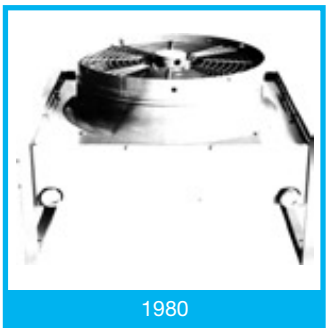
asahydraulik.com

heat exchanger

No. 1 for standard coolers!

asa

bl



1980

2011

asa progress in cooling

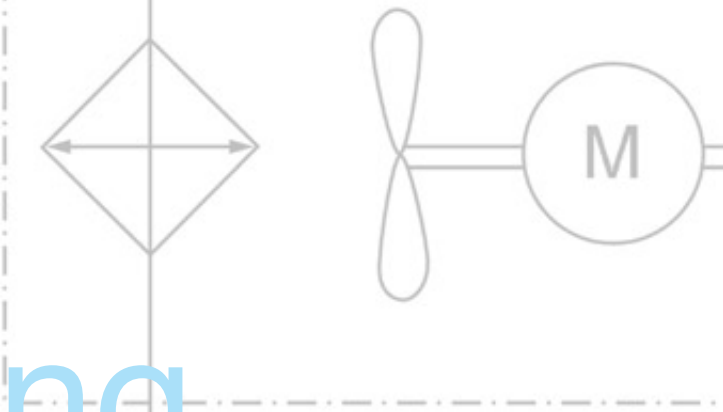
Progress in cooling stands for developments, advances and innovations already working for our customers' worldwide mobile and stationary applications.

More than 30 years experience in heat transfer equipment and special hydraulic components has made us a global leader in advanced technologies. Our **experience creates progress** to ensure you competitive pricing, consistent product performance and reliability.

asa's **global capacities** follow worldwide standards, confirmed by successful ISO 9001 quality management and client audits. The modular design and patented solutions of our products offer many advantages for customizing the product to your application.

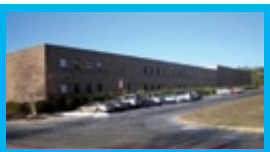
Over the years, asa continually developed into a globally active systems supplier. Despite this evolution, we consciously maintained the medium sized structure of a family owned company. As a result we are able to respond quickly and flexibly to our customer's demands and promote our innovations. We **build to your order in record time**. Flexibility, short lead time and quality engineering are our most important advantages.

This catalogue provides a technical overview of our standard products. Please contact us, if more detailed information is required or if you cannot find the optimal product for you.



cooling progress in

asa hydraulik GmbH, Austria / EU



asa of Amerika, New Jersey / USA

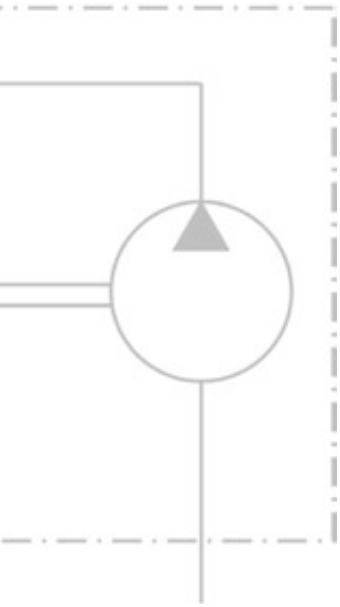
asa hydraulik of Kunshan / CHINA

blue efficiency

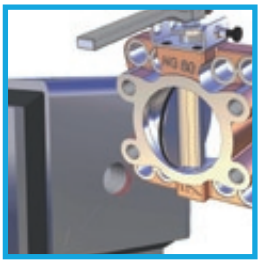
asa blue efficiency keeps you 2 steps ahead!

Best practice standard oil cooler series assures success in all applications.

No limits from the first worldwide, flexible mounting and connection system (patented)



Optimized air flow from our uniquely quality engineered fan guard and electronic fan speed control options.

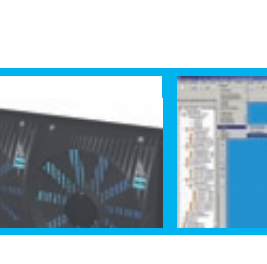


The asa rail system marries aluminium coolers and plastic tanks in a cost effective way.

Radiator integrated bypass system (patented) to protect the cooler, e.g.: for extremely viscous oil at cold start conditions.

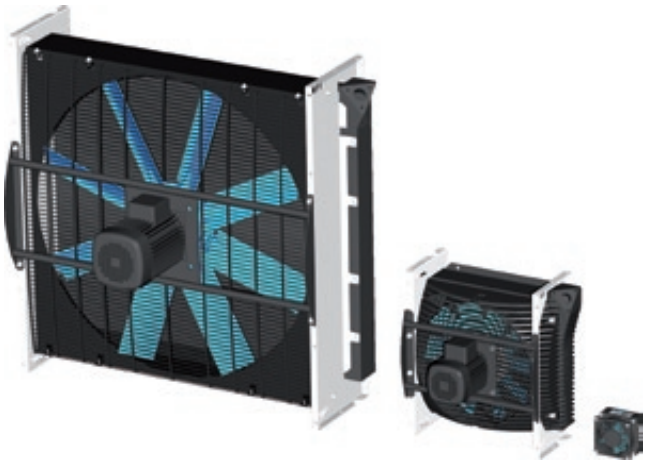
Value added vibration absorbers offer the capability to resist highest shear loads!

The smallest depth on serial produced standard butterfly flanges.



Compactness of serial produced parts as a function of capacity and life time.

standard is our definition

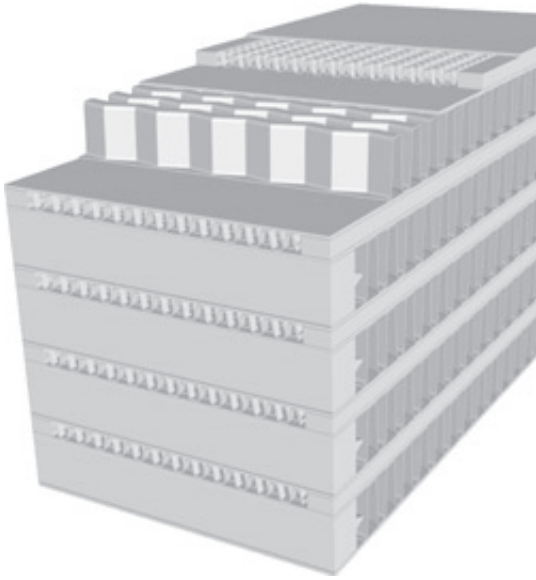


Standard Cooler Series

asa coolers have the advantages of a standard product and a customized one.

This means proven quality, best lead time and competitive prices, combined with flexibility and perfect fit into a given installation space so that the optimal performance output and best integration in the system can be achieved.

According to the cooler size, we offer various options and accessories to adapt the cooler to the customer's requirements. The benefits achieved, are not only for the application itself, but also for our customers' end product as an advantage against their competitors.



Pollution reduces performance!

Heavy polluted ambient air can clog the air side of the radiator and reduce the performance, dramatically.

Our standard oil cooler radiators are designed with smooth wavy air fins to offer higher resistance against clogging.

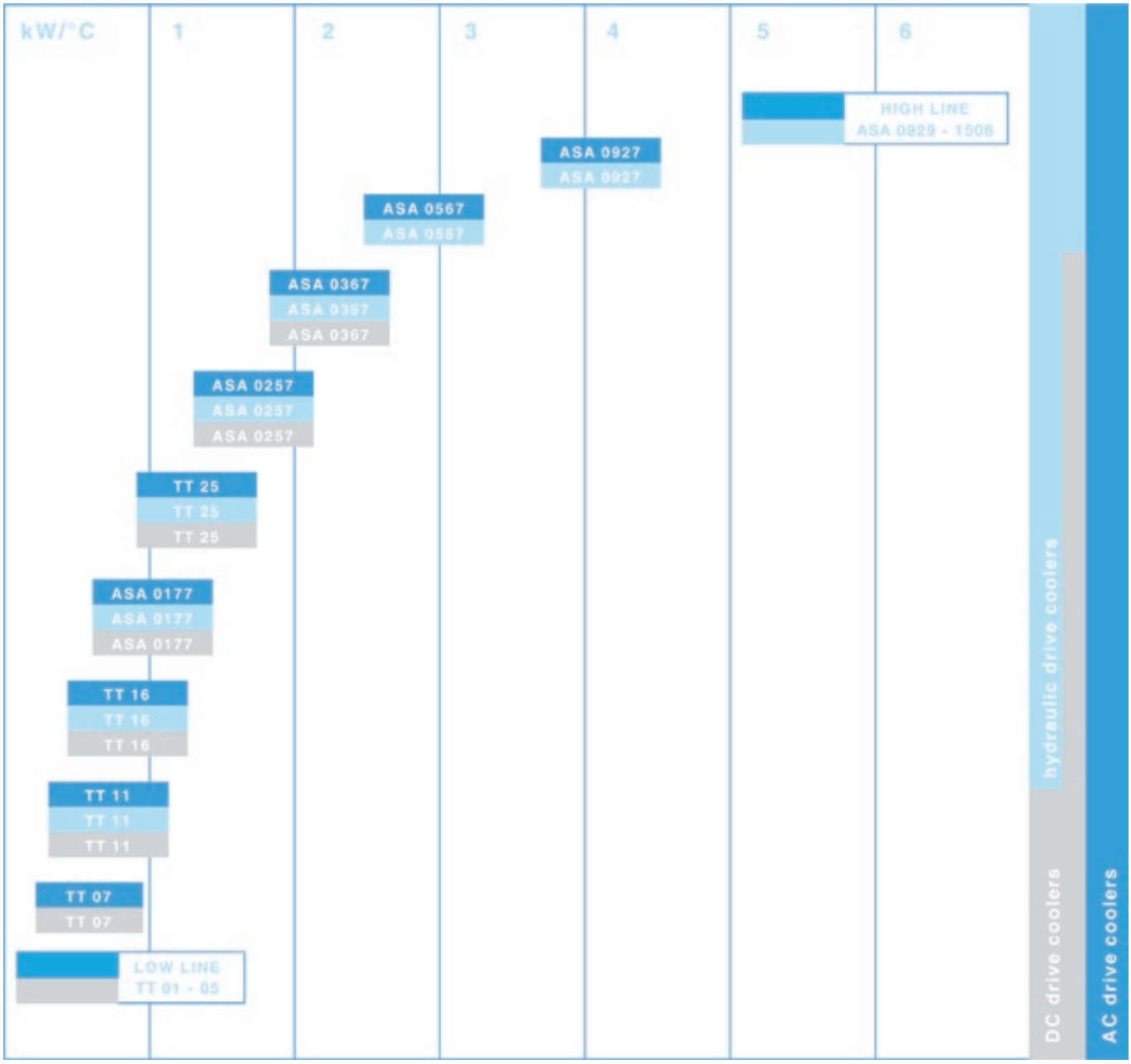
The smooth air fin surfaces are easy to clean and have a constant performance output. Therefore the cooler can also be used in applications like on agricultural machines, recycling power packs, quarry and construction machines without any additional protection (depending on the degree of pollution).

