

discover
what
we can do
for you

binottousa.com

Binotto®

THE TIPPING POWER



Binotto®
THE TIPPING POWER



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DRIVES YOU INTO THE FUTURE

LONG-STANDING EXPERTISE

Binotto is a Global Leading Company operating in the industry of hydraulic systems for tipping trucks, trailers and semitrailers.

Serving more than 150 countries across the globe with subsidiaries, authorized dealers and specialized workshops, Binotto Group is based in Italy, with 5 state-of-the-art manufacturing plants worldwide: 3 in Europe, 1 in Brazil and 1 in China.

EXTENSIVE RANGE

We design, manufacture and distribute a vast amount and variety of telescopic cylinders, with the widest selection for capacity and product variations. Suitable to fulfill all tipping applications.

EXCELLENCE in DESIGN, SUPREMACY in PERFORMANCE

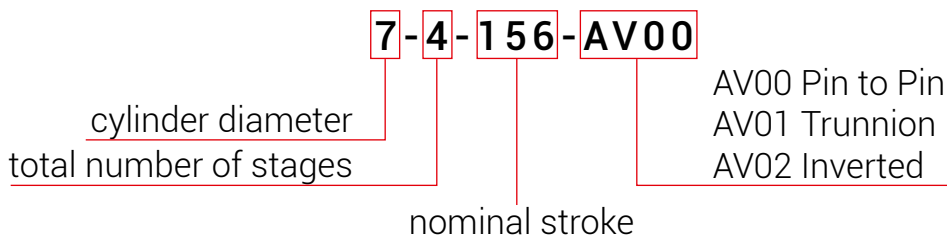
Binotto brand is highly rated for reliable and top-quality design of telescopic cylinders and complete hydraulic systems, including front-end and under-body telescopic cylinders, wet kits, oil tanks, pumps, ptos and valves.

SINGLE ACTING FRONT MOUNT CYLINDERS

Trunnion type cylinders and pin-to-pin type cylinders are all available with Binotto B3 technology.



PART NUMBER BREAKDOWN



Pin to Pin	5-3-072-AV00	6-3-126-AV00	6-4-167-AV00	7-4-156-AV00	8-5-220-AV00
	5-3-084-AV00	6-3-137-AV00	6-4-182-AV00	7-4-167-AV00	8-5-232-AV00
	6-3-110-AV00	6-4-135-AV00	7-4-135-AV00	7-4-182-AV00	8-5-250-AV00
	6-3-120-AV00	6-4-156-AV00	7-4-147-AV00	8-5-190-AV00	8-5-265-AV00
Trunnion	4.5-3-090-AV01	5.5-3-130-AV01	6.5-4-160-AV01	6.5-4-180-AV01	7.5-4-185-AV01
	4.5-3-100-AV01	5.5-3-140-AV01	6.5-4-170-AV01	6.5-4-195-AV01	7.5-4-195-AV01
	4.5-3-110-AV01	6.5-4-150-AV01			
Inverted	8-5-195-AV02	8-5-212-AV02	8-5-232-AV02	8-5-268-AV02	8-5-278-AV02

BINOTTO CONSTRUCTION features and benefits

- **Unique design** with B3 technology, the Binotto patented cushion system to increase durability and stability of your cylinder and your vehicle.
- **Ideal for dump bodies and dump trailers applications**, our cylinders cover a stroke range of 72-278 inches.
- **Seamless steel tubes** with high tensile strength and rocky resistance without weak points.
- **Solid design:** Stop-limit machined on the pure pipe in order to provide the user with maximum safety when the cylinder is fully extended.
- **Unbeatable exact clearances** between stages grants greater stability and safety when tipping.
- **Special finishing (hard roller burnishing) process** performed both inside and outside of the tubes
 - Increasing the superficial hardness up to 40% for higher resistance to side loads and scratches
 - Increasing the superficial smoothness to ensure better performance and long-lasting seals lifetime (up to 3 times longer).
 - Providing an amazing "mirror" effect
- **Hard chromed** final stage.
- **Low cylinder weight**, more payload capacity.
- **Low oil volume requirement**, lower oil expense, faster dumping.
- **Double seal system**, proved to work in the most extreme environmental conditions to prevent leakages
- **Delrin sliders**, performing at both high and low pressures.
- **Low maintenance** requirements.
- **No adjusting nuts.**
- **Self-bleeding design.**
- **Two year warranty.**

B3

TECHNOLOGY

B3 is an exclusive
TECHNOLOGY of Binotto
which sets a new benchmark
in tipping hoist performance

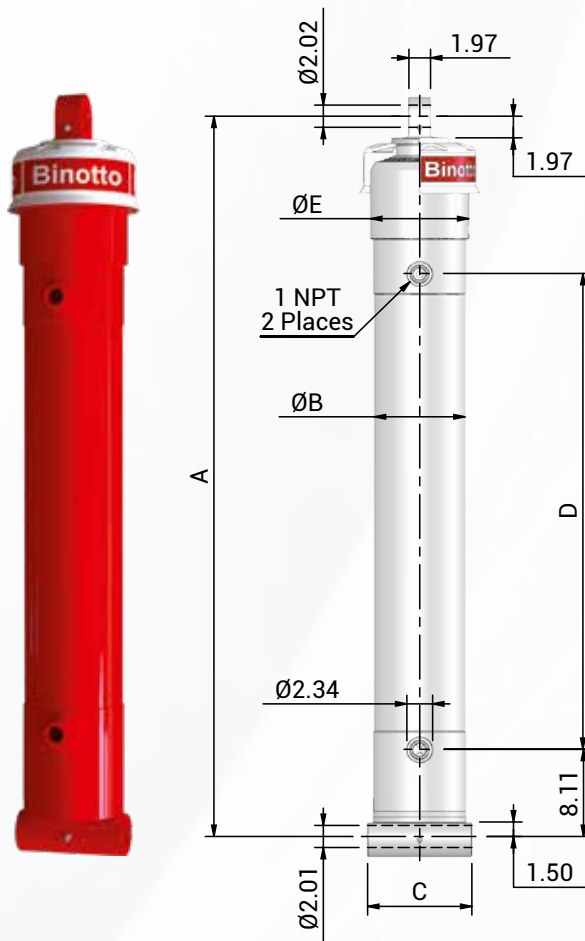
A clever and unique design provides a momentary cushion effect at the end of the stroke of each stage.

- Less noise, friction and vibration
- Longer seal and wiper lifespan
- Greater hoist protection and durability
- Enhanced safety, even at high speed
- Greater vehicle efficiency



For more information

www.b3cylinder.com



TECHNICAL INFORMATION

- The max tipping weight that can be raised by the cylinder is the body weight plus the max payload.
- Max pressure 2750 PSI.
- Chrome plated 20µm on the smallest stage.
- Cylinder painted RAL7021.
- For oil specification refer to the user manual.
- Hydraulic oil temperature allowable range between -40°F to 212°F.
- Maximum extension speed cannot exceed 0.656 ft/s.

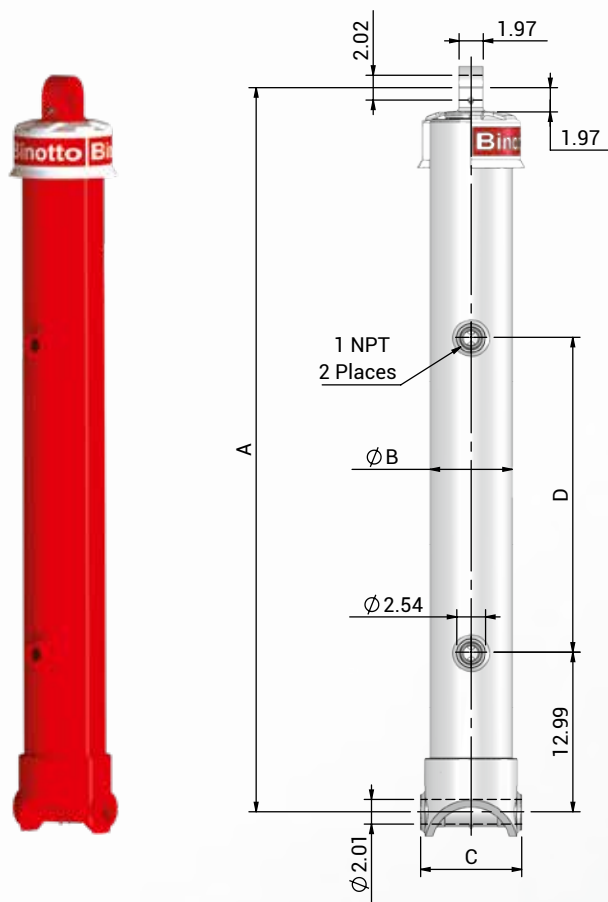


2 Year Warranty

Extended length = Closed length (A) + Total stroke

All Cylinders require a 0.75" PULL OUT (min-0.20", max +1.18"). Dimensions below do not include pull out.

