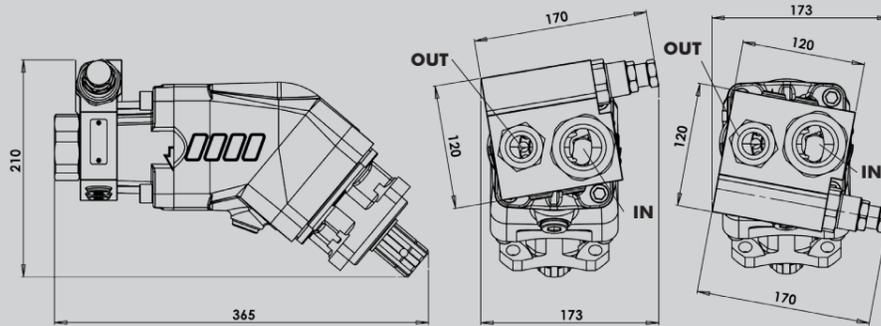


Relief valve assembly

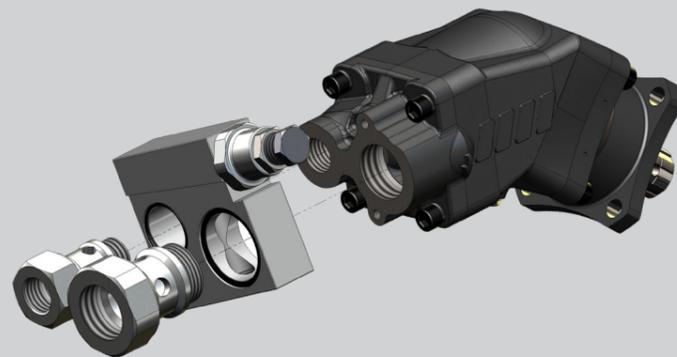
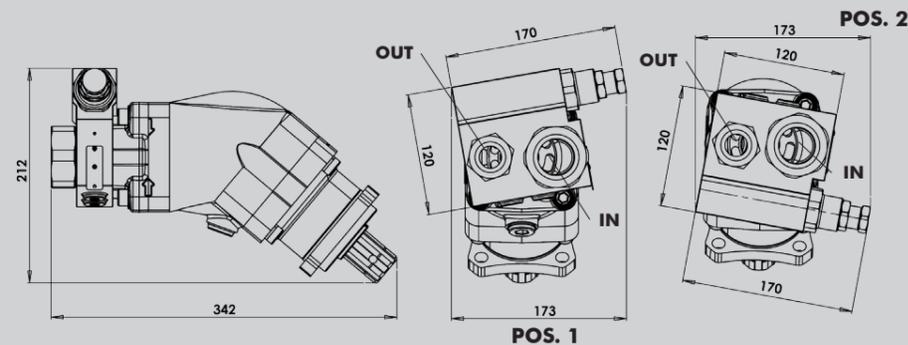
Relief valve assembly for "HDS-MDS-HDT" bent axis piston pumps

This valve can be directly fitted on the rear cover of the pump in such a way that the return flow goes back to tank through the pump itself saving one hose. The valve protects the pump from peak pressure due to any wrong operations such as closed circuit or coupling not connected. The fitment of the relief valve assembly onto the pump is symmetric, thus it is possible to rotate it by 180° just to avoid any interferences.

HDS-MDS



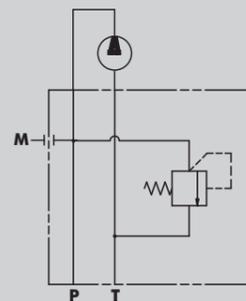
HDT



TECHNICAL FEATURES

Pump type	Order code	Setting pressure bar		IN	OUT
		min.	max.		
HDS-40 ISO HDS-47 ISO HDS-55 ISO HDS-64 ISO MDS-80 ISO	108-205-00479	45 ± 5	360 ± 5	G 1 1/4	G 3/4
HDS-84 ISO	108-205-00844	45 ± 5	360 ± 5	G 1 1/4	G 1
HDS-108 ISO	108-205-01085			G 1 1/2	G 1
MDS-130 ISO					
HDT-75 HDT-84 HDT-96 HDT-108	108-205-50843	45 ± 5	360 ± 5	G 1 1/4	G 1