Customized 4 you with 2 systems

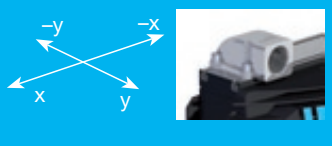
Our asa rail system and asa universal connector are the frame structure for easy and cost efficient adaption for various mounting systems and electronic control options.

Gain from the benefit of a fan speed control to extend the fan life time and keep the noise level to a minimum. The asa protection housing is designed with rubber vibration absorbers and a very robust metal housing to resist impacts on mobile applications.

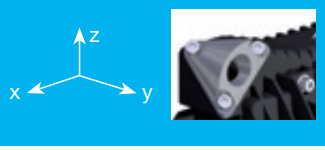
our standard range



asa rail

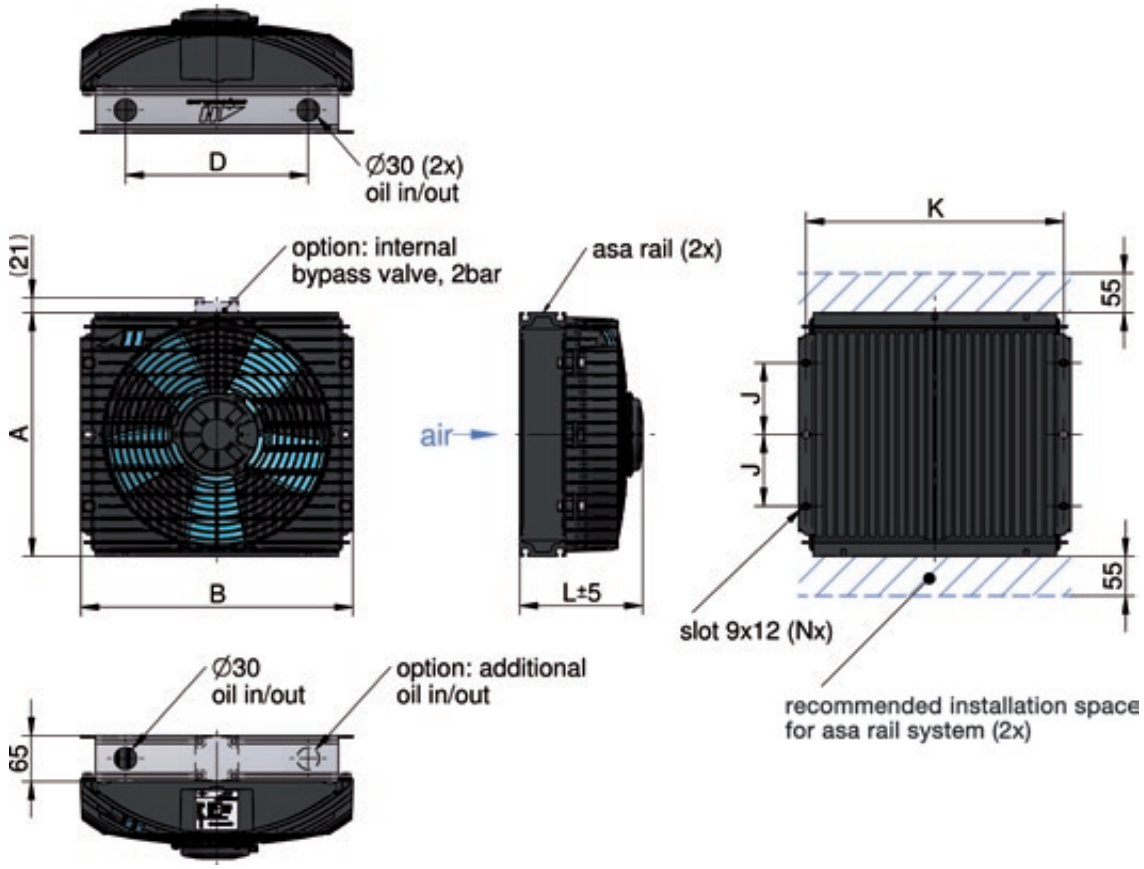


asa uc



Oil / Air Cooler TT Series

12V / 24 V DC asa rail



Dimensions

description	order number	A	B	D	J	K	L	N	weight
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[kg]
TT 07 rail 12V DC	ASATT07RD01	300	320	178	86	290	160	4	6,5
TT 07 rail 24V DC	ASATT07RD02	300	320	178	86	290	160	4	6,5
TT 07 rail 12V DC h.p.	ASATT07RD03	300	320	178	86	290	176	4	7,0
TT 07 rail 24V DC h.p.	ASATT07RD04	300	320	178	86	290	176	4	7,0
TT 11 rail 12V DC	ASATT11RD01	340	380	255	100	360	175	6	8,7
TT 11 rail 24V DC	ASATT11RD02	340	380	255	100	360	175	6	8,7
TT 16 rail 12V DC	ASATT16RD01	465	460	333	153	436	190	6	14,6
TT 16 rail 24V DC	ASATT16RD02	465	460	333	153	436	190	6	14,6
TT 25 rail 12V DC	ASATT25RD01	605	555	429	208,5	535	257	6	21,7
TT 25 rail 24V DC	ASATT25RD02	605	555	429	208,5	535	257	6	21,7

Technical Data

description	order number	current	motor power	protection level	air flow	noise level	internal bypass option
		[A]	[kW]		[kg/s]	[dB (A)]	cooler order number
TT 07 12V DC	ASATT07RD01	9,1	0,12	IP 68	0,32	74	ASATT07RD01BP
TT 07 24V DC	ASATT07RD02	5,1	0,13	IP 68	0,32	74	ASATT07RD02BP
TT 07 rail 12V DC h.p.	ASATT07RD03	17	0,22	IP 68	0,40	78	ASATT07RD03BP
TT 07 rail 24V DC h.p.	ASATT07RD04	8,5	0,22	IP 68	0,40	78	ASATT07RD04BP
TT 11 12V DC	ASATT11RD01	18	0,23	IP 68	0,62	77	ASATT11RD01BP
TT 11 24V DC	ASATT11RD02	11	0,28	IP 68	0,62	77	ASATT11RD02BP
TT 16 12V DC	ASATT16RD01	20	0,26	IP 68	0,68	79	ASATT16RD01BP
TT 16 24V DC	ASATT16RD02	11	0,28	IP 68	0,68	79	ASATT16RD02BP
TT 25 12V DC	ASATT25RD01	20	0,26	IP 68	0,78	77	ASATT25RD01BP
TT 25 24V DC	ASATT25RD02	11	0,28	IP 68	0,78	77	ASATT25RD02BP

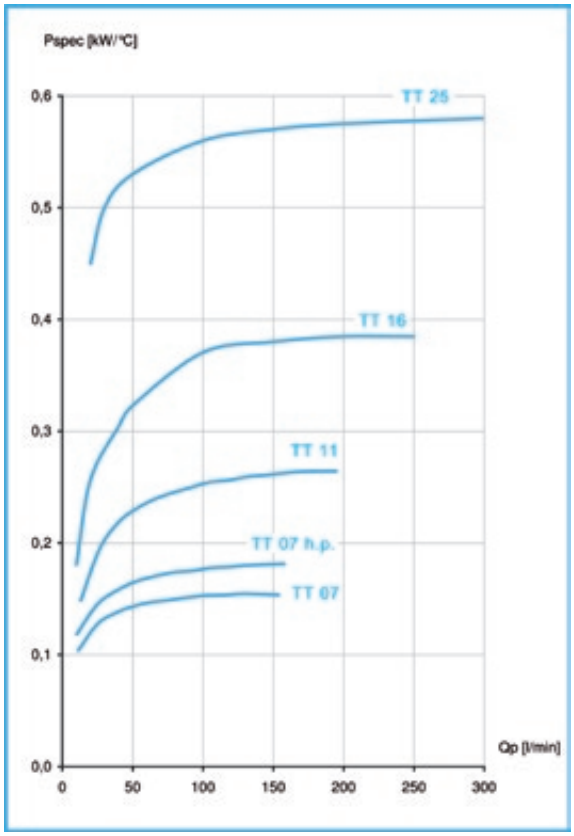
Oil / Air Cooler TT Series

12V / 24 V DC asa rail

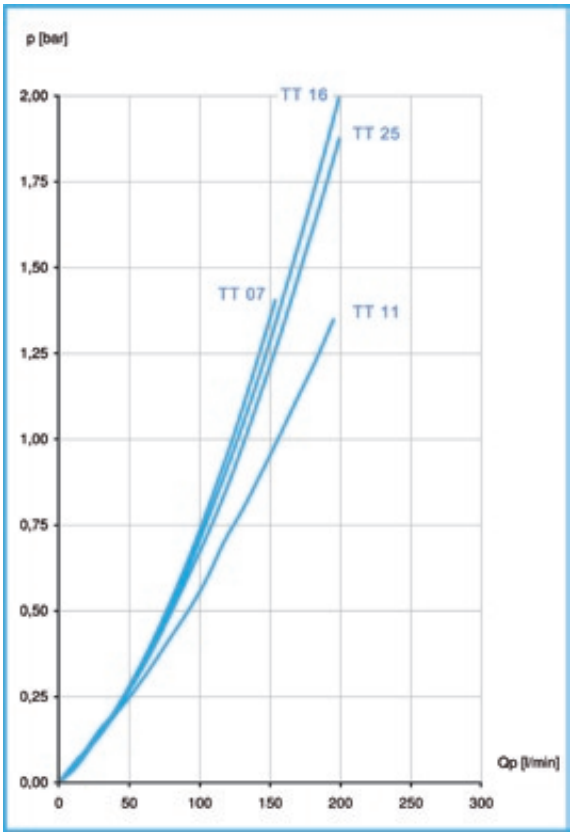
asahydraulik.com

Performance

Specific cooling performance



Pressure drop at 30cSt



Radiator

material:	aluminium
working temperature range:	–20°C to +80°C (oil temperature)
air fin shape:	wavy
working pressure:	26 bar (static)