Part Number	Stages [n°]	A [in]	ØB [in]	C [in]	D [in]	ØE [in]	Total Stroke [in]	Weight [lb]	Max. Oil Cap. [gal]	Last Stage Ø [in]
B3C 5-3-072-AV00	3	37.08	5.71	7.00	16.14	6.53	72.28	189	4.43	3.46
B3C 5-3-084-AV00	3	41.02	5.71	7.00	20.08	6.53	84.09	208	5.18	3.46
B3C 6-3-110-AV00	3	50.87	6.49	7.00	29.92	7.28	110.67	287	9.40	4.21
B3C 6-3-120-AV00	3	52.83	6.49	7.00	31.89	7.28	118.35	295	10.05	4.21
B3C 6-3-126-AV00	3	55.20	6.49	7.00	34.25	7.28	126.03	316	10.70	4.21
B3C 6-4-135-AV00	4	47.67	6.49	7.00	26.57	7.28	135.75	294	10.04	3.46
B3C 6-3-137-AV00	3	58.74	6.49	7.00	37.80	7.28	136.65	335	11.61	4.21
B3C 6-4-156-AV00	4	52.99	6.49	7.00	31.89	7.28	157.80	327	11.66	3.46
B3C 6-4-167-AV00	4	55.35	6.49	7.00	34.25	7.28	168.00	342	12.42	3.46
B3C 6-4-182-AV00	4	58.89	6.49	7.00	37.79	7.28	182.20	364	13.47	3.46
B3C 7-4-135-AV00	4	47.67	7.36	8.23	26.57	8.07	135.75	367	13.51	4.21
B3C 7-4-147-AV00	4	51.02	7.36	8.23	29.92	8.07	147.56	389	14.70	4.21
B3C 7-4-156-AV00	4	52.99	7.36	8.23	31.89	8.07	157.80	397	15.71	4.21
B3C 7-4-167-AV00	4	55.35	7.36	8.23	34.25	8.07	168.00	415	16.73	4.21
B3C 7-4-182-AV00	4	58.89	7.36	8.23	37.79	8.07	182.20	435	18.14	4.21
B3C 8-5-190-AV00	5	53.93	8.26	9.49	30.67	8.94	190.36	517	22.18	4.21
B3C 8-5-220-AV00	5	59.84	8.26	9.49	37.36	8.94	221.85	590	25.85	4.21
B3C 8-5-232-AV00	5	61.81	8.26	9.49	39.33	8.94	231.70	609	26.99	4.21
B3C 8-5-250-AV00	5	68.30	8.26	9.49	43.27	8.94	251.38	651	29.29	4.21
B3C 8-5-265-AV00	5	69.68	8.26	9.49	47.20	8.94	268.70	687	31.30	4.21



TECHNICAL INFORMATION

- The max tipping weight that can be raised by the cylinder is the body weight plus the max payload.
- Max pressure 3626 PSI.*
- Chrome plated 20µm on the smallest stage.
- Cylinder painted RAL7021.
- For oil specification refer to the user manual.
- Hydraulic oil temperature allowable range between -40°F to 212°F.
- Maximum extension speed cannot exceed 0.656 ft/s.

*Max pressure for ANT 8-5-250 AV00 model is 3191 PSI, for ANT 8-5-265 AV00 model is 2756 PSI and for ANT 8-5-280 AV00 model is 2466 PSI.

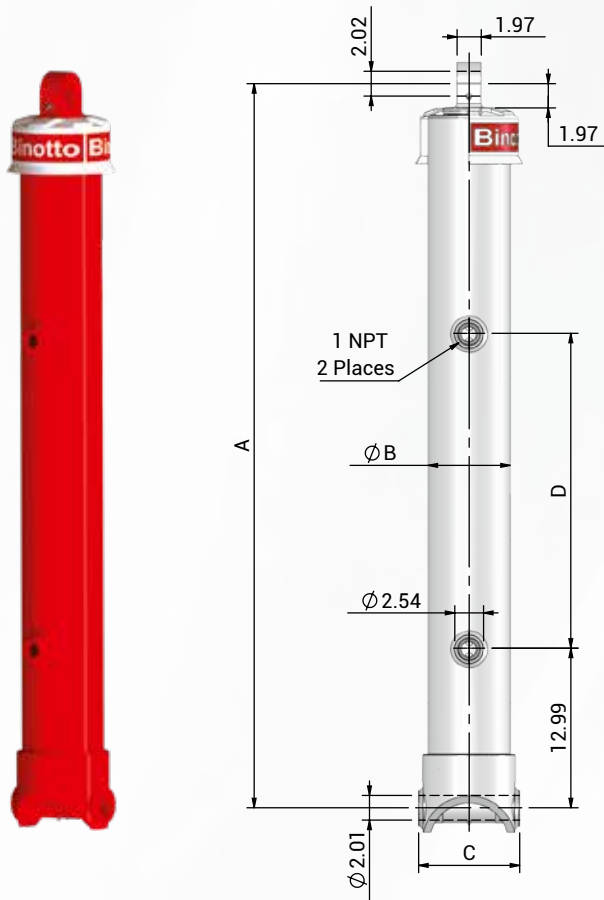
2 Year Warranty

Extended length = Closed length (A) + Total stroke

All Cylinders require a 0.75" PULL OUT (min-0.20", max +1.18"). Dimensions below do not include pull out.

Part Number	Stages [n°]	A [in]	ØB [in]	C [in]	D [in]	Total Stroke [in]	Weight [lb]	Max. Oil Cap. [gal]	Last Stage Ø [in]
ANT 5-3-072 AV00	3	37.28	5.43	7.00	**	71.06	156	4.15	3.15
ANT 5-3-084 AV00	3	41.22	5.43	7.00	**	82.87	172	4.83	3.15
ANT 5-3-126 AV00	3	56.20	5.43	7.00	21.89	124.80	227	7.26	3.15
ANT 6-3-110 AV00	3	50.67	5.91	7.00	17.36	111.22	236	7.82	3.58
ANT 6-3-120 AV00	3	52.64	5.91	7.00	19.33	117.12	249	8.40	3.58
ANT 6-3-126 AV00	3	55.39	5.91	7.00	22.09	125.39	260	9.14	3.58
ANT 6-3-137 AV00	3	58.94	5.91	7.00	25.63	136.02	278	9.67	3.58
ANT 6-3-141 AV00	3	60.51	5.91	7.00	27.20	140.75	287	9.99	3.58
ANT 6-3-151 AV00	3	65.24	5.91	7.00	31.93	152.56	306	10.86	3.58
ANT 6-4-135 AV00	4	47.72	5.91	7.00	14.41	135.98	249	8.42	2.83
ANT 6-4-156 AV00	4	53.03	5.91	7.00	19.72	155.27	276	9.61	2.83
ANT 7-3-120 AV00	3	52.64	6.69	8.23	19.33	116.49	295	11.18	4.41
ANT 7-3-136 AV00	3	60.51	6.69	8.23	26.42	137.75	333	13.23	4.41
ANT 7-4-120 AV00	4	43.19	6.69	8.23	**	117.83	269	9.99	3.58
ANT 7-4-126 AV00	4	45.16	6.69	8.23	**	125.71	280	10.65	3.58
ANT 7-4-135 AV00	4	47.72	6.69	8.23	14.41	135.94	298	11.50	3.58

**lower oil entrance available only



TECHNICAL INFORMATION

- The max tipping weight that can be raised by the cylinder is the body weight plus the max payload.
- Max pressure 3626 PSI.*
- Chrome plated 20µm on the smallest stage.
- Cylinder painted RAL7021.
- For oil specification refer to the user manual.
- Hydraulic oil temperature allowable range between -40°F to 212°F.
- Maximum extension speed cannot exceed 0.656 ft/s.

*Max pressure for ANT 8-5-250 AV00 model is 3191 PSI, for ANT 8-5-265 AV00 model is 2756 PSI and for ANT 8-5-280 AV00 model is 2466 PSI.

2 Year Warranty

Extended length = Closed length (A) + Total stroke

All Cylinders require a 0.75" PULL OUT (min-0.20", max +1.18"). Dimensions below do not include pull out.

Part Number	Stages [n°]	A [in]	ØB [in]	C [in]	D [in]	Total Stroke [in]	Weight [lb]	Max. Oil Cap. [gal]	Last Stage Ø [in]
ANT 7-4-147 AV00	4	50.67	6.69	8.23	17.36	147.75	315	12.52	3.58
ANT 7-4-156 AV00	4	53.03	6.69	8.23	19.72	157.20	331	13.40	3.58
ANT 7-4-161 AV00	4	53.82	6.69	8.23	20.51	160.35	335	13.66	3.58
ANT 7-4-167 AV00	4	55.39	6.69	8.23	22.09	166.65	346	14.02	3.58
ANT 7-4-182 AV00	4	58.94	6.69	8.23	25.63	180.83	368	15.37	3.58
ANT 8-4-167 AV00	4	55.87	8.46	9.45	**	165.03	496	22.54	5.07
ANT 8-5-169 AV00	5	49.37	8.46	9.45	**	168.35	465	22.48	4.41
ANT 8-5-190 AV00	5	53.90	8.46	9.45	19.02	189.01	509	25.23	4.41
ANT 8-5-200 AV00	5	56.08	8.46	9.45	20.98	198.85	520	26.20	4.41
ANT 8-5-220 AV00	5	59.80	8.46	9.45	25.71	222.48	567	29.21	4.41
ANT 8-5-232 AV00	5	61.77	8.46	9.45	27.68	232.32	582	30.45	4.41
ANT 8-5-250 AV00	5	68.07	8.46	9.45	32.40	252.00	631	33.21	4.41
ANT 8-5-265 AV00	5	69.65	8.46	9.45	35.94	269.72	666	35.54	4.41
ANT 8-5-280 AV00	5	71.22	8.46	9.45	37.91	279.57	690	36.86	4.41

**lower oil entrance available only

All Binotto trunnion cylinders in the US market are now featuring an *exclusive self-aligning outer cover*.