HYDRAULIC SCHEME



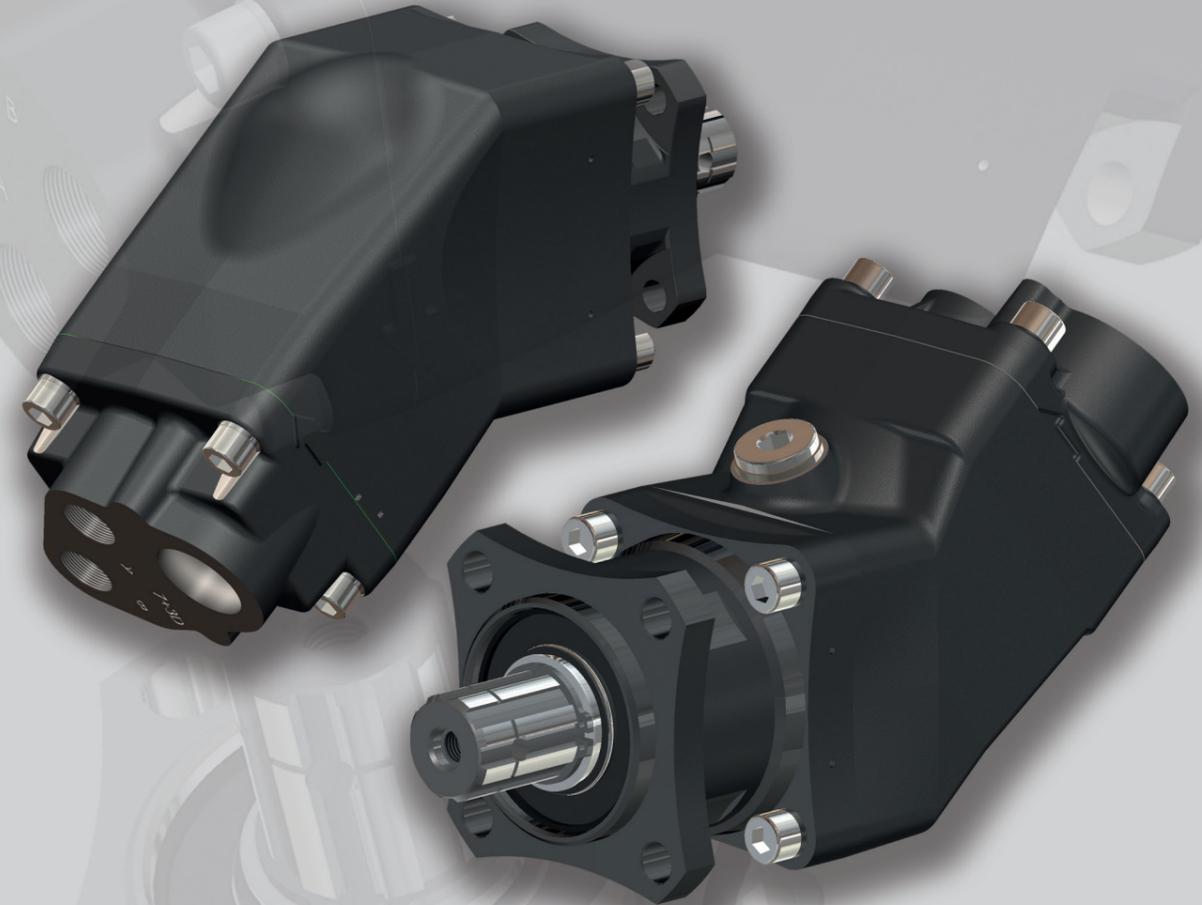
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BENT-AXIS PISTON PUMPS

The bent axis piston pumps series HDS, HDT, MDS and TFP ensure lower noise level thanks to internal gear machining method that improves significantly the mechanical coupling between the cylinder block and the driving gear guaranteeing maximum performances at extremely low noise level.



A very unique pump

Compact size cast iron body.

Overall dimensions reduced and high resistance to pressure peaks (up to 400 Bar) to match higher working pressure of the latest machines.

Hardened splined output shaft.

Better resistance to the torque driven by the PTO.

HNBR and reinforced oil-seals.

This solution allows the pump to bear back pressures.

Operating temperature.

Special seals allow the pump to operate at a temperature ranging from -40°C and +140°C.

Seven pistons.

The optimal solution to allow a more constant load on bearing and, consequently, a more fluent delivery and less pulsation.