Options

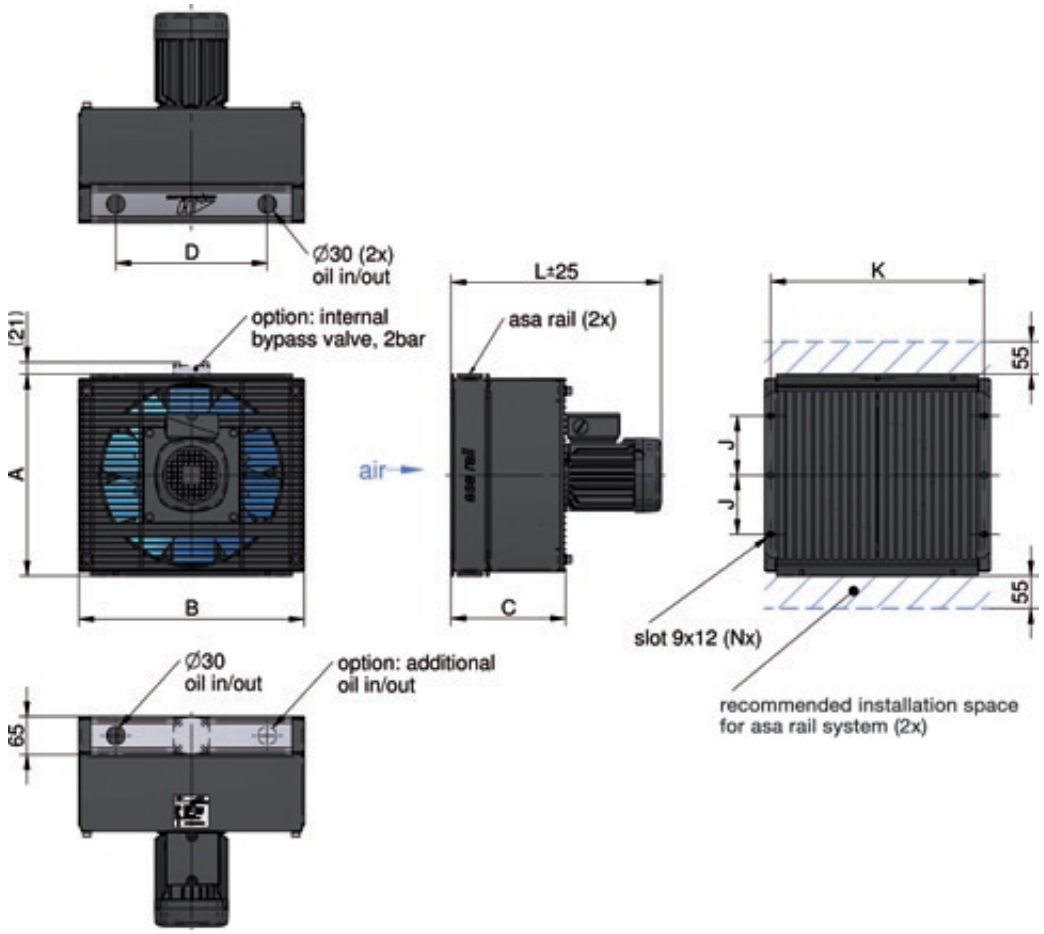
DC motor	brushless type
AC motor	115V 60Hz or 230V 50Hz, 230/400V 50Hz
temperatrue control	ILLZTC12K or 24K + ILLZTT5067K
temperature switches	ILLZTH4767K, ILLZTH4765K, ILLZTH6065K
protection housings	TT 07: ILLEGAK0075GT TT 11: ILLEGAK0115GT TT 16: ILLEGAK0176GT TT 25: on request
foot mounting	on request

Installation System (see more information on page 18)

connection BSP 1“	ILLZSET5G25
connection BSP 1 ¼“	ILLZSET5G32

Oil / Air Cooler TT Series

230/400 V 50 Hz asa rail



Dimensions

description	order number	A	B	C	D	J	K	L	N	weight
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[kg]
TT 07 rail 0,25kW AC	ASATT07RA44	300	320	193	178	86	290	355	4	19,5
TT 07 rail 0,55kW AC	ASATT07RA25	300	320	193	178	86	290	355	4	20,5
TT 11 rail 0,25kW AC	ASATT11RA44	340	380	193	255	100	360	355	6	20,7
TT 11 rail 0,55kW AC	ASATT11RA25	340	380	193	255	100	360	355	6	21,7
TT 16 rail 0,18kW AC	ASATT16RA64	465	460	218	333	153	436	380	6	25,0
TT 16 rail 0,25kW AC	ASATT16RA44	465	460	218	333	153	436	380	6	25,2
TT 16 rail 0,55kW AC	ASATT16RA25	465	460	218	333	153	436	380	6	26,2
TT 25 rail 0,37kW AC	ASATT25RA66	605	555	218	429	208,5	535	425	6	32,5
TT 25 rail 0,55kW AC	ASATT25RA46	605	555	218	429	208,5	535	425	6	32,3

Technical Data

description	order number	current	motor power	motor size	protection level	rotation	air flow	noise level	optional internal bypass
		[A]	[kW]			[rpm]	[kg/s]	[dB (A)]	cooler order number
TT 07 rail 0,25kW AC	ASATT07RA44	0,8	0,25	71	IP 55	1385	0,19	60	ASATT07RA44BP
TT 07 rail 0,55kW AC	ASATT07RA25	1,4	0,55	71	IP 55	2815	0,40	78	ASATT07RA25BP
TT 11 rail 0,25kW AC	ASATT11RA44	0,8	0,25	71	IP 55	1385	0,34	73	ASATT11RA44BP
TT 11 rail 0,55kW AC	ASATT11RA25	1,4	0,55	71	IP 55	2815	0,68	83	ASATT11RA25BP
TT 16 rail 0,18kW AC	ASATT16RA64	0,9	0,18	71	IP 55	920	0,42	62	ASATT16RA64BP
TT 16 rail 0,25kW AC	ASATT16RA44	0,8	0,25	71	IP 55	1385	0,58	74	ASATT16RA44BP
TT 16 rail 0,55kW AC	ASATT16RA25	1,4	0,55	71	IP 55	2815	0,86	91	ASATT16RA25BP
TT 25 rail 0,37kW AC	ASATT25RA66	1,2	0,37	80	IP 55	915	0,68	68	ASATT25RA66BP
TT 25 rail 0,55kW AC	ASATT25RA46	1,6	0,55	80	IP 55	1400	1,10	79	ASATT25RA46BP

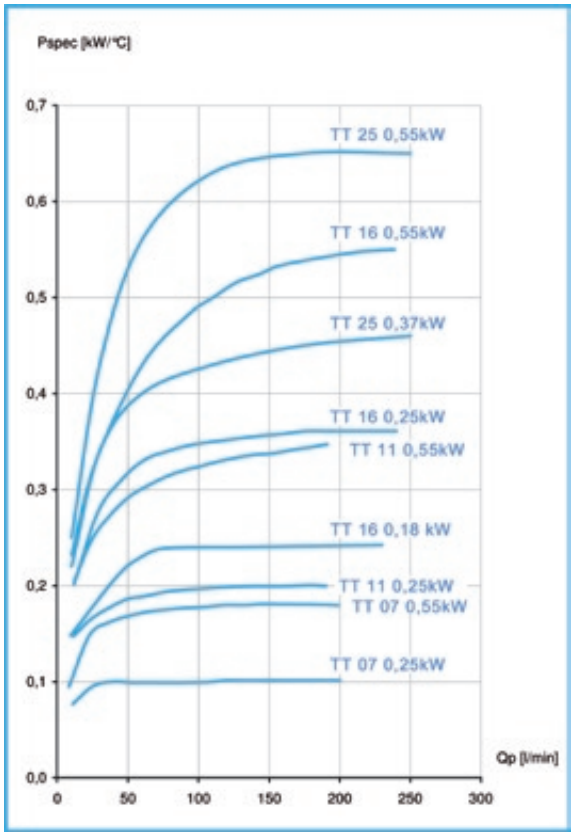
Oil / Air Cooler TT Series

230/400 V 50 Hz asa rail

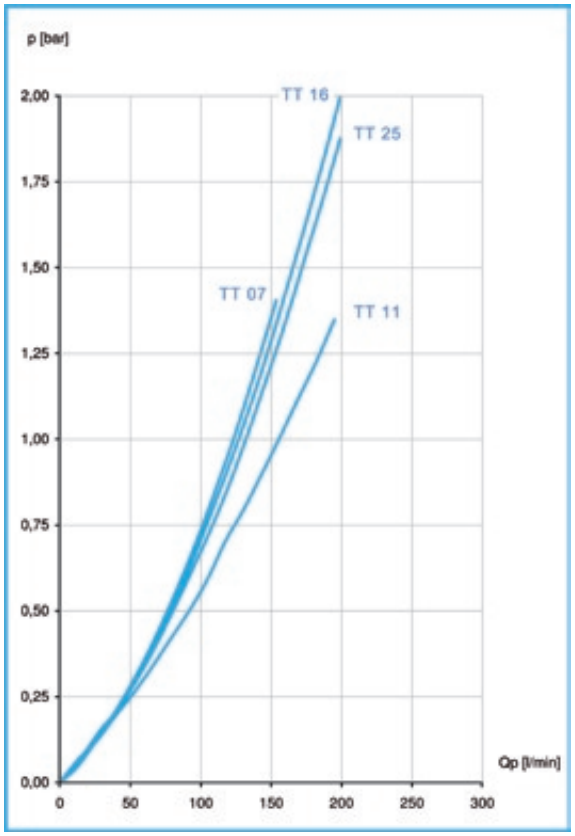
asahydraulik.com

Performance

Specific cooling performance



Pressure drop at 30cSt



Radiator

material:	aluminium
working temperature range:	–20°C to +80°C (oil temperature)
air fin shape:	wavy
working pressure:	26 bar (static)

Options

temperature switches	ILLZTH4767K, ILLZTH4765K, ILLZTH6065K
foot mounting	on request

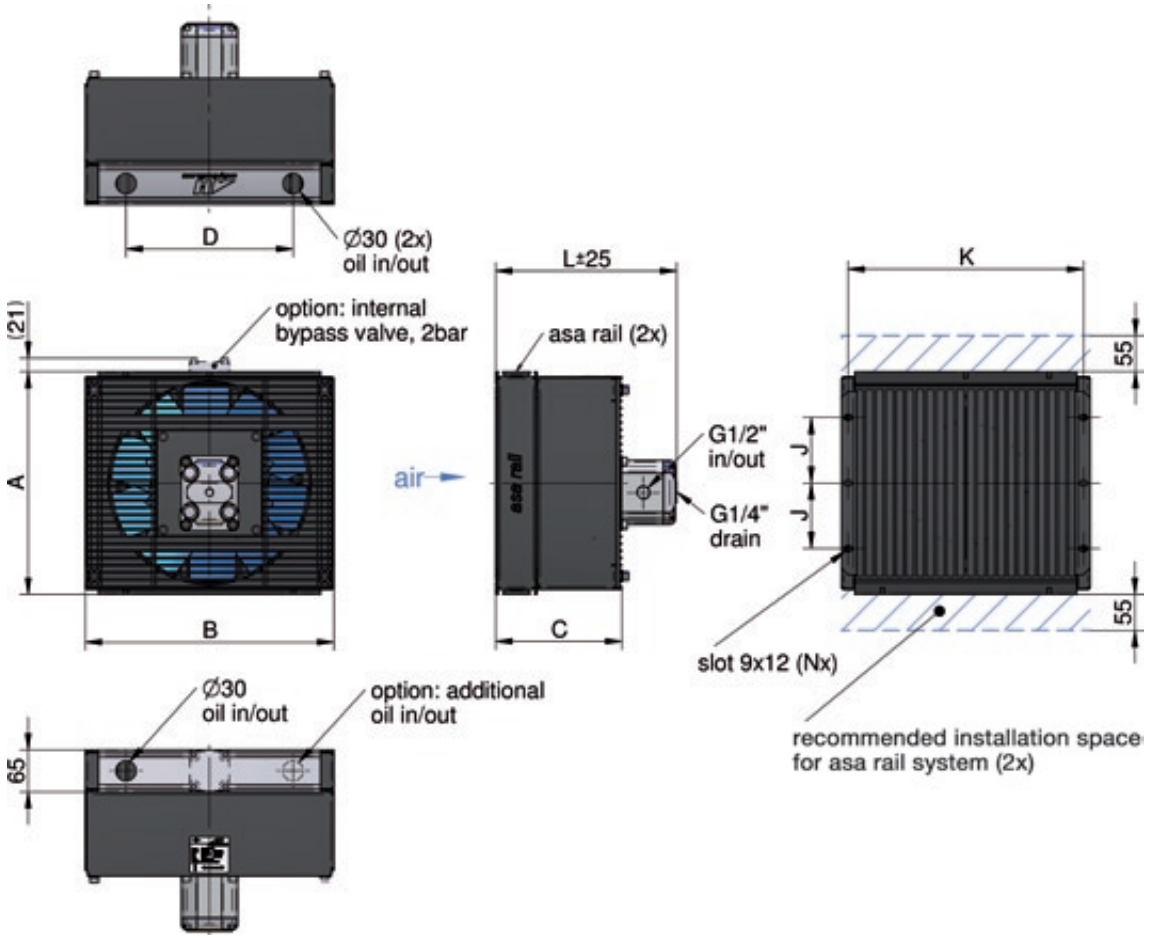
Installation System (see more information on page 18)