This unique, *patent pending*, Binotto technology aims to save cylinders from heavy scratches due to the outer cover misalignments produced during lowering operations in extreme side load conditions.

According to Binotto guidelines and recommendations (*see our official User Manual*), drivers are always requested to operate in safe conditions only, therefore avoiding all those situations that could generate a side load on the cylinder, such as, for example: moving the vehicle before completing the tipping operation, operating a tipper on a slope ground or unloading a not evenly distributed load.

As an immediate consequence of these inappropriate uses of the cylinder, operators are quite familiar with damages on the cylinder stages.

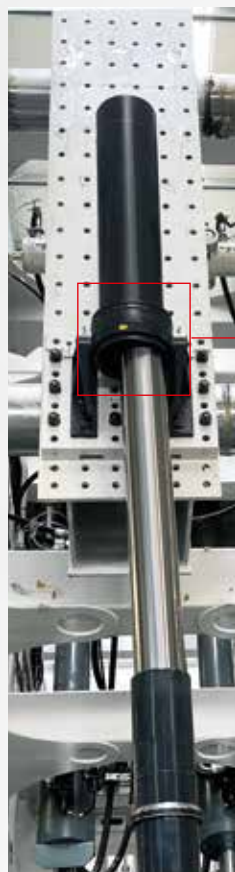
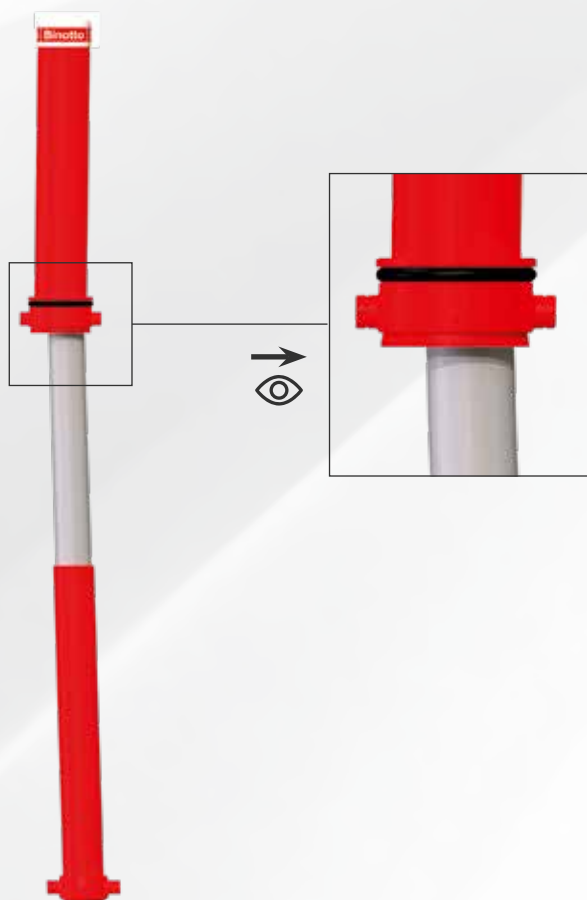
In most cases, these damages consist of scratches and/or dents on the surface of the cylinder stages, revealing collision between the cylinder itself and the bottom part of the outer cover. In fact, when constrained to an excessive side load, the outer cover misaligns the rest of the cylinder (see pictures on the left).

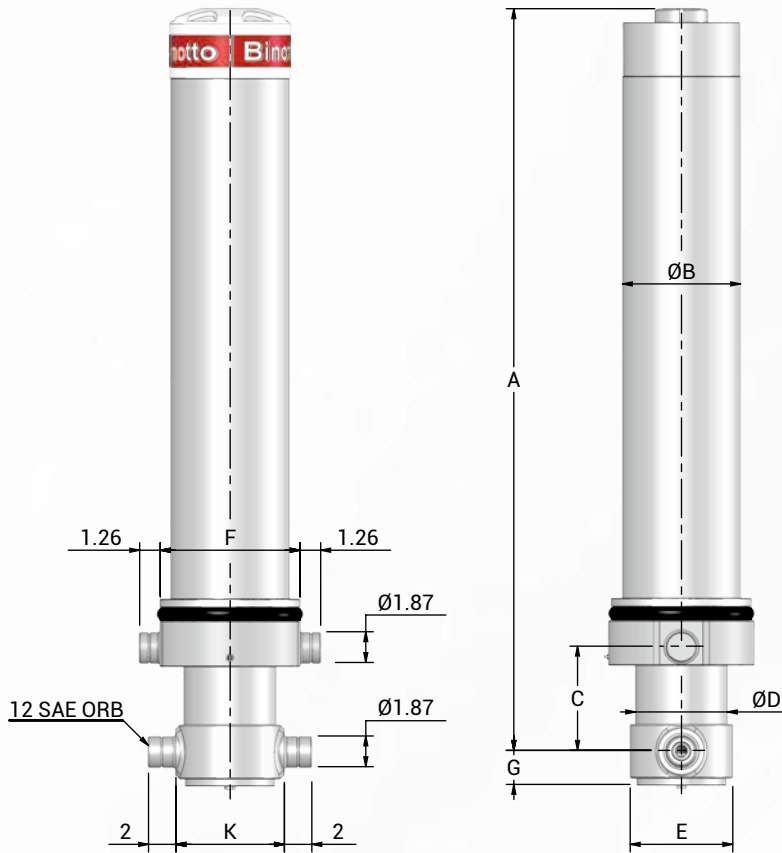
Misalignments between cylinder and its outer cover happens especially during lowering operations.

The new Binotto collar solution features a **special design** which minimizes the friction between the collar itself and the stages (and/or the external tube) in cases of collision, and prevents from damages and consequent service costs, as a result.

The self-aligning outer cover is a Binotto patent pending technology. Tested and approved by TCLS.

To learn more about TCLS visit our official page:





TECHNICAL INFORMATION

- The max tipping weight that can be raised by the cylinder is the body weight plus the max payload.
- Max pressure 2750 PSI.
- Chrome plated 20µm on the smallest stage.
- Cylinder painted RAL7021.
- For oil specification refer to the user manual.
- Hydraulic oil temperature allowable range between -40°F to 212°F.
- Maximum extension speed cannot exceed 0.656 ft/s.

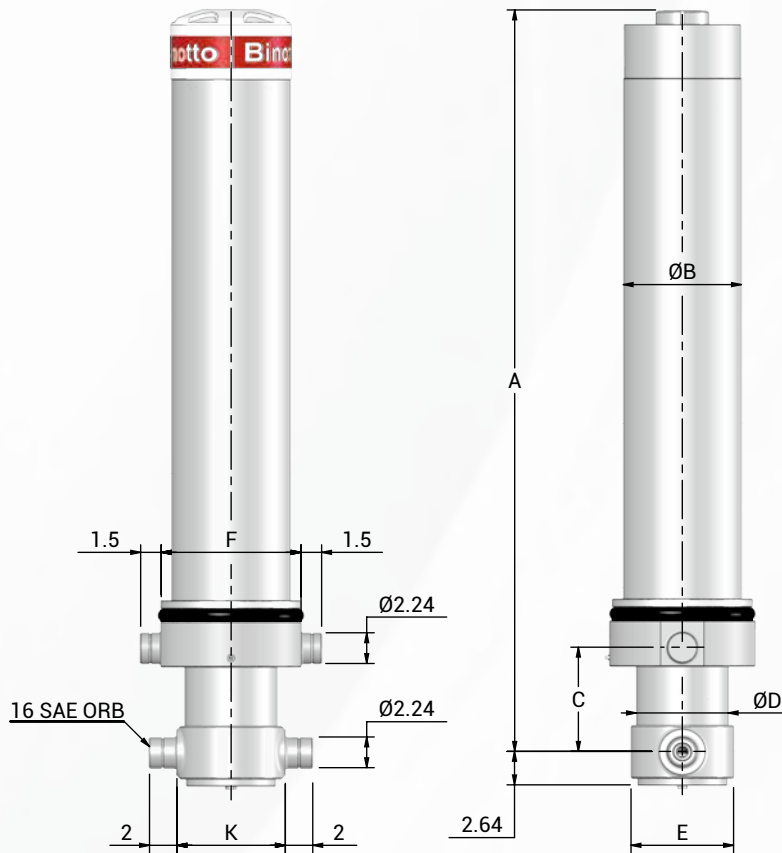


2 Year Warranty

Extended length = Closed length (A) + Total stroke

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Part Number	Stages [n°]	A [in]	ØB [in]	C [in]	ØD [in]	E [in]	F [in]	G [in]	K [in]	Total Stroke [in]	Weight [lb]	Max. Oil Cap. [gal]	Last Stage Ø [in]
B3C 4.5-3-090-AV01	3	41.25	5.98	4.72	4.96	6.30	7.91	2.24	5.79	90.00	271	3.79	2.71
B3C 4.5-3-100-AV01	3	45.78	5.98	4.72	4.96	6.30	7.91	2.24	5.79	101.80	295	4.28	2.71
B3C 4.5-3-110-AV01	3	49.13	5.98	4.72	4.96	6.30	7.91	2.24	5.79	111.65	313	4.70	2.71
B3C 5.5-3-130-AV01	3	53.23	7.68	5.59	5.71	6.89	9.02	2.64	7.01	126.00	421	7.76	3.46
B3C 5.5-3-140-AV01	3	56.77	7.68	5.59	5.71	6.89	9.02	2.64	7.01	137.00	465	8.42	3.46