Improved suction port.

Optimised in order to achieve lower noise level.

Pistons' barrel driven by the shaft.

The already proven tapered toothing allows the pistons to work without radial load resulting in a longer resistance to fatigue.

Choice of compatible materials for sliding surfaces.

Sliding surfaces made of steel and nitrated cast iron to guarantee a longer life against contaminated fluid.

Tapered roller bearings.

The tapered roller bearings offer bigger load capacity against high working pressure.

3-piece body.

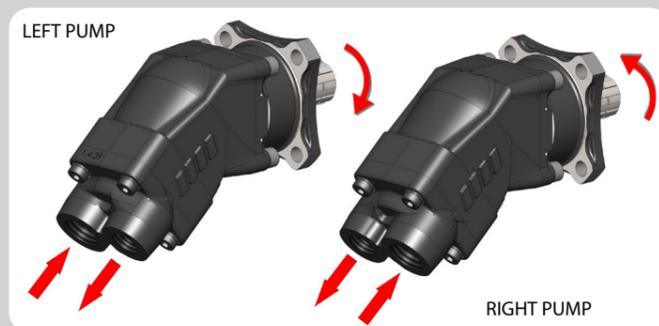
This solution allows constant lubrication of the bearings.

By-pass valve option.

The by-pass valve is mainly used in applications where the pump is permanently driven.

Special versions available:

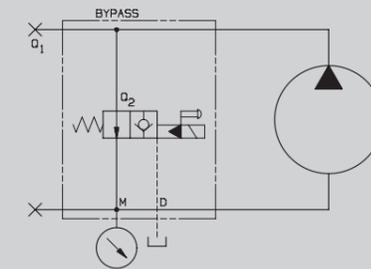
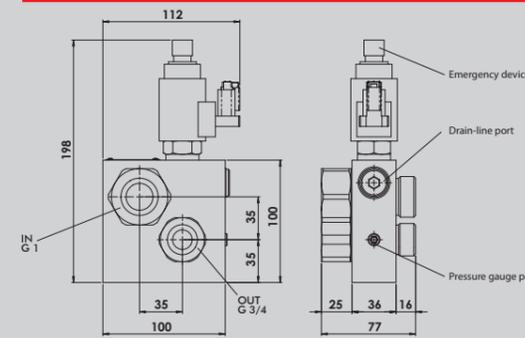
Versions with SAE shafts and UNF ports.



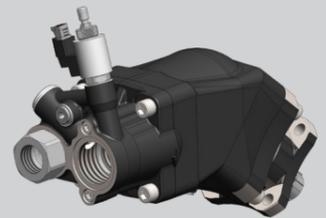
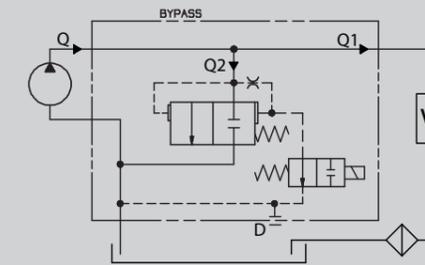
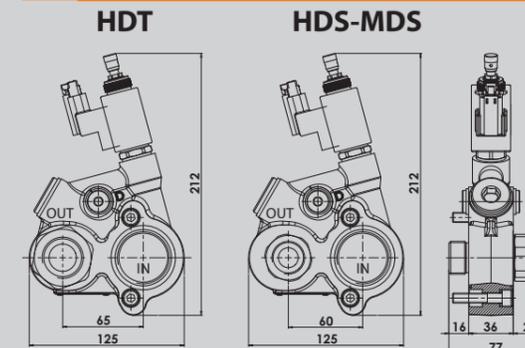
By-pass valves

By-pass valve is used together with Bent Axis HDS-HDT piston pumps in case the pump is always in rotation while the vehicle is turned on (mounting with PTO without engagement or directly on motor).