connection BSP 1“	ILLZSET5G25
connection BSP 1 ¼“	ILLZSET5G32

Oil / Air Cooler TT Series

11 cm³ hydraulic drive asa rail

asahydraulik.com



Dimensions

description	order number	A	B	C	D	J	K	L	N	weight
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[kg]
TT 11 rail 11cm³ hydr. motor	ASATT11RH11	340	380	193	255	100	360	277	6	16,7
TT 16 rail 11cm³ hydr. motor	ASATT16RH11	465	460	218	333	153	436	302	6	21,2
TT 25 rail 11cm³ hydr. motor	ASATT25RH11	605	555	218	429	208,5	535	302	6	27,8

Technical Data

description	order number	motor power	oil pressure	oil flow	rotation	air flow	noise level	internal bypass option
		[kW]	[bar]	[lpm]	[rpm]	[kg/s]	[dB (A)]	cooler order number
TT 11 rail 11cm³ hydr. motor	ASATT11RH11	0,02	1	12	1000	0,21	66	ASATT11RH11BP
TT 11 rail 11cm³ hydr. motor	ASATT11RH11	0,19	6	23	2000	0,40	82	ASATT11RH11BP
TT 11 rail 11cm³ hydr. motor	ASATT11RH11	0,65	12	35	3000	0,75	90	ASATT11RH11BP
TT 16 rail 11cm³ hydr. motor	ASATT16RH11	0,06	2	12	1000	0,44	61	ASATT16RH11BP
TT 16 rail 11cm³ hydr. motor	ASATT16RH11	0,51	9	23	2000	0,76	79	ASATT16RH11BP
TT 16 rail 11cm³ hydr. motor	ASATT16RH11	1,50	20	35	3000	1,02	91	ASATT16RH11BP
TT 25 rail 11cm³ hydr. motor	ASATT25RH11	0,12	4	12	1000	0,81	73	ASATT25RH11BP
TT 25 rail 11cm³ hydr. motor	ASATT25RH11	0,95	15	23	2000	1,63	80	ASATT25RH11BP
TT 25 rail 11cm³ hydr. motor	ASATT25RH11	3,20	34	35	3000	2,44	89	ASATT25RH11BP

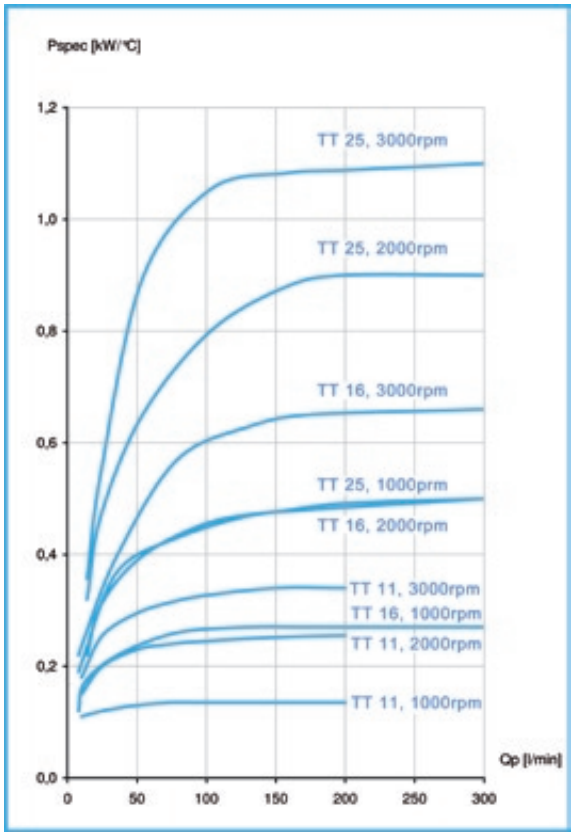
Oil / Air Cooler TT Series

11 cm³ hydraulic drive asa rail

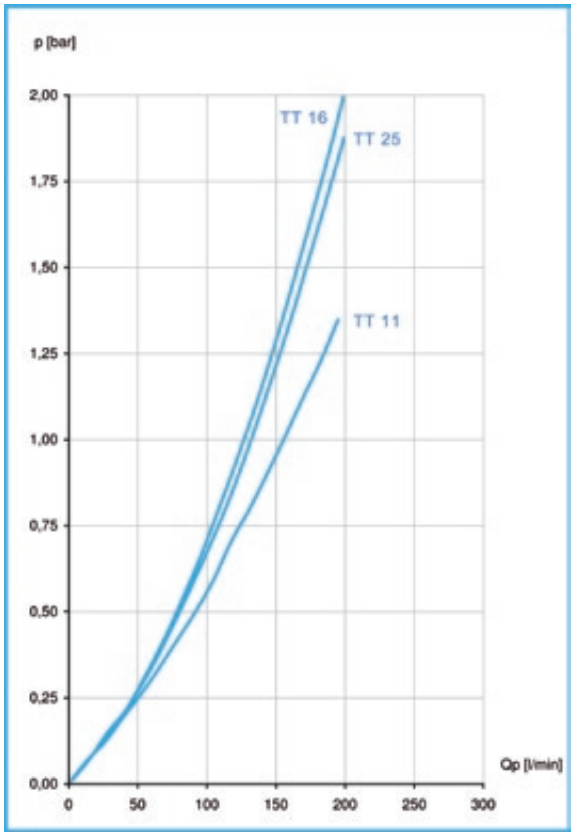
asahydraulik.com

Performance

Specific cooling performance



Pressure drop at 30cSt



Radiator

material:	aluminium
working temperature range:	–20°C to +80°C (oil temperature)
air fin shape:	wavy
working pressure:	26 bar (static)

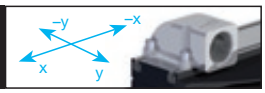
Options

temperature switches	ILLZTH4767K, ILLZTH4765K, ILLZTH6065K
foot mounting	on request

Installation System (see more information on page 18)

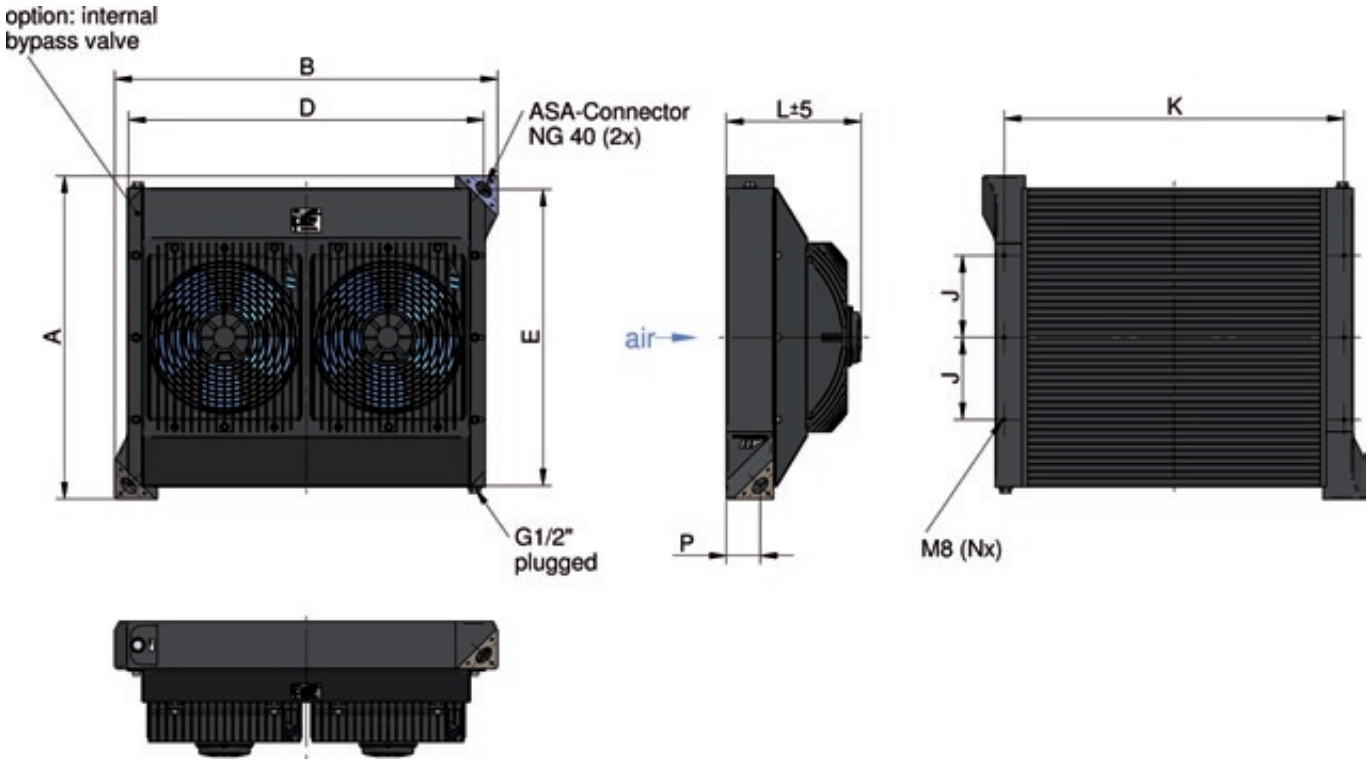
connection BSP 1“	ILLZSET5G25
connection BSP 1 ¼“	ILLZSET5G32

asa rail



Oil / Air Cooler ASA Series

12V / 24 V DC asa uc



Dimensions

description	order number	A	B	D	J	K	L	N	P	weight
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[kg]
ASA 0177 12V DC	ASA0177AD01	470	590	535	153	510	228	4	68	23,7
ASA 0177 24V DC	ASA0177AD02	470	590	535	153	510	228	4	68	23,7
ASA 0257 12V DC h.p.	ASA0257AD03	555	690	635	208,5	530*)	259	6*)	68	38,5
ASA 0257 24V DC h.p.	ASA0257AD04	555	690	635	208,5	530*)	259	6*)	68	38,5
ASA 0367 12V DC	ASA0367AD01	650	770	715	165	694	271	6	68	39,8
ASA 0367 24V DC	ASA0367AD02	650	770	715	165	694	271	6	68	39,8