TECHNICAL INFORMATION

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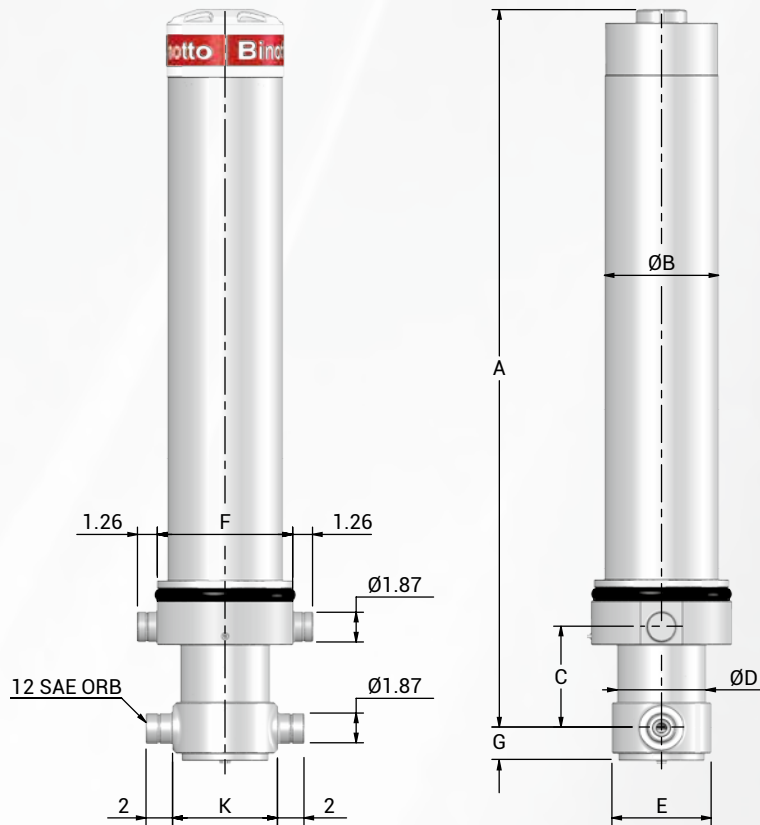


2 Year Warranty

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B3C 6.5-4-150-AV01	4	49.05	8.62	6.85	6.49	7.48	10.20	7.91	147.56	468	10.90	3.46
B3C 6.5-4-160-AV01	4	51.02	8.62	6.85	6.49	7.48	10.20	7.91	157.80	477	11.66	3.46
B3C 6.5-4-170-AV01	4	53.39	8.62	6.85	6.49	7.48	10.20	7.91	168.00	496	12.42	3.46
B3C 6.5-4-180-AV01	4	56.93	8.62	6.85	6.49	7.48	10.20	7.91	182.20	551	13.47	3.46
B3C 6.5-4-195-AV01	4	60.86	8.62	6.85	6.49	7.48	10.20	7.91	193.30	585	14.29	3.46
B3C 7.5-4-185-AV01	4	56.93	9.61	8.86	7.36	8.66	12.95	9.02	182.20	728	18.14	4.21
B3C 7.5-4-195-AV01	4	60.86	9.61	8.86	7.36	8.66	12.95	9.02	193.30	688	19.24	4.21



TECHNICAL INFORMATION

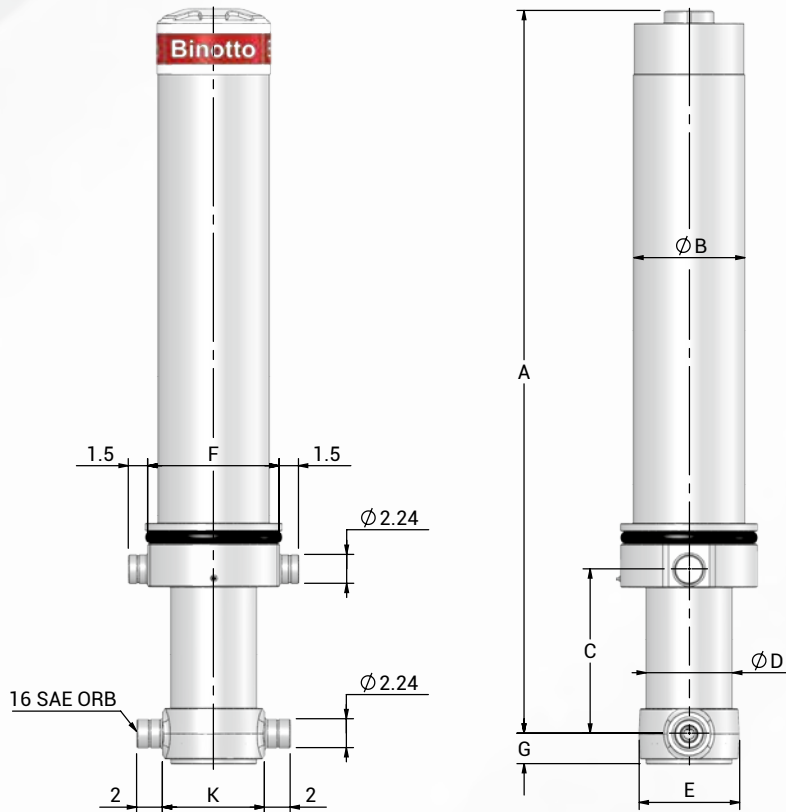
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ANT 4.5-3-090 AV01	3	40.91	5.98	4.72	5.12	6.46	7.91	1.97	5.79	89.72	216	4.74	2.83
ANT 4.5-3-100 AV01	3	45.04	5.98	4.72	5.12	6.46	7.91	1.97	5.79	102.12	238	5.07	2.83
ANT 4.5-3-110 AV01	3	47.99	5.98	4.72	5.12	6.46	7.91	1.97	5.79	112.16	251	5.63	2.83
ANT 5.5-3-100 AV01	3	44.84	7.64	5.59	5.91	7.09	9.02	2.36	7.01	102.36	299	7.25	3.58
ANT 5.5-3-120 AV01	3	50.79	7.64	5.59	5.91	7.09	9.02	2.36	7.01	102.67	335	8.55	3.58
ANT 5.5-3-130 AV01	3	52.52	7.64	5.59	5.91	7.09	9.02	2.36	7.01	125.39	348	8.87	3.58
ANT 5.5-3-140 AV01	3	56.06	7.64	5.59	5.91	7.09	9.02	2.36	7.01	136.02	366	9.70	3.58



TECHNICAL INFORMATION

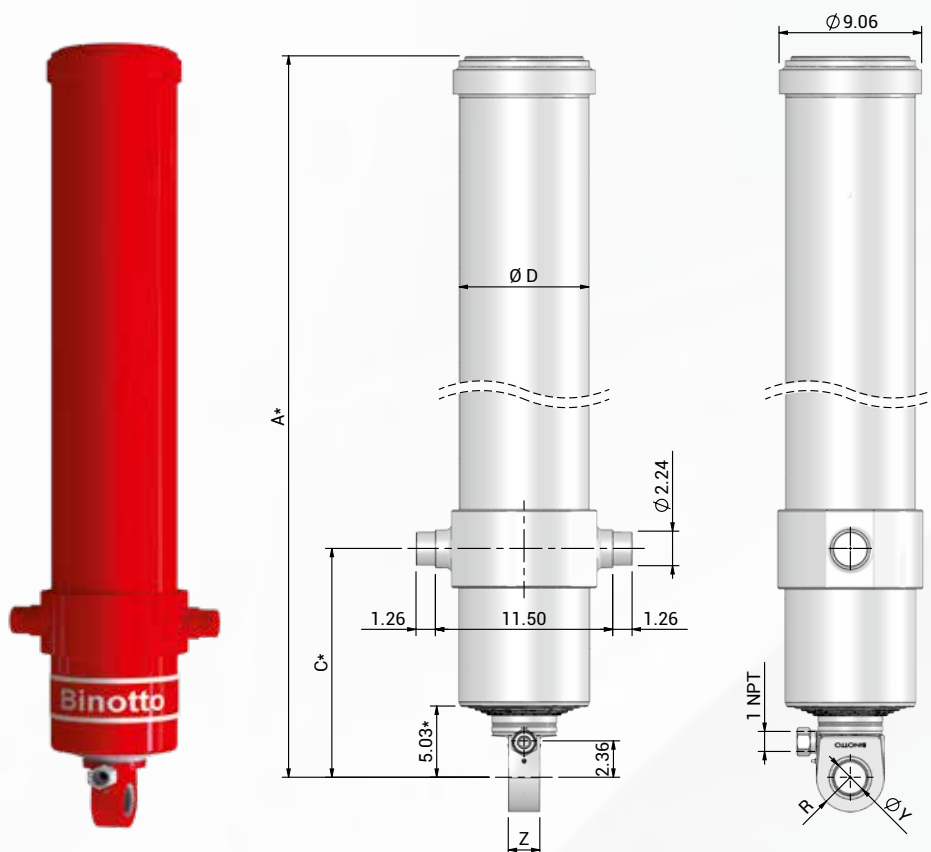
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ANT 6.5-4-150 AV01	4	47.80	8.62	6.85	6.69	7.79	10.20	2.36	7.91	147.75	421	12.52	3.58
ANT 6.5-4-160 AV01	4	50.16	8.62	6.85	6.69	7.79	10.20	2.36	7.91	157.20	443	13.40	3.58
ANT 6.5-4-170 AV01	4	52.52	8.62	6.85	6.69	7.79	10.20	2.36	7.91	166.65	465	14.02	3.58
ANT 6.5-4-180 AV01	4	56.06	8.62	6.85	6.69	7.79	10.20	2.36	7.91	180.83	489	15.37	3.58
ANT 6.5-4-195 AV01	4	59.21	8.62	6.85	6.69	7.79	10.20	2.36	7.91	193.43	514	16.39	3.58
ANT 7.5-4-185 AV01	4	56.61	9.61	8.86	7.56	8.82	12.95	2.36	9.02	181.65	619	20.39	4.41
ANT 7.5-4-195 AV01	4	59.76	9.61	8.86	7.56	8.82	12.95	2.36	9.02	194.25	646	22.01	4.41



TECHNICAL INFORMATION

- The max tipping weight that can be raised by the cylinder is the body weight plus the max payload.
- Max pressure 2750 PSI.
- Chrome plated 20µm on the smallest stage.
- Cylinder painted RAL7021.
- For oil specification refer to the user manual.
- Hydraulic oil temperature allowable range between -40°F to 212°F.
- Maximum extension speed cannot exceed 0.656 ft/s.

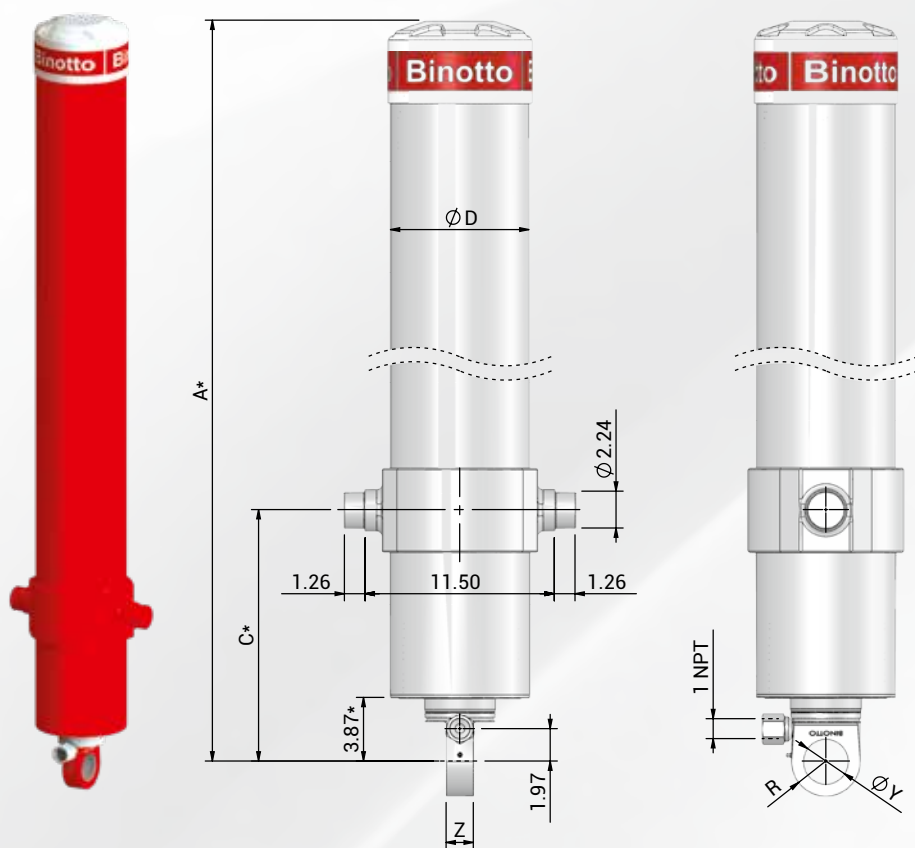


2 Year Warranty

Extended length = Closed length (A) + Total stroke

* Indicates that a 0.75" PULL OUT (min-0.20", max +1.18") is included in these dimensions.

Part Number	Stages [n°]	A* [in]	C* [in]	ØD [in]	R [in]	Y [in]	Z [in]	Total Stroke [in]	Weight [lb]	Max. Oil Cap. [gal]	Last Stage Ø [in]
B3C 8-5-195-AV02	5	54.21	15.35	8.43	2.20	2.00	2.05	194.30	571	22.60	4.21
B3C 8-5-212-AV02	5	58.14	15.35	8.43	2.20	2.00	2.05	212.00	612	24.70	4.21
B3C 8-5-232-AV02	5	62.08	15.35	8.43	2.20	2.00	2.05	231.69	652	27.00	4.21
B3C 8-5-268-AV02	5	69.95	15.35	8.43	2.20	2.00	2.05	268.60	734	31.30	4.21
B3C 8-5-278-AV02	5	71.92	15.35	8.43	2.20	2.00	2.05	278.50	756	32.40	4.21



TECHNICAL INFORMATION

- The max tipping weight that can be raised by the cylinder is the body weight plus the max payload.
- Max pressure 3626 PSI.*
- Chrome plated 20µm on the smallest stage.
- Cylinder painted RAL7021.
- For oil specification refer to the user manual.
- Hydraulic oil temperature allowable range between -40°F to 212°F.
- Maximum extension speed cannot exceed 0.656 ft/s.

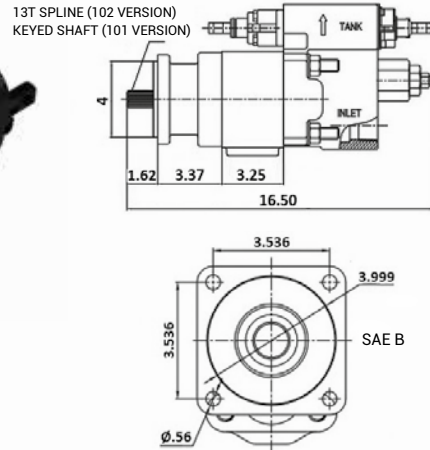
*Max pressure for ANT 8-5-250 AV02 model is 3191 PSI, for ANT 8-5-265 AV02 model is 2756 PSI and for ANT 8-5-280 AV02 model is 2466 PSI.

2 Year Warranty

Extended length = Closed length (A) + Total stroke

Part Number	Stages [n°]	A [in]	C [in]	D [in]	R [in]	ØY [in]	Z [in]	Total Stroke [in]	Weight [lb]	Max. Oil Cap. [gal]	Last Stage Ø [in]
ANT 8-5-190 AV02	5	51.62	14.57	8.43	2.09	2.00	1.65	189.01	507	27.03	4.41
ANT 8-5-200 AV02	5	53.59	14.57	8.43	2.09	2.00	1.65	198.85	525	28.43	4.41
ANT 8-5-220 AV02	5	58.31	14.57	8.43	2.09	2.00	1.65	222.48	571	31.78	4.41
ANT 8-5-232 AV02	5	60.28	14.57	8.43	2.09	2.00	1.65	232.32	589	33.18	4.41
ANT 8-5-250 AV02	5	65.00	14.57	8.43	2.09	2.00	1.65	252.00	635	35.99	4.41
ANT 8-5-265 AV02	5	68.55	14.57	8.43	2.09	2.00	1.65	269.72	668	38.49	4.41
ANT 8-5-280 AV02	5	70.51	14.57	8.43	2.09	2.00	1.65	279.57	688	39.90	4.41

DUMP PUMPS



Part Number	Shift Method	Rotation	Mounting Method
BTC102-LAS-25	Air	Left Hand	Direct Mount
BTC102-RAS-25	Air	Right Hand	Direct Mount
BTC102-LMS-25	Manual	Left Hand	Direct Mount
BTC102-RMS-25	Manual	Right Hand	Direct Mount
BTC101-XAS-25	Air	Biorotational	Remote Mount
BTC101-XMS-25	Manual	Biorotational	Remote Mount

DUMP PUMP

BTC Series

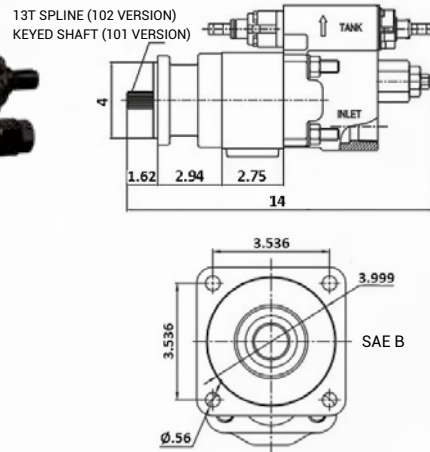
Technical Information

- Gear Size: 2-1/2 Inch
- Inlet Port: 1-1/4" NPT
- Return/Pressure Port: 1" NPT
- Displacement (CI/Rev): 6.38
- Paint: Black
- GPM at 1000 RPM: 27.61
- Max Pressure: 2500 PSI
- Max Speed: 1800 RPM
- Weight: 70 lbs

C102AS



Binotto BTC series dump pump air shifter



Part Number	Shift Method	Rotation	Mounting Method
BTG102-LAS-20	Air	Left Hand	Direct Mount
BTG102-RAS-20	Air	Right Hand	Direct Mount
BTG102-LMS-20	Manual	Left Hand	Direct Mount
BTG102-RMS-20	Manual	Right Hand	Direct Mount
BTG101-XAS-20	Air	Biorotational	Remote Mount
BTG101-XMS-20	Manual	Biorotational	Remote Mount

DUMP PUMP

BTG Series

Technical Information

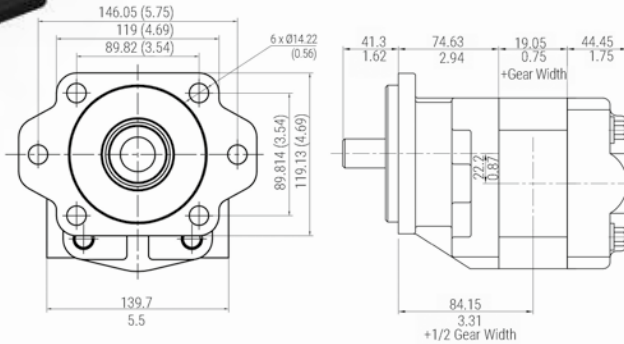
- Gear Size: 2 Inch
- Inlet Port: 1-1/4" NPT
- Return/Pressure Port: 3/4" NPT
- Displacement (CI/Rev): 3.94
- Paint: Black
- GPM at 1000 RPM: 17.05
- Max Pressure: 2500 PSI
- Max Speed: 1800 RPM
- Weight: 38 lbs

G102AS



Binotto BTG series dump pump air shifter

Note: Conversion sleeve included with each pump • It must be installed when using a 3-line system. Do not use sleeve when pump is being used on a 2-line system.



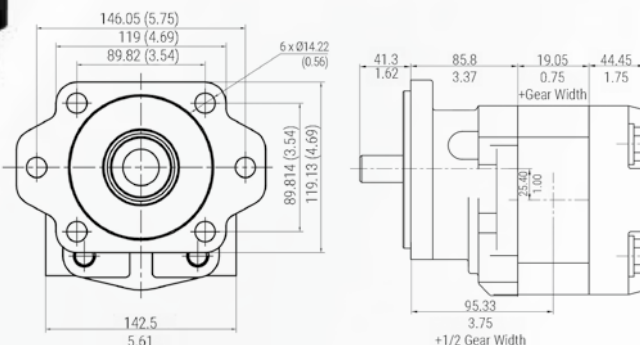
GEAR PUMP

BTP21

Technical Information

- Flange: SAE-B 2/4 Bolt
- Speed/range: 600-2400 RPM
- Shaft: 13T Spline
- Bi-rotational gear pump

Part Number	Rear Port	Side Port	Gear Width	Weight [lbs]	Displacement [CI/REV]	GPM at 1000 RPM	Max Pressure [PSI]	Max Speed [RPM]
BTP21BDN10-10	1" NPT	Blanked	1"	32.0	1.97	8.52	2400	3000
BTP21BDS10-10	1" SAE ORB	Blanked	1"	32.0	1.97	8.52	2400	3000
BTP21BDN11-12	1" NPT	1" NPT	1-1/4"	33.0	2.47	10.69	2400	3000
BTP21BDN14-12	1" NPT	1-1/4" NPT	1-1/4"	33.0	2.47	10.69	2400	3000
BTP21BDS11-12	1" SAE ORB	1" SAE ORB	1-1/4"	33.0	2.47	10.69	2400	3000
BTP21BDN11-15	1" NPT	1" NPT	1-1/2"	34.0	2.95	12.77	2400	3000
BTP21BDS11-15	1" SAE ORB	1-1/4" NPT	1-1/2"	34.0	2.95	12.77	2400	3000
BTP21BDN14-17	1" NPT	1" NPT	1-3/4"	35.0	3.45	14.93	2400	2500
BTP21BDS14-17	1" SAE ORB	1-1/4" SAE ORB	1-3/4"	35.0	3.45	14.93	2400	2500
BTP21BDN14-20	1" NPT	1-1/4" NPT	2"	36.0	3.94	17.05	2400	2500
BTP21BDS14-20	1" SAE ORB	1-1/4" SAE ORB	2"	36.0	3.94	17.05	2400	2500



GEAR PUMP

BTP51

Technical Information

- Flange: SAE-B 2/4 Bolt
- Speed/range: 600-2400 RPM
- Shaft: 13T Spline
- Bi-rotational gear pump

Part Number	Rear Port	Side Port	Gear Width	Weight [lbs]	Displacement [CI/REV]	GPM at 1000 RPM	Max Pressure [PSI]	Max Speed [RPM]
BTP51BDN24-17	1-1/2" NPT	1-1/4" NPT	1-3/4"	47.5	4.46	19.30	3000	2400
BTP51BDN24-20	1-1/2" NPT	1-1/4" NPT	2"	49.0	5.10	22.07	2500	2400
BTP51BDN24-22	1-1/2" NPT	1-1/4" NPT	2-1/4"	51.0	5.74	24.84	2500	2400
BTP51BDN22-25	1-1/2" NPT	1-1/2" NPT	2-1/2"	53.5	6.38	27.61	2500	2400
BTP51BDN02-25	Blanked	1-1/2" NPT	2-1/2"	53.5	6.38	27.61	2500	2400

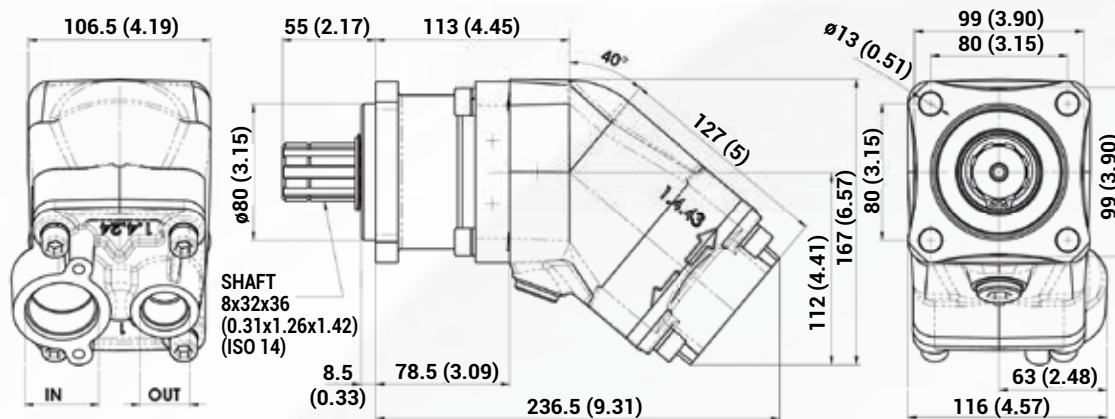


BENT AXIS PISTON PUMPS

4-BOLT TYPE

Technical Information

- Flange: ISO 4-Bolt
- Shaft: ISO14 8x32x36
- Unidirectional (right or left)
- Working temperature:
-40°C / +140°C (-40°F / +284°F)
- Max. continuous speed without load: 2700 RPM
- Max. continuous speed: 1900 RPM
- Max. intermittent speed: 2500 RPM



Type	Rotation		Displacement at 1000 RPM		Ports		Max Pressure [PSI]		Weight [lbs]
	L	R	[cm³/REV]	GPM	IN - SAE 20	OUT - SAE 16	P1	P3	
HDS-47 L	●		47.13	12.44	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,801.51	27.34
HDS-47 R		●	47.13	12.44	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,801.51	27.34
HDS-55 L	●		56.70	14.97	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,801.51	26.90
HDS-55 R		●	56.70	14.97	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,801.51	26.90
HDS-64 L	●		63.56	16.78	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,801.51	26.90
HDS-64 R		●	63.56	16.78	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,801.51	26.90

P1= Max. continuous pressure (100%) / P3= Max. peak pressure (max. 6 secs.)

RECOMMENDATIONS

Fluid		Mineral or synthetic compatible with HNBR seals			
Kinematic Viscosity	Average Ambient Temp.	< -40 °C	-40 ÷ 10 °C	10 ÷ 34 °C	> 35 °C
	VG (cSt = mm²/s)	16	22	32	46
Optimal Kinematic Viscosity		VG = 10 cSt to 100 cSt			
Max. kinematic viscosity suggested at the start-up		VG = 750 cSt			
Viscosity Index (suggested)		VI > 100			
Oil Filtering		>200 bar: 10 µm / < 200 bar: 25 µm			
Inlet Pressure		0.85 ÷ 2 bar (absolute)			

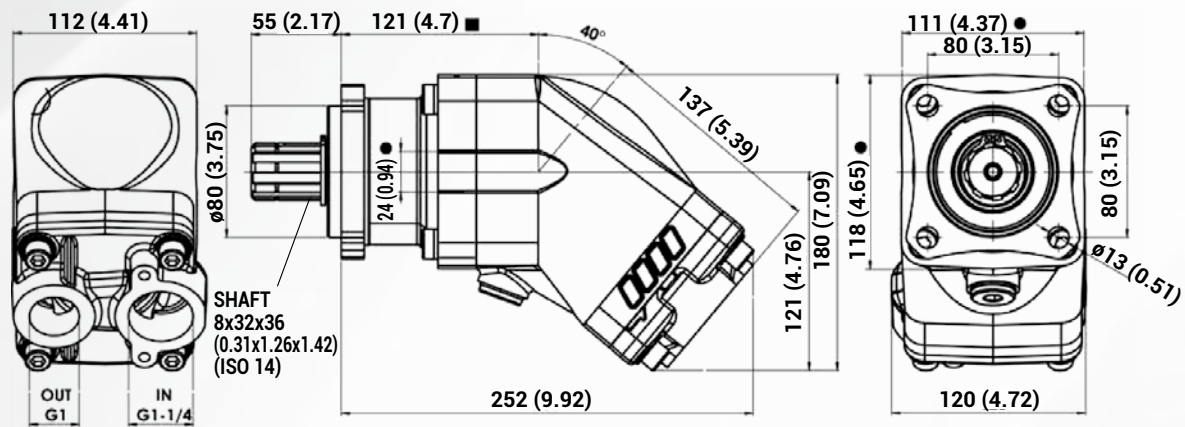


BENT AXIS PISTON PUMPS

4-BOLT TYPE

Technical Information

- Flange: ISO 4-Bolt
- Shaft: ISO14 8x32x36
- Unidirectional (right or left)
- Working temperature:
-40°C / +140°C (-40°F / +284°F)
- Max. continuous speed without load: 2300 RPM
- Max. continuous speed: 1500 RPM
- Max. intermittent speed: 2000 RPM



● Minimum bodywidth at indicated measurement ■

Type	Rotation		Displacement at 1000 RPM		Ports		Max Pressure [PSI]		Weight [lbs]
	L	R	[cm ³ /REV]	GPM	IN - SAE 20	OUT - SAE 16	P1	P3	
HDT-75 L	●		75.50	19.93	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,366.4	32.85
HDT-75 R		●	75.50	19.93	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,366.4	32.85
HDT-84 L	●		84.20	22.23	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,366.4	32.40
HDT-84 R		●	84.20	22.23	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,366.4	32.40
HDT-96 L	●		95.50	25.21	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,366.4	32.40
HDT-96 R		●	95.50	25.21	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,366.4	32.40
HDT-108 L	●		107.00	28.25	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,366.4	32.19
HDT-108 R		●	107.00	28.25	1 5/8-12 UN-2B	1 5/16-12 UN-2B	5,076.32	5,366.4	32.19

P1= Max. continuous pressure (100%) / P3= Max. peak pressure (max. 6 secs.)

RECOMMENDATIONS

Fluid		Mineral or synthetic compatible with HNBR seals			
Kinematic Viscosity	Average Ambient Temp.	< -40 °C	-40 ÷ 10 °C	10 ÷ 34 °C	> 35 °C
	VG (cSt = mm ² /s)	16	22	32	46
Optimal Kinematic Viscosity		VG = 10 cSt to 100 cSt			
Max. kinematic viscosity suggested at the start-up		VG = 750 cSt			
Viscosity Index (suggested)		VI > 100			
Oil Filtering		>200 bar: 10 µm / < 200 bar: 25 µm			
Inlet Pressure		0.85 ÷ 2 bar (absolute)			

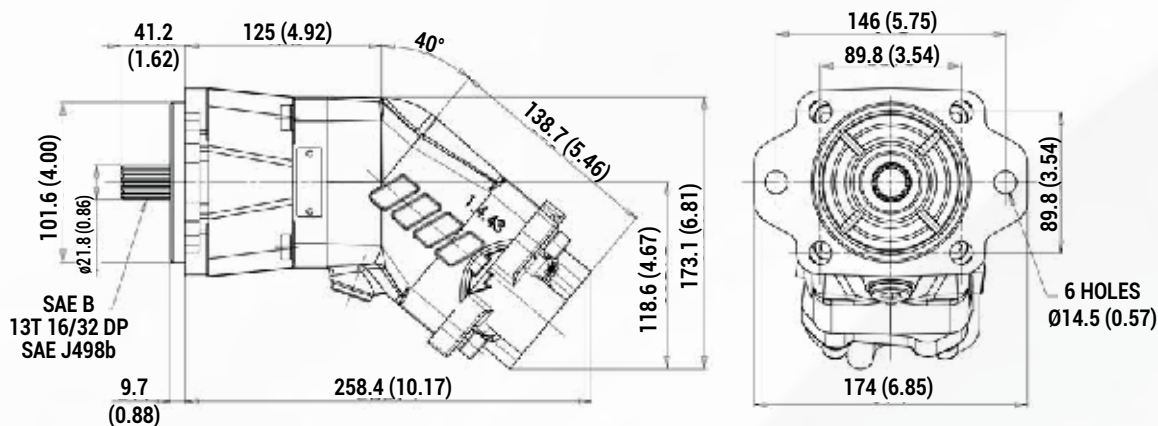
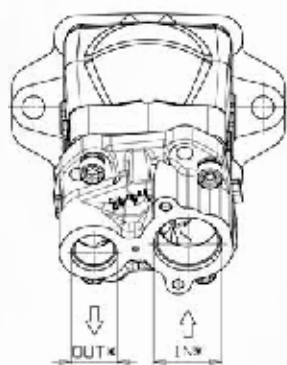


BENT AXIS PISTON PUMPS

6-BOLT TYPE

Technical Information

- Flange: SAE-B
- Shaft: 13T 16/32
- Unidirectional (right or left)
- Working temperature:
-15°C / +140°C (5°F / +284°F)
- Max. continuous speed without load: 2700 RPM
- Max. continuous speed: 1900 RPM
- Max. intermittent speed: 2500 RPM

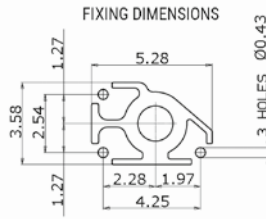


Type	Rotation		Displacement at 1000 RPM		Ports		Max Pressure [PSI]		Weight [lbs]
	L	R	[cm ³ /REV]	GPM	IN - SAE 20	OUT - SAE 16	P1	P3	
HDS-47 SAE L	●		47.13	12.44	1 5/8-12 UN-2B	1 5/16-12 UN-2B	4,931.28	4,931.28	31.30
HDS-47 SAE R		●	47.13	12.44	1 5/8-12 UN-2B	1 5/16-12 UN-2B	4,931.28	4,931.28	31.30
HDS-55 SAE L	●		56.70	14.97	1 5/8-12 UN-2B	1 5/16-12 UN-2B	4,061.06	4,061.06	31.30
HDS-55 SAE R		●	56.70	14.97	1 5/8-12 UN-2B	1 5/16-12 UN-2B	4,061.06	4,061.06	31.30
HDS-64 SAE L	●		63.56	16.78	1 5/8-12 UN-2B	1 5/16-12 UN-2B	3,625.94	3,625.94	31.30
HDS-64 SAE R		●	63.56	16.78	1 5/8-12 UN-2B	1 5/16-12 UN-2B	3,625.94	3,625.94	31.30

P1= Max. continuous pressure (100%) / P3= Max. peak pressure (max. 6 secs.)
Indicated pressure values are limited due to the max allowed torque on SAE B shaft (300 Nm)

RECOMMENDATIONS

Fluid		Mineral or synthetic compatible with HNBR seals			
Kinematic Viscosity	Average Ambient Temp.	< -40 °C	-40 ÷ 10 °C	10 ÷ 34 °C	> 35 °C
	VG (cSt = mm ² /s)	16	22	32	46
Optimal Kinematic Viscosity		VG = 10 cSt to 100 cSt			
Max. kinematic viscosity suggested at the start-up		VG = 750 cSt			
Viscosity Index (suggested)		VI > 100			
Oil Filtering		>200 bar: 10 µm / < 200 bar: 25 µm			
Inlet Pressure		0.85 ÷ 2 bar (absolute)			



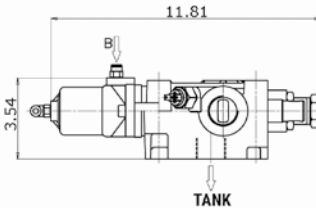
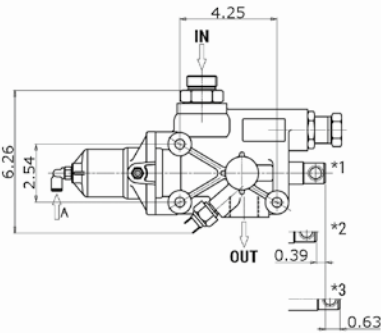
TIPPER VALVE

SINGLE PRESSURE VALVE

Technical Information

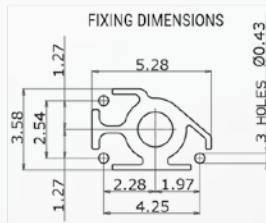
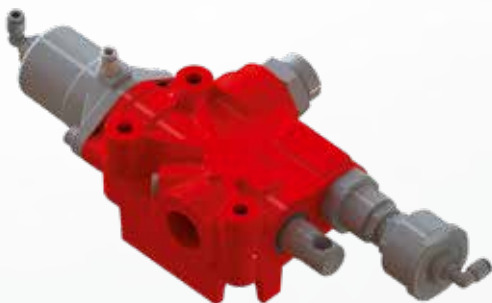
Proportional pneumatic tipping valve suitable for large oil flow applications especially designed for heavy-duty tipper bodies, off-road trucks and semi-trailers. Operated by proportional cab control. Open center hydraulic scheme according to CE standards.

- Built-in check & adjustable relief valves (direct type).
- Modular cast-iron body for pressure up to 5801 PSI (400 bar).
- Either chassis or tank mounting options.
- Mechanical Direct End-of-stroke.
- Ready for pressure signal switch mounting.
- Galvanized body and nickel spool.
- Guaranteed for oil temperature range: 5° to 230° F (-15° to 110° C), Viscosity range 12 to 100 cSt & oil filtering 25 micron.



- A = PROPORTIONAL LOWERING
- B = TIPPING
- *1 = REST POSITION
- *2 = TIPPING
- *3 = LOWERING

Part Number	Description	In	Out/Tank
VR2DQ0C1CTUXUX5B11	Single Pressure Tipper Valve Relief Valve Set at 2320 PSI (160 bar)	1 5/16-12 UN-2A	1 5/16-12 UN-2B



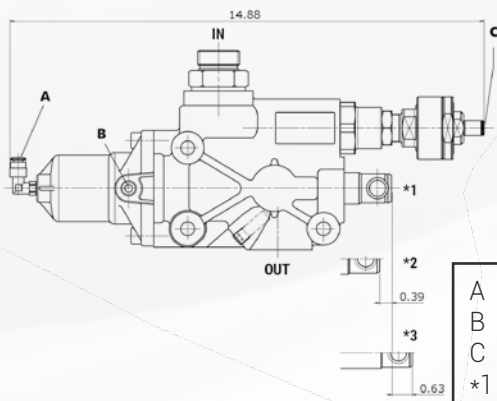
TIPPER VALVE

DUAL PRESSURE VALVE

Technical Information

Proportional pneumatic tipping valve suitable for large oil flow applications especially designed for heavy-duty tipper bodies and semi-trailers with two independent working pressures which can be selected pneumatically. Operated by proportional cab control. Open center hydraulic scheme according to CE standards.

- Built-in check & dual pressure adjustable relief valve (pilot type).
- Modular cast-iron body for pressure up to 5801 PSI (400 bar).
- Either chassis or tank mounting options.
- Mechanical Direct End-of-stroke.
- Ready for pressure signal switch mounting.
- Galvanized body and nickel spool.
- Guaranteed for oil temperature range: 5° to 230° F (-15° to 110° C), Viscosity range 12 to 100 cSt & oil filtering 25 micron.



- A = PROPORTIONAL LOWERING
- B = TIPPING
- C = 2nd PRESSURE AIR
- *1 = REST POSITION
- *2 = TIPPING
- *3 = LOWERING

Part Number	Description	In	Out/Tank
VR6DQ3T1CTUXUX5B11	Dual Pressure Tipper Valve - Relief Valve Set at 2030 PSI (140 bar) and 3335 PSI (230 bar)	1 5/16-12 UN-2A	1 5/16-12 UN-2B

Eaton Transmissions PTO

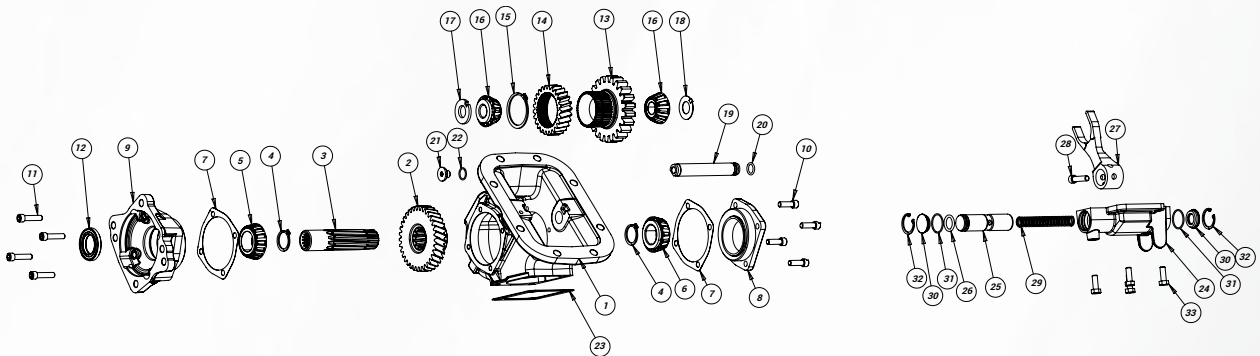
TYPE XB

DIRECT



Bill Of Material		
Item	Qty	Description
1	1	housing
2	1	output gear -34t r1 ratio
3	1	output shaft-13t 7/8"
4	2	locking
5	1	bearing
6	1	bearing
7	2	gasket
8	1	bearing cap
9	1	pump flange assembly
10	4	hexagon socket
11	4	hexagon socket
12	1	oil seal
13	1	input gear-22t hs
14	1	input gear ratio-28t
15	1	locking
16	2	bearing
17	1	spacer

Bill Of Material		
Item	Qty	Description
18	1	thrust washer
19	1	idler shaft .75"
20	1	o-ring
21	1	plug
22	1	o-ring
23	1	gasket for shifter cover
24	1	shifter cover
25	1	shaft, shifter
26	1	o-ring
27	1	shifter fork
28	1	hexagon socket
29	1	shifter spring
30	2	cover plug
31	2	o-ring
32	2	locking
33	4	six head capscrew
34	1	gasket



CODE CONSTRUCTION DIAGRAM

B **T** **8** **X** **B** **N** **A** **1** **1** **X** **B**

1 2 3 4 5 6 7

- 1 BT8** PTO SERIES MODEL (BT8)

- 2 X** MOUNTING OPTION (X = STANDARD MOUNT)

- 3 B** GEAR RATIO
 B = 21/37 D = 25/34 F = 22/24
 C = 23/35 E = 19/24

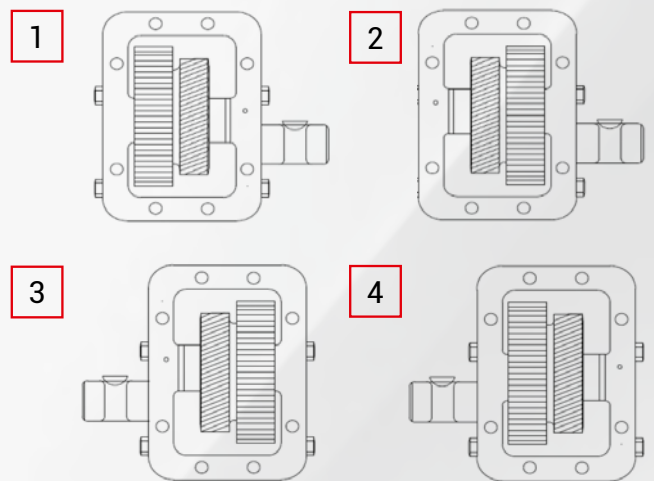
- