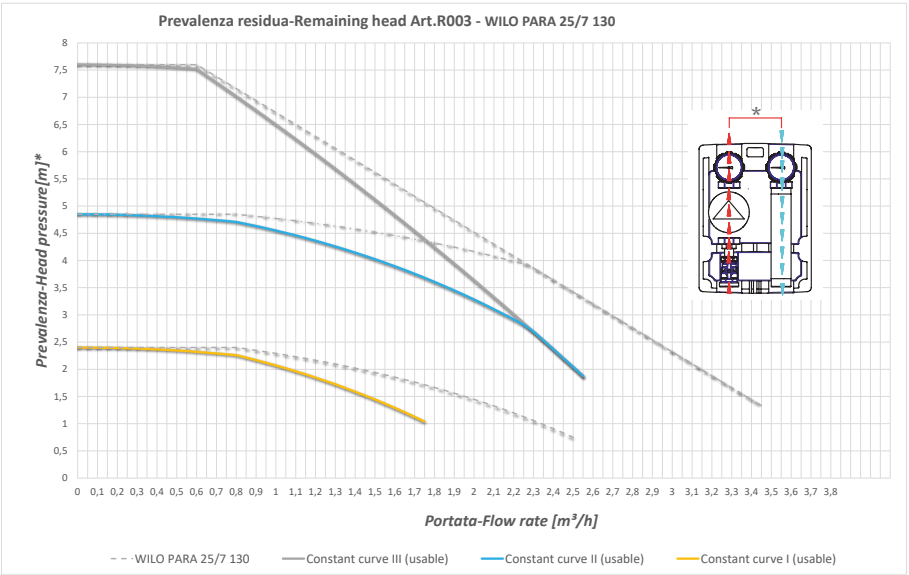


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Art. **P331**



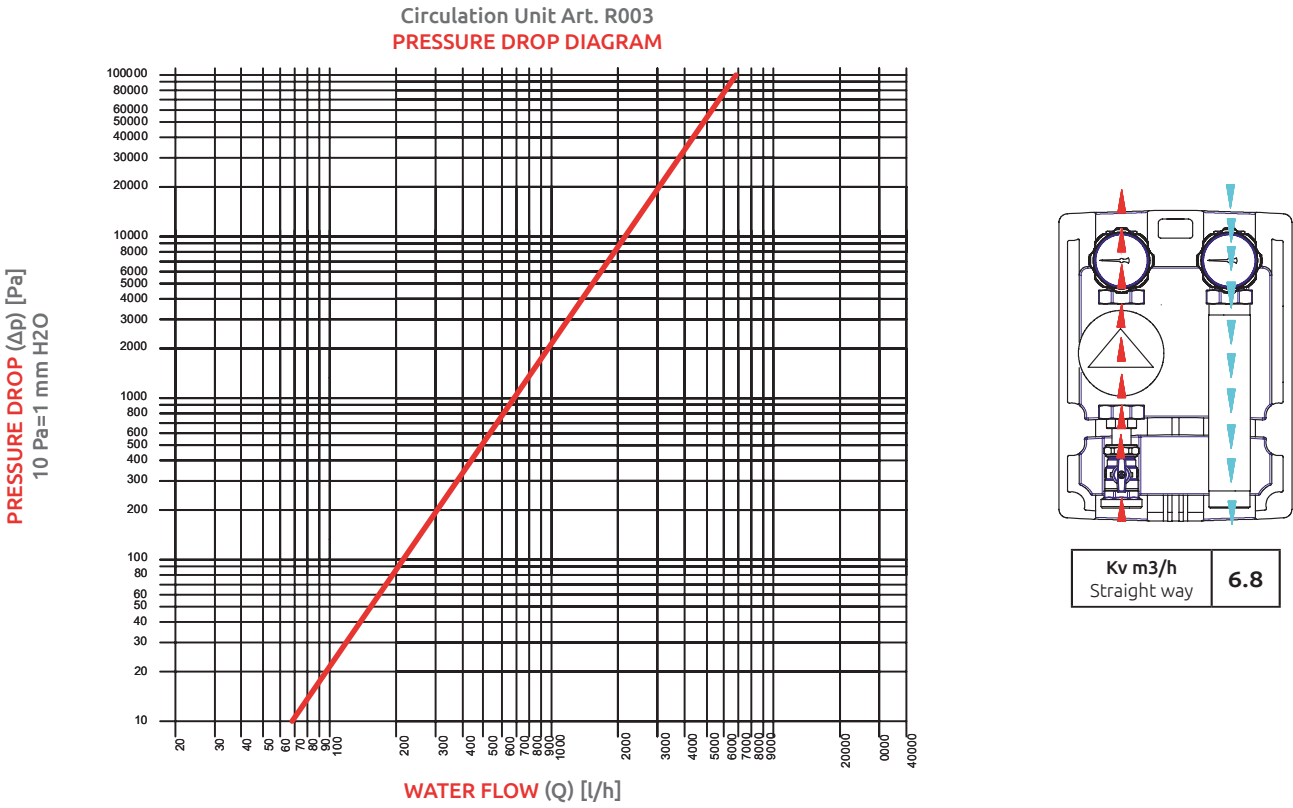
Art. **P330**



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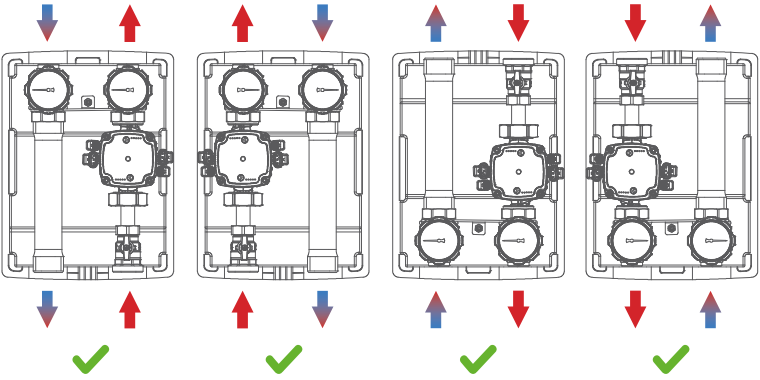
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Hydraulic Specifications



Positioning

Group orientation



Right-Left Switching