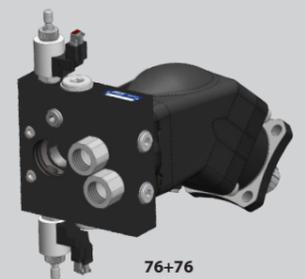
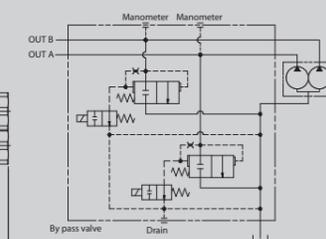
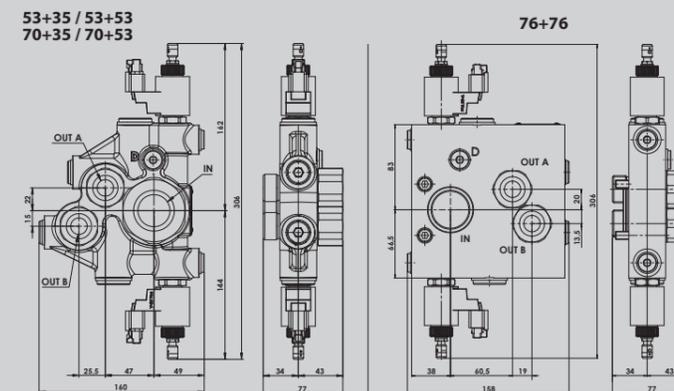
HDS 12-17-25-34



HDS - MDS - HDT



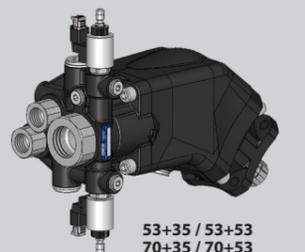
TWIN FLOW



TECHNICAL FEATURES

Pump type	Order code		Pressure max bar	IN	OUT	Manometer	Drain-line	Enclosure	Coil power W
	12 V	24 V							
HDS-12 ISO HDS-17 ISO HDS-25 ISO HDS-34 ISO	10820012345	10820024341	400*	G 1	G 3/4	G 1/8	G 3/8	IP 66	22
HDS-40 ISO HDS-47 ISO HDS-55 ISO HDS-64 ISO MDS-80 ISO	10820012498	10820024494	400*	G 1 1/4	G 3/4	G 3/4	G 1/4	IP 66	22
HDS-84 ISO HDS-108 ISO MDS-130 ISO	10820012872	10820024878	400*	G 1 1/2	G 1	G 3/4	G 1/4	IP 66	22
HDT-75 HDT-84 HDT-96 HDT-108	10820012881	10820024887	400*	G 1 1/4	G 1	G 3/4	G 1/4	IP 66	22
TWIN-FLOW 53+35 53+53 / 70+35	10820012550	10820024556	400*	G 1 1/4	G 3/4	G 3/8	G 1/4	IP 66	22
TWIN-FLOW 70+53	10820012729	10820024725							
TWIN-FLOW 76+76	10820012765	10820024761							

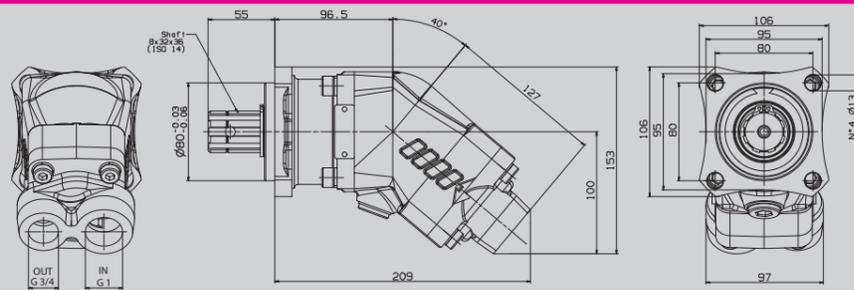
* See pumps catalogue for related pressure values.



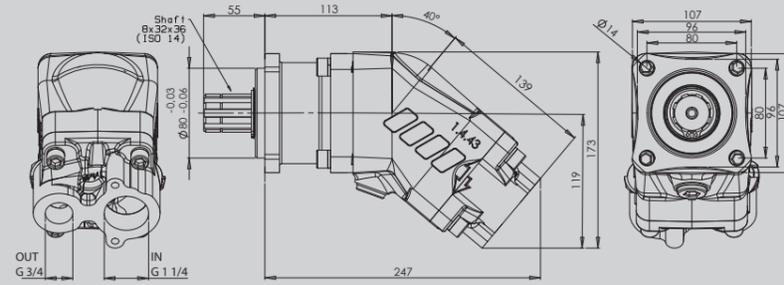
HDS

Unidirectional bent axis piston pumps with displacement from 12 to 130 cm³.

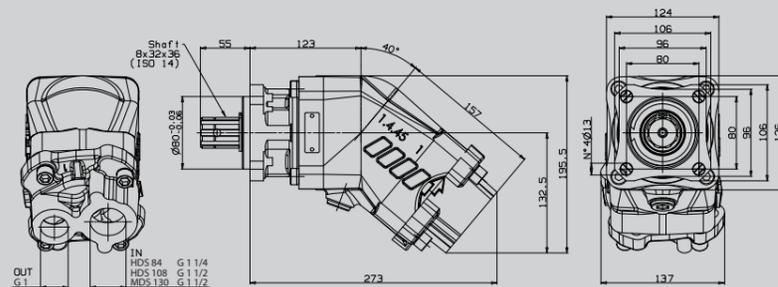
HDS 12-17-25-34 ISO



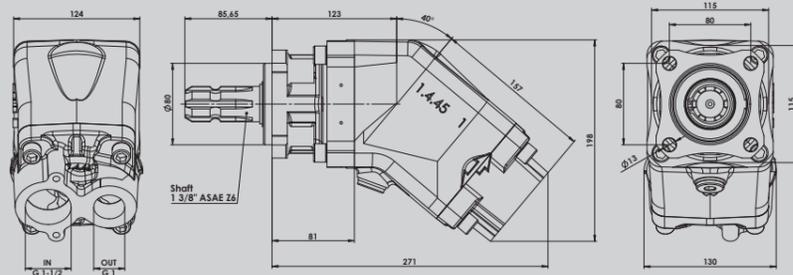
HDS 40-47-55-64 - MDS 80 ISO



HDS 84-96-108-130 - MDS 130 ISO



HDS 130 ASAE



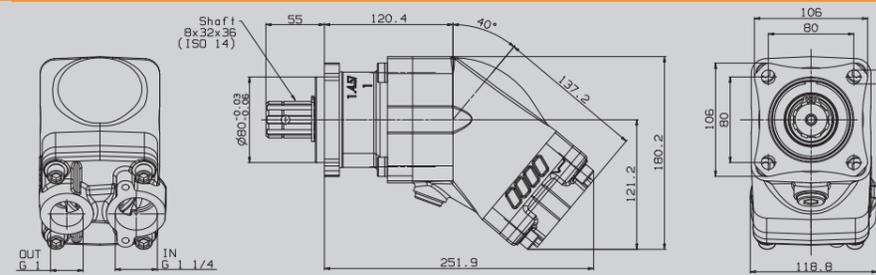
TECHNICAL FEATURES

Pump type	Rotation		Displac. cm ³	Pressure bar		Max speed rpm			Min speed rpm	Weight kg
	right	left		P1	P3	without load	continuous	intermittent		
HDS-12 ISO	60100110123	60100110129	12,62	350	400	3000	2300	3000	300	8,7
HDS-17 ISO	60100110173	60100110179	16,98	350	400	3000	2300	3000	300	8,7
HDS-25 ISO	60100110253	60100110259	25,12	350	400	3000	2300	3000	300	8,8
HDS-34 ISO	60100110343	60100110349	33,80	350	400	3000	2300	3000	300	8,7
HDS-40 ISO	60100110403	60100110409	41,25	350	400	2700	1900	2500	300	12,3
HDS-47 ISO	60100110473	60100110479	47,13	350	400	2700	1900	2500	300	12,4
HDS-55 ISO	60100110553	60100110559	56,70	350	400	2700	1900	2500	300	12,2
HDS-64 ISO	60100110643	60100110649	63,56	350	400	2700	1900	2500	300	12,2
MDS-80 ISO	60300110803	60300110809	77,25	250	300	2300	1800	2100	300	12
HDS-84 ISO	60100110843	60100110849	84,33	350	400	2300	1500	2000	300	19,2
HDS-96 ISO	60100110963	60100110969	95,5	350	400	2300	1500	2000	300	19
HDS-108 ISO	60100111083	60100111089	107	350	400	2300	1500	2000	300	18,6
HDS-130 ISO	60100111303	60100111309	131,62	350	400	2300	1750	2000	300	18,3
MDS-130 ISO	60300111303	60300111309	131,62	250	270	2300	1500	2000	300	18,7
HDS-130 ASAE	60100311309F		131,62	350	400	2300	1750	2000	300	18,7

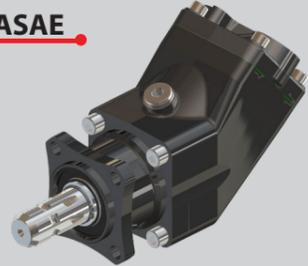
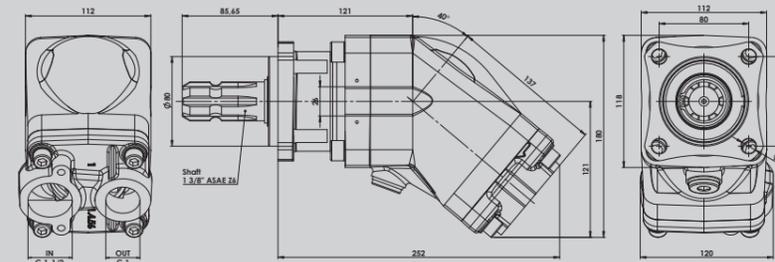
HDT

Unidirectional bent axis piston pumps with displacement from 75 to 108 cm³.

HDT 75-84-96-108 ISO



HDT 84-108 ASAE



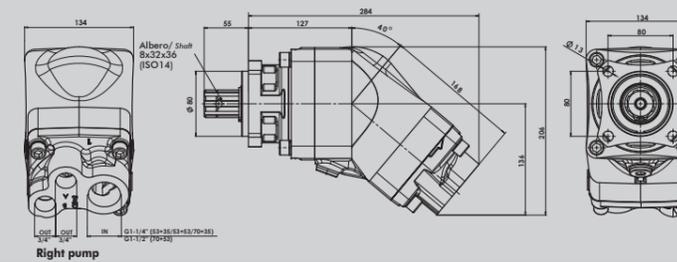
TECHNICAL FEATURES

Pump type	Rotation		Displac. cm ³	Pressure bar		Max speed rpm			Min speed rpm	Weight kg
	right	left		P1	P3	without load	continuous	intermittent		
HDT-75 ISO	60200110753	60200110759	75,5	350	370	2300	1500	2000	300	14,9
HDT-84 ISO	60200110843	60200110849	84,2	350	370	2300	1500	2000	300	14,7
HDT-96 ISO	60200110963	60200110969	95,5	350	370	2300	1500	2000	300	14,7
HDT-108 ISO	60200111083	60200111089	107	350	370	2300	1500	2000	300	14,6
HDT-84 ASAE		60200310849F	84,2	350	370	2300	1500	2000	300	15
HDT-108 ASAE		60200311089F	107	350	370	2300	1500	2000	300	15

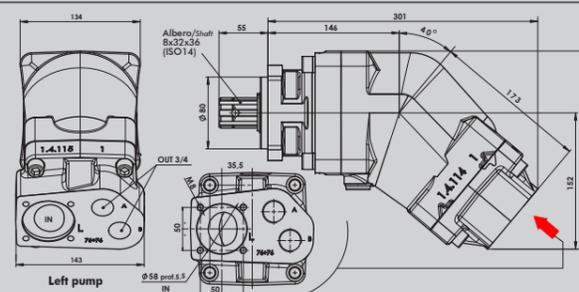
TWIN-FLOW

Unidirectional bent axis piston pumps with double output.

TWIN FLOW 53+35/53+53/70+35/70+53/76+76



TWIN FLOW 53+35
53+53/70+35/70+53



TWIN FLOW 76+76

TECHNICAL FEATURES

Pump type	Rotation		Rear cover	Pressure bar		Max speed rpm			Max. power kW	
	right	left		P1	P2	without load	with load on A and B outputs	with load on 1 output only	continuous	intermit.
TWIN-FLOW 53+35	60400115033	60400115039	50002995101 50002995209	350	400	2550	1800	2100	94	107
TWIN-FLOW 53+53	60400115053	60400115059	50002995307 50002995405	350	400	2550	1800	2100	111	127
TWIN-FLOW 70+35	60400117033	60400117039	50002997001 50002997109	350	400	2550	1800	2100	108	123
TWIN-FLOW 70+53	60400117053	60400117059	50002997403 50002997501	300	350	2550	1650	2100	98	114
TWIN-FLOW 76+76	60400117673	60400117679	50002997618 50002997609	300	350	2550	1500	2100	110	129