*).... please contact us for a specific scale drawing

Technical Data

description	order number	current	motor power	protection level	air flow	noise level	internal bypass option
		[A]	[kW]		[kg/s]	[dB (A)]	cooler order number
ASA 0177 12V DC	ASA0177AD01	19,3**)	0,22	IP 68	0,62	79	ASA0177AD01BP
ASA 0177 24V DC	ASA0177AD02	9,7**)	0,22	IP 68	0,62	79	ASA0177AD02BP
ASA 0257 12V DC h.p.	ASA0257AD03	2×15	0,50	IP 68	1,20	83	ASA0257AD03BP
ASA 0257 24V DC h.p.	ASA0257AD04	2×9,7	0,50	IP 68	1,20	83	ASA0257AD04BP
ASA 0367 12V DC	ASA0367AD01	2×15	0,50	IP 68	1,15	84	ASA0367AD01BP
ASA 0367 24V DC	ASA0367AD02	2×9,5	0,50	IP 68	1,15	84	ASA0367AD02BP

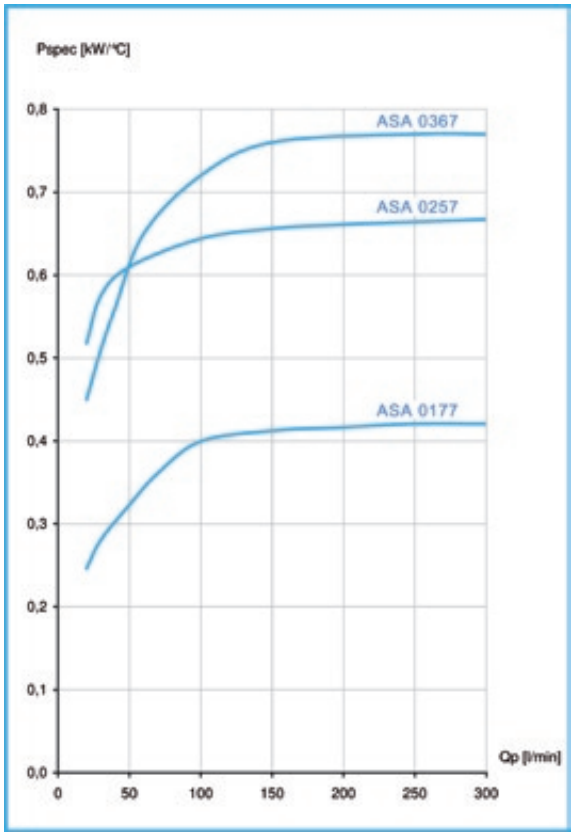
**)... single fan

Oil / Air Cooler ASA Series

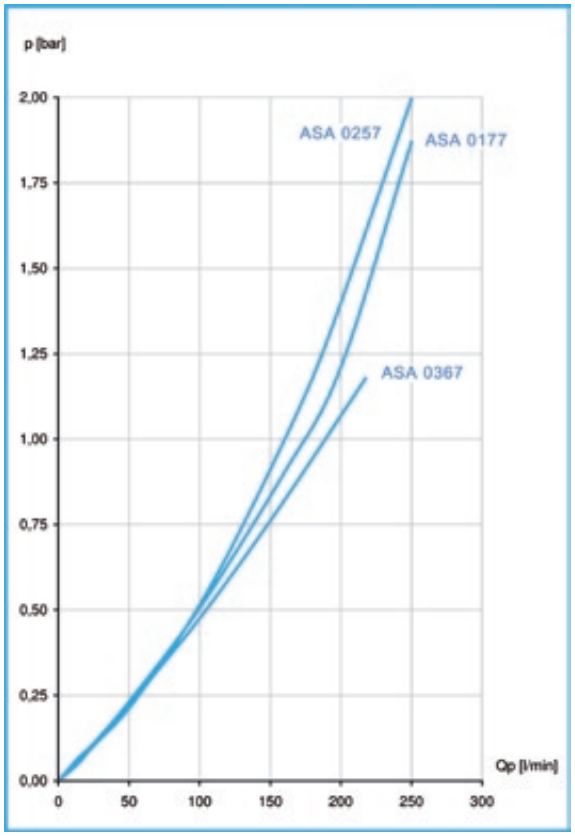
12V / 24 V DC asa uc

Performance

Specific cooling performance



Pressure drop at 30cSt



Radiator

material:	aluminium
working temperature range:	–20°C to +80°C (oil temperature)
air fin shape:	wavy
working pressure:	26 bar (static)

Options

DC motor	brushless type
AC motor	115V 60Hz, 230V 50Hz or 230/400V 50Hz
temperatrue control	ILLZTC12K or 24K + ILLZTT5067K
temperature switches	ILLZTH4767K, ILLZTH4765K, ILLZTH6065K

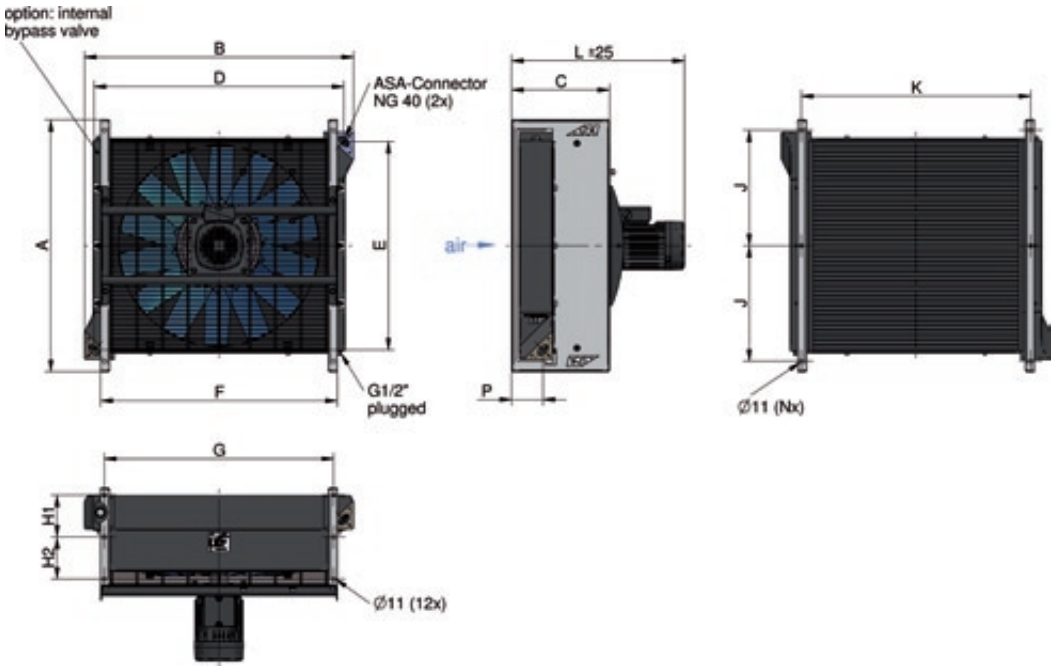
Installation System (see more information on page 19)

connection BSP 1 ¼“	ILLZASA32G32
connection BSP 1 ½“	ILLZASA40G40

Oil / Air Cooler ASA Series

230/400V 50Hz asa uc

asahydraulik.com



Dimensions

description	order number	A	B	C	D	E	F	G	H1	H2	J	K	N	L	P	weight
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[kg]
ASA 0177 0,18kW AC	ASA0177AA64	530	582	260	534	412	462	442	120	90	490	442	4	460	89	39,3
ASA 0177 0,25kW AC	ASA0177AA44	530	582	260	534	412	462	442	120	90	490	442	4	460	89	40,7
ASA 0177 0,55kW AC	ASA0177AA25	530	582	260	534	412	462	442	120	90	490	442	4	460	89	40,5
ASA 0257 0,37kW AC	ASA0257AA66	635	682	270	634	501	562	542	110	110	280	542	6	480	93	48,7
ASA 0257 0,55kW AC	ASA0257AA46	635	682	270	634	501	562	542	110	110	280	542	6	480	93	48,4
ASA 0367 0,37kW AC	ASA0367AA66	720	770	280	720	596	676	656	120	120	330	656	6	515	90	63
ASA 0367 0,55kW AC	ASA0367AA46	720	770	280	720	596	676	656	120	120	330	656	6	515	90	59,5
ASA 0367 0,75kW AC	ASA0367AA47	720	770	280	720	596	676	656	120	120	330	656	6	515	90	64,1
ASA 0567 0,37kW AC	ASA0567AA66	860	920	290	870	746	826	806	125	125	400	806	10	524	92	79,5
ASA 0567 0,75kW AC	ASA0567AA47	860	920	290	870	746	826	806	125	125	400	806	10	524	92	80,6
ASA 0567 2,20kW AC	ASA0567AA4A	860	920	290	870	746	826	806	125	125	400	806	10	587	92	92,3
ASA 0927 1,50kW AC	ASA0927AA6A	1100	1165	320	1120	921	1058	1031	130	130	504,5	1031	10	612	87	140,5
ASA 0927 4,00kW AC	ASA0927AA6E	1100	1165	320	1120	921	1058	1031	130	130	504,5	1031	10	780	87	178,6

Technical Data

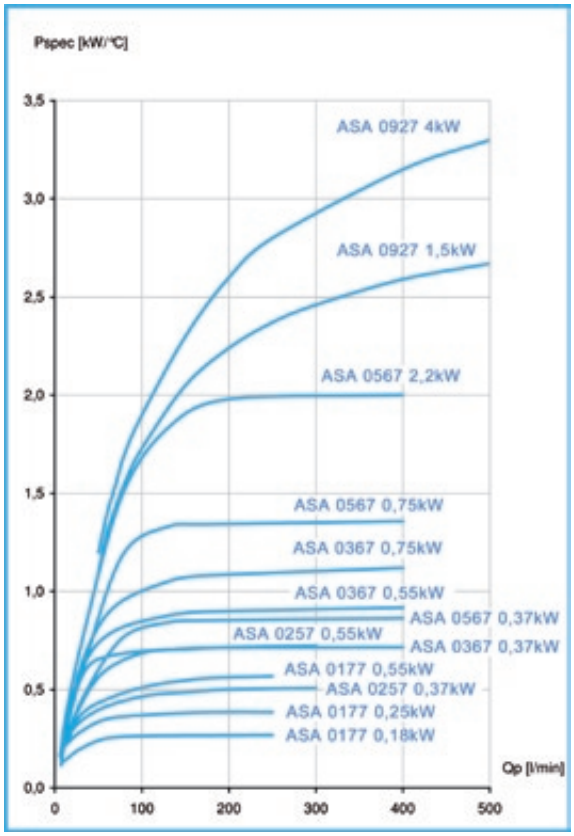
description	order number	current	motor power	motor size	protection level	rotation	air flow	noise level	internal bypass option
		[A]	[kW]			[rpm]	[kg/s]	[dB (A)]	cooler order number
ASA 0177 0,18kW AC	ASA0177AA64	0,9	0,18	71	IP 55	920	0,39	62	ASA0177AA64BP
ASA 0177 0,25kW AC	ASA0177AA44	0,78	0,25	71	IP 55	1385	0,57	74	ASA0177AA44BP
ASA 0177 0,55kW AC	ASA0177AA25	1,4	0,55	71	IP 55	2815	0,82	91	ASA0177AA25BP
ASA 0257 0,37kW AC	ASA0257AA64	1,2	0,37	80	IP 55	915	0,75	68	ASA0257AA64BP
ASA 0257 0,55kW AC	ASA0257AA44	1,6	0,55	80	IP 55	1400	1,14	79	ASA0257AA44BP
ASA 0367 0,37kW AC	ASA0367AA66	1,2	0,37	80	IP 55	915	0,94	73	ASA0367AA66BP
ASA 0367 0,55kW AC	ASA0367AA46	1,6	0,55	80	IP 55	1400	1,20	79	ASA0367AA46BP
ASA 0367 0,75kW AC	ASA0367AA47	2,1	0,75	80	IP 55	1400	1,47	83	ASA0367AA47BP
ASA 0567 0,37kW AC	ASA0567AA66	1,2	0,37	80	IP 55	915	1,21	74	ASA0567AA66BP
ASA 0567 0,75kW AC	ASA0567AA47	2,1	0,75	80	IP 55	1400	1,89	84	ASA0567AA47BP
ASA 0567 2,20kW AC	ASA0567AA4A	5,15	2,20	100	IP 55	1420	2,80	88	ASA0567AA4ABP
ASA 0927 1,50kW AC	ASA0927AA6A	3,9	1,50	100	IP 55	945	4,73	86	–
ASA 0927 4,00kW AC	ASA0927AA6E	9	4,00	132	IP 55	950	6,86	89	–

Oil / Air Cooler ASA Series

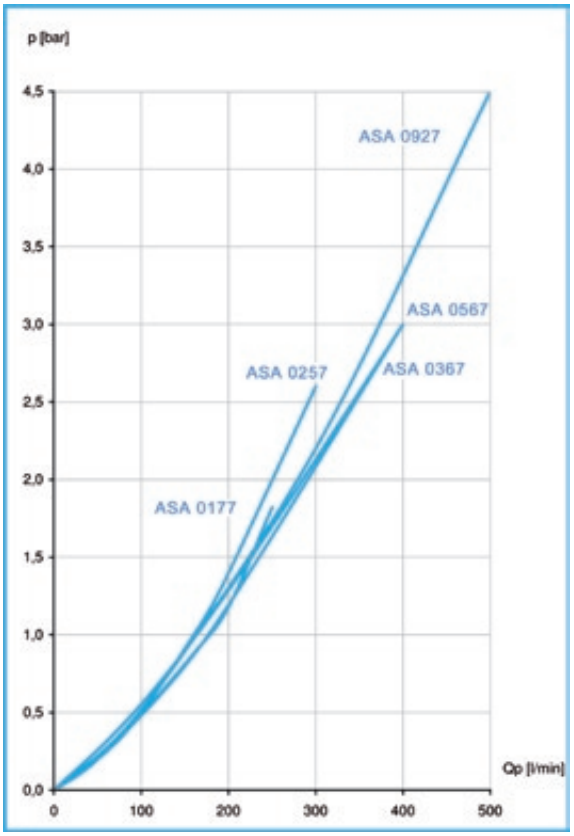
230/400V 50Hz asa uc

Performance

Specific cooling performance



Pressure drop at 30cSt



Radiator

material:	aluminium
working temperature range:	–20°C to +80°C (oil temperature)
air fin shape:	wavy
working pressure:	26 bar (static)

Options

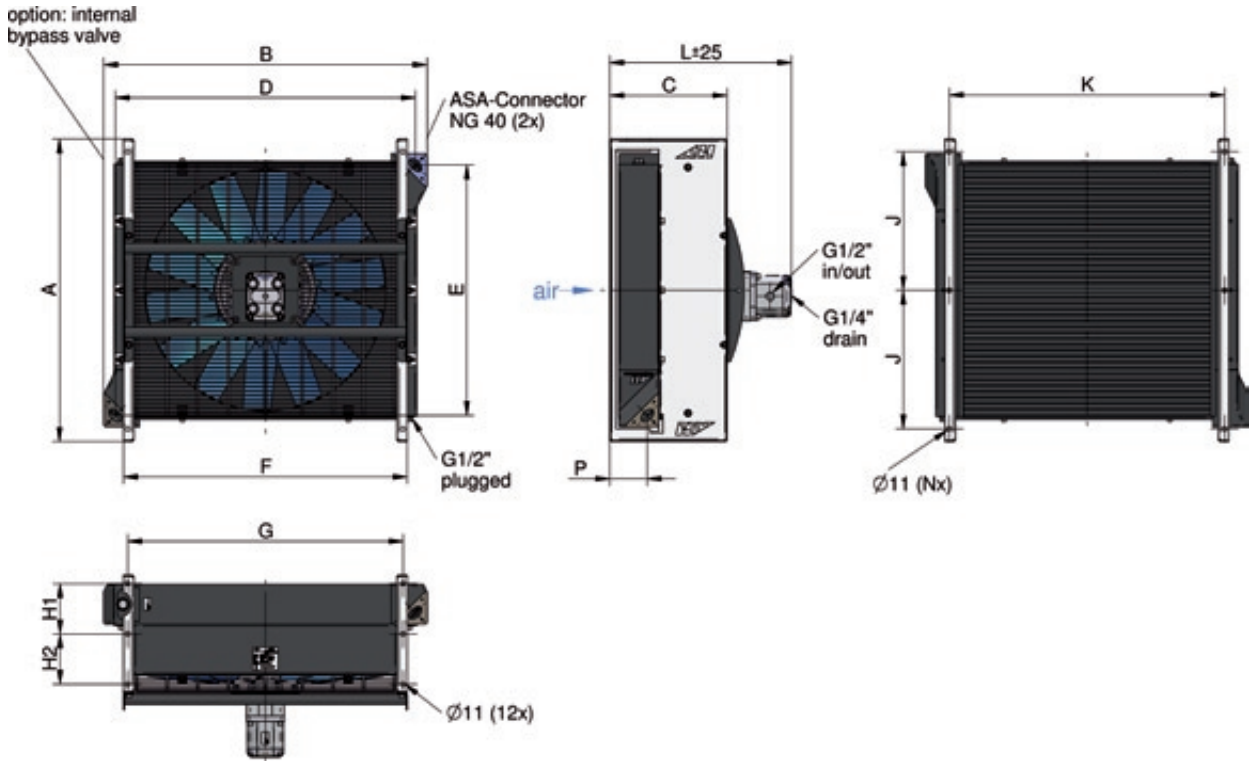
temperature switches	ILLZTH4767K, ILLZTH4765K, ILLZTH6065K

Installation System (see more information on page 19)

connection BSP 1 ¼“	ILLZASA32G32
connection BSP 1 ½“	ILLZASA40G40

Oil / Air Cooler ASA Series

11 cm³ hydraulic drive asa uc



Dimensions

description	order number	A	B	C	D	E	F	G	H1	H2	J	K	N	L	P	weight
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[kg]
ASA 0177 11cm³ motor	ASA0177AH11	530	582	260	534	412	462	442	120	90	490	442	4	364	89	37,2
ASA 0257 11cm³ motor	ASA0257AH11	635	682	270	634	501	562	542	110	110	280	542	6	370	93	49,9
ASA 0367 11cm³ motor	ASA0367AH11	720	770	280	720	596	676	656	120	120	330	656	6	430	90	55,4
ASA 0567 11cm³ motor	ASA0567AH11	860	920	290	870	746	826	806	125	125	400	806	10	460	92	71,9
ASA 0927 11cm³ motor	ASA0927AH11	1100	1165	320	1120	921	1058	1031	130	130	504,5	1031	10	475	87	120

Technical Data

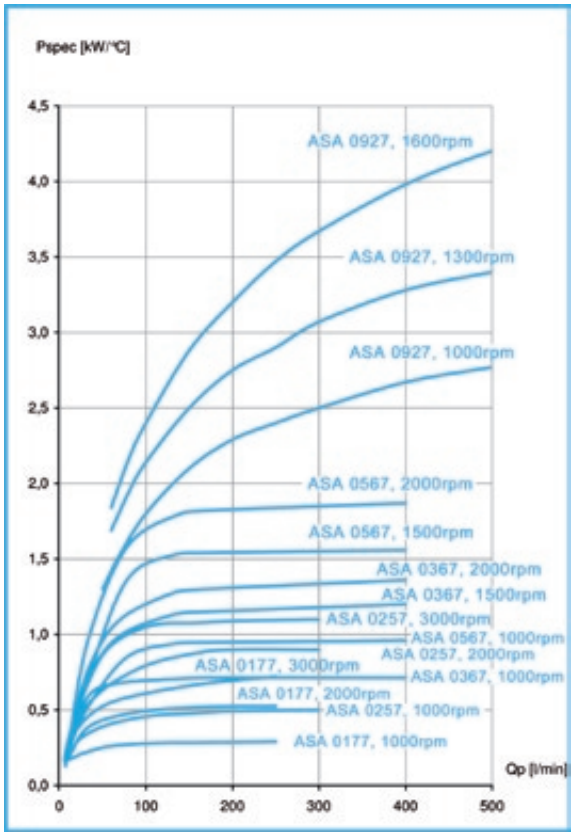
description	order number	motor power	oil pressure	oil flow	rotation	air flow	noise level	internal bypass option
		[kW]	[bar]	[lpm]	[rpm]	[kg/s]	[dB (A)]	cooler order number
ASA 0177 11cm³ motor	ASA0177AH11	0,06	3	12	1000	0,42	61	ASA0177AH11BP
	ASA0177AH11	0,51	15	23	2000	0,73	79	ASA0177AH11BP
	ASA0177AH11	1,50	29	35	3000	0,97	91	ASA0177AH11BP
ASA 0257 11cm³ motor	ASA0257AH11	0,12	7	12	1000	0,81	73	ASA0257AH11BP
	ASA0257AH11	0,95	27	23	2000	1,63	80	ASA0257AH11BP
	ASA0257AH11	3,20	61	35	3000	2,44	89	ASA0257AH11BP
ASA 0367 11cm³ motor	ASA0367AH11	0,20	12	12	1000	0,94	73	ASA0367AH11BP
	ASA0367AH11	0,68	26	17	1500	1,53	85	ASA0367AH11BP
	ASA0367AH11	1,60	48	12	2000	2,20	90	ASA0367AH11BP
ASA 0567 11cm³ motor	ASA0567AH11	0,23	13	12	1000	1,21	77	ASA0567AH11BP
	ASA0567AH11	0,78	30	17	1500	1,89	87	ASA0567AH11BP
	ASA0567AH11	1,86	54	23	2000	2,90	90	ASA0567AH11BP
ASA 0927 11cm³ motor	ASA0927AH11	1,10	63	12	1000	5,00	88	ASA0927AH11BP
	ASA0927AH11	2,60	115	15	1300	6,50	92	ASA0927AH11BP
	ASA0927AH11	4,70	169	19	1600	7,95	97	ASA0927AH11BP

Oil / Air Cooler ASA Series

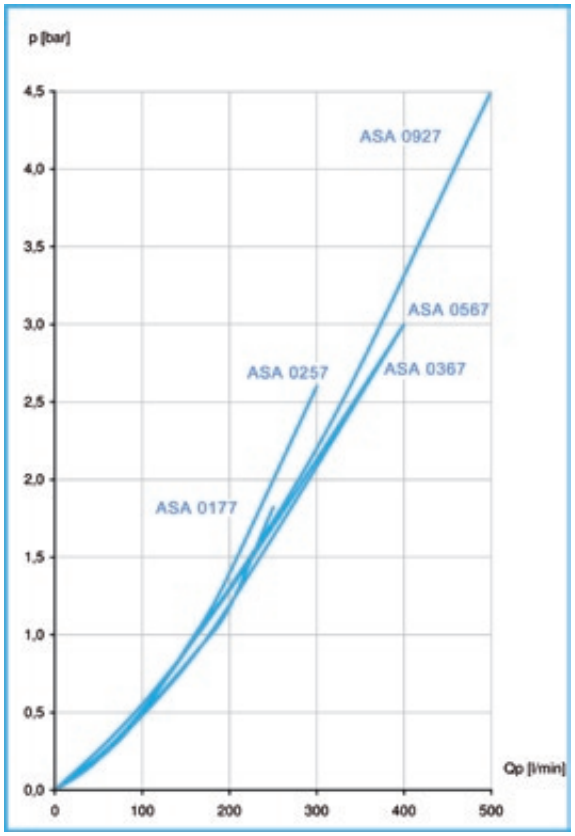
11 cm³ hydraulic drive asa uc

Performance

Specific cooling performance



Pressure drop at 30cSt



Radiator

material:	aluminium
working temperature range:	–20°C to +80°C (oil temperature)
air fin shape:	wavy
working pressure:	26 bar (static)

Installation System (see more information on page 19)

connection BSP 1 ¼“	ILLZASA32G32
connection BSP 1 ½“	ILLZASA40G40

ASA Rail Connector Set

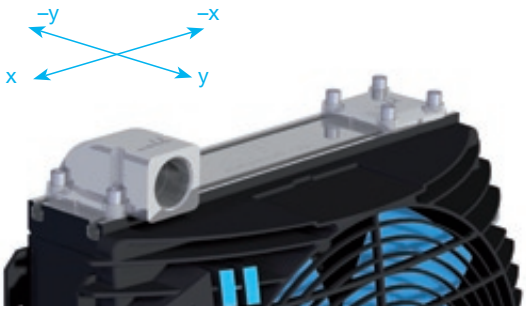
BSP 1”, BSP 1 ¼” asa rail

asahydraulik.com

Description

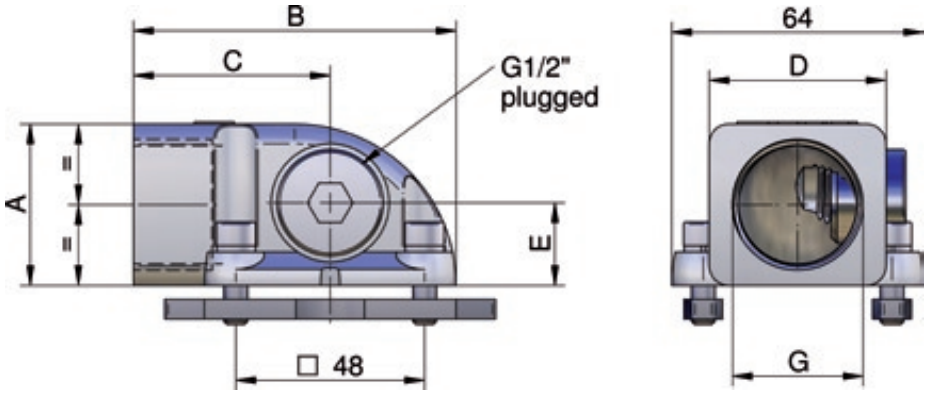
The asa rail system is the first worldwide flexible mounting and connection system for air blast heat exchangers. The flexibility comes from free choice of the direction. Each port on the radiator has 3 possibilities. This well designed radiator concept brings another flexible innovation hit to the standard cooler market: The oil flow direction can be varied between u-flow direction and diagonal oil flow on each TT rail cooler.

The rail slots in the radiator are not only to connect the blocks and make the cooler complete. Various possible mounting arrangements can be attached to the system: bypass systems, mounting of the cooler to an aggregate, measurement devices, and much more. Please contact us to discover the huge potential of this system for your application.

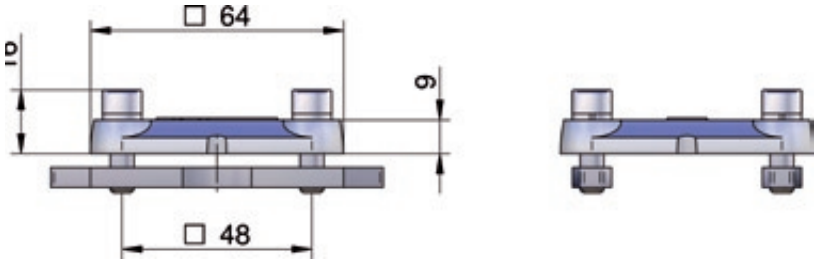


Technical Data

ported block



closed block



Technical Data

description	order number	block material	o-ring	A	B	C	D	E	G	weight
				[mm]	[mm]	[mm]	[mm]	[mm]	BSP	[kg]
asa rail connector BSP 1”	ILLZSET5G25	aluminium	NBR, 70 shore, 35 x 3mm	41	82	50	45	21	1”	1,10
asa rail connector BSP 1 ¼”	ILLZSET5G32	aluminium	NBR, 70 shore, 35 x 3mm	50	88	56	50	21	1 ¼”	1,28

Content

ported block	2x
closed block	2x
o-ring	4x
slot nut	8x
plug screw G ½“	2x
sealing G ½“	2x
screw M6x25	16x
spring ring	16x

Fits On Cooler Types

ILLZSET5G25	TT 07, 11, 16, 25
ILLZSET5G32	TT 07, 11, 16, 25

ASA Universal Connector Set

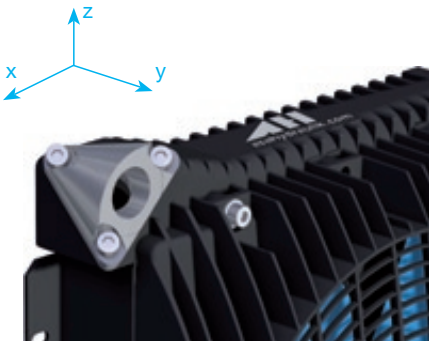
BSP 1 ¼” & BSP 1 ½” asa uc

Description

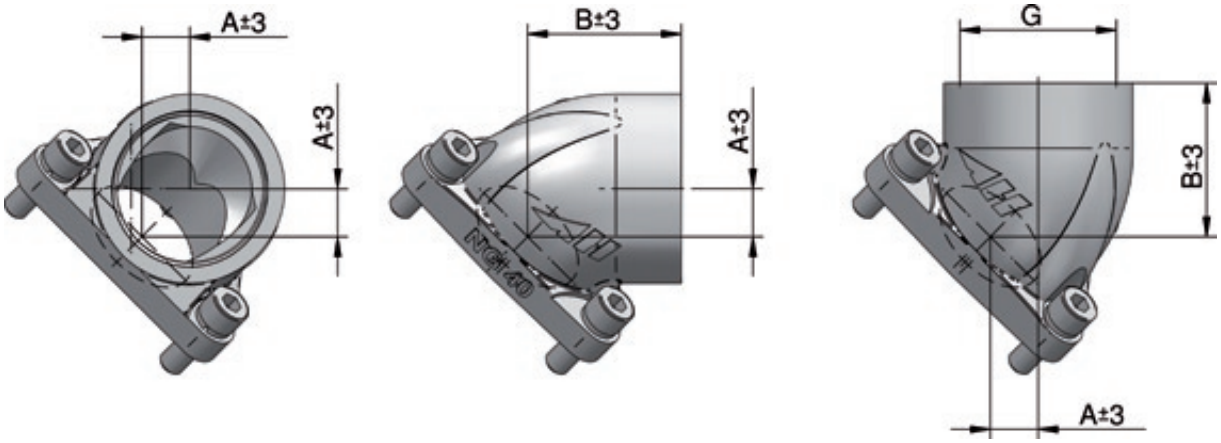
The asa universal connector is a patented system that offers many possibilities regarding dimension and direction of the hydraulic connection.

With each connector you can choose from 3 directions how to install it into the hydraulic circuit. The stream optimized design reduces the total pressure drop on the cooler. The omission of screwed joints reduces the number of sealing surfaces.

The available connector dimensions depend on the coolers size and shown in the table below.



Technical Data



description	order number	A	B	G	block material	o-ring	weight
		[mm]	[mm]				[kg]
AUC NG 32	ILLZASA32G32	14	34	BSP 1 ¼“	aluminium	NBR, 70 shore, 44x3mm	0,31
AUC NG 40	ILLZASA40G40	15	47	BSP 1 ½“	aluminium	NBR, 70 shore, 44x3mm	0,29

Content

asa universal connector	2x
o-ring	2x
screw	6x
spring ring	6x

Fits On Cooler Types

ILLZASA32G32	ASA 0177, 0257, 0367, 0567, 0927
ILLZASA40G40	ASA 0177, 0257, 0367, 0567, 0927

Mounting Accessories

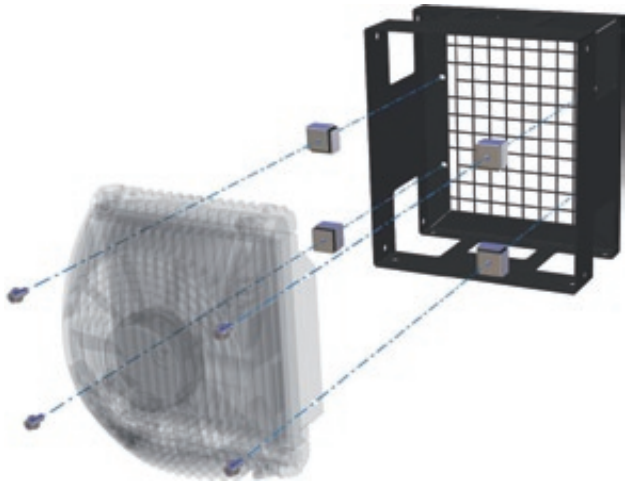
protection housing, mounting frame & foot mounting

asa rail asa uc

asahydraulik.com

If desired, our coolers can be delivered with mounting arrangements and protection housings, which serve for flexible and economic mounting in many assembly situations. The mechanical stress in mobile applications can be reduced by rubber shock absorbers between the protection housing and the cooler. Please contact us for more detailed information.

Protection Housing



Mounting Frame

Foot Mounting

Overview

asa mounting systems	cooler type								
	TT 07	TT 11	TT 16	ASA 0177	TT 25	ASA 0257	ASA 0367	ASA 0567	ASA 0927
protection housing	○	○	○	○	–	–	–	–	–
mounting frame	–	–	–	○	–	○	○	•	•
mounting feet	•	•	•	•	○	○	–	–	–

○ … available on request
• … optional available
– … not available at the moment, please contact us for possible options

Temperature Control Accessories

fan control, temperature switch, relay box

asa rail asa uc

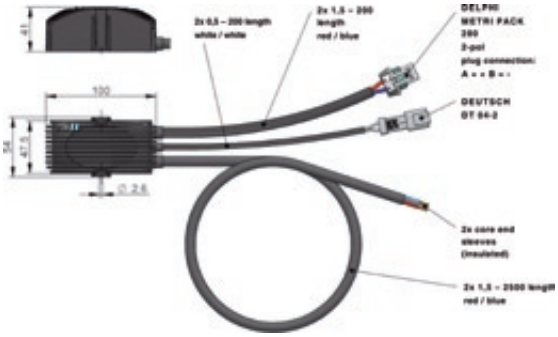
asahydraulik.com

Fan Control

The fan control consists of a temperature sensor and a control unit that varies the fan speed according the actual oil temperature. This lowers the noise level of the cooler and increases the durability of the fan motor, because it is not running on maximum speed all the time.

Temperature switch

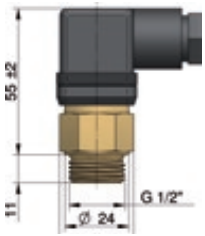
Also available are various thermostats with different temperature settings and protection classes for each cooler type.



ILLZTC12K or 24K

ILLZTH5067K

ILLZTH4767K



ILLZTH4765K, ILLZTH6065K

Overview

asa electronics	protection	cooler type								
		TT 07	TT 11	TT 16	ASA 0177	TT 25	ASA 0257	ASA 0367	ASA 0567	ASA 0927
temperature control (ILLZTH5067 + ILLZTC12 or 24)	IP 67	•	•	•	•	•	•	•	–	–
thermostat ILLZTH4767K	IP 67	•	•	•	•	•	•	•	•	•
thermostat ILLZTH4765K	IP 65	•	•	•	•	•	•	•	•	•
thermostat ILLZTH6065	IP 65	•	•	•	•	•	•	•	•	•

• … optional available
– … not available at the moment, please contact us for possible options

Calculation of an oil air cooler

In all hydraulic systems any kind of restriction heats the oil. The oil temperature becomes higher and higher until the added thermal energy has the same value as the radiation energy and the energy which is caused by convection which both are absorbed by the surrounding atmosphere. After a certain operation time the temperature becomes stationary. If this temperature is too high, the oil must be cooled.

Hot oil costs money!

The oil changing period gets shorter. Gaskets and wearing components must be changed and the hydraulic system efficiency is reduced. In order to choose the required cooler type we must know the required cooling performance

Approximate calculation

The required cooling performance PK can generally be calculated as follows:

$$P_M = \frac{p \times Q_{oil}}{600 \times \eta} \qquad P_K = P_M (1 - \eta)$$

Hydraulic circuits with constant pumps have a general efficiency from approximately 70–75%, η = 0,7 bis 0,75

Circuits with variable pumps: η = 0,75 bis 0,80

η = general efficiency
P_K = required cooling performance [kW]
P_M = required motor power [kW]
p = oil pressure [bar]
Q_P = oil flow [l/min]

How to find out the required cooling performance with the rise in temperature:

For existing hydraulic circuits the heat input to the oil can be accurately determined if the rise in temperature is known over a known period of time. This then gives the amount of heat to be exchanged by the cooler in order to maintain the system at an optimum operating temperature.

$$P_K = \frac{m \times c \times (t_2 - t_1)}{1000\ T}$$

P_K = required cooling performance [kW]
m = const. mass of the reservoir [kg]
c = specific heat capacity [Wh/kg°C]
(c~0,53 for hydraulic oil, c~1,16 for water)
t_1 = oil temperature at the begin [°C]
t_2 = oil temperature at the end [°C]
T = heat up time [h]

Temperature behaviour:

1. oil temperature difference Δtoil by one pass
2. air temperature increase ΔtL

$$1.\ \Delta t_{oil} = \frac{36 \times P_K}{Q_{oil}}\ [°C] \qquad 2.\ \Delta t_{oil} = \frac{P_K}{Q_L}\ [°C]$$

Selection of the cooler:

After calculation the required cooling performance (PK) the specific cooling performance (P_{spec}) must be determined.

$$P_{spec} = \frac{P_K}{t_{oil} - t_L}\ [kW/°C]$$

P_{spec} = specific cooling performance (kW/°C)
T_{oil} = oil temperature inlet (°C)
T_L = air temperature inlet (°C)

Enter the value of P_{spec} (kW/°C) on the vertical line on the cooling performance diagram and determine the junction with the horizontal line for oil flow (l/min) of the required cooler type. In most of the cases it is enough if this line is lying close to a curve in the diagram because the cooling capacity is calculated with enough safeties.

Calculation of the oil pressure drop:

If the right cooler is found we recommend to check the oil pressure drop and to avoid too high oil pressure loss after through the cooler.

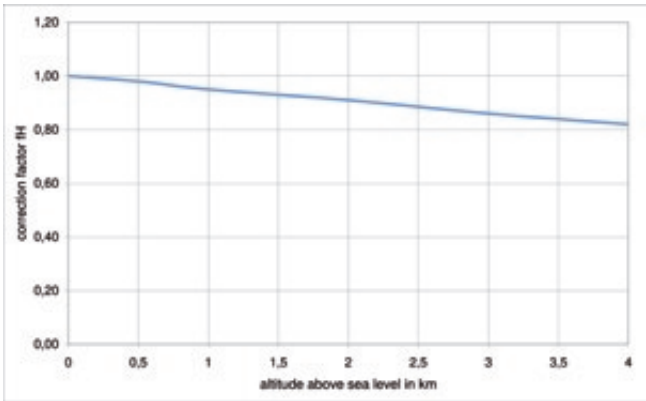
The values indicated in the diagram are valid for hydraulic oil with a viscosity of 30cSt (appr. ISO VG 32). Multiply the pressure drop by the correction factor f according to the used hydraulic oil viscosity.

$\Delta p = \Delta p30cst \times f_p$

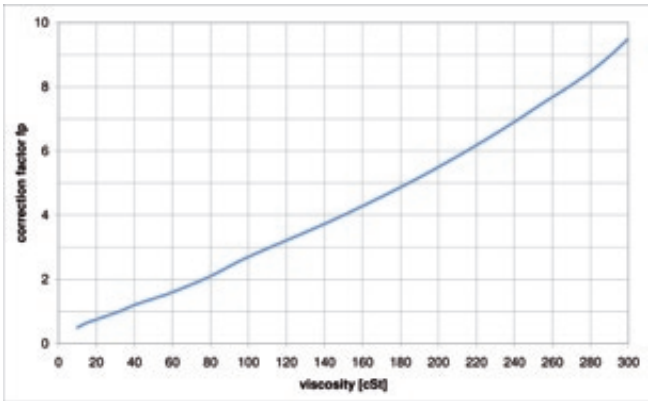
Δp = oil pressure drop [bar]
Δp_{30cst} = oil pressure drop at 30cst oil viscosity [bar]
fp = correction factor for the oil viscosity [ ]

We also recommend you to check the oil pressure drop also for extreme situation (e.g. cold start). If necessary bypass valves should be installed to avoid overpressure.

Correction factor f_H for cooling performance depending on the altitude (approximate value).



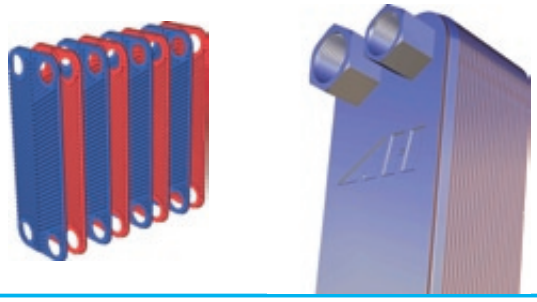
Correction factor f_p for oil pressure drop (approximate value)



other products and accessories

COMPONENTS RANGE
Leading quality engineering!

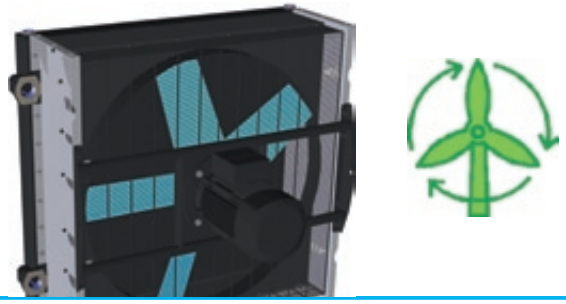
E-SERIES
Brazed stainless steel plate heat exchanger



CC
Circulation cooler series with integrated gerotor pump for off line cooling

ATEX
ATEX certificated air blast coolers acording to CE Ex II 2G EEx c IIB T4

W-LINE
Special equipped heat exchangers for the wind energy industry, coastal and off shore applications



GERO PUMP
Robust gerotor pump with low noise level

Please contact us for further information or see more products on our website. The calculation program for simple and exact cooler selection and our international correspondence is available for you 24h a day.

www.asahydraulik.com

asahydraulik.com

progress in cooling

AUSTRIA

AUSTRIAN RESEARCH CENTERS

PERRY JOHNSON REGISTRARS, INC.

ISO 9001

DNV REGISTERED

Austria

asa hydraulik GmbH
Prager Strasse 280
A-1210, Vienna
Tel.: +43 1 292 40 20
Fax: +43 1 292 40 70
support@asahydraulik.com

USA

asa hydraulik of America
160 Meister Avenue 20 A
Branchburg, New Jersey 08876
Tel.: +1 800 473 94 00
Fax: +1 908 541 15 50
sales_us@asahydraulik.com

CHINA

asa hydraulik of Kunshan
江苏省昆山市千灯镇七浦西路25号
postcode: 215341
Tel.: +86 512 57950818
Fax: +86 512 57950898
kunshan@asahydraulik.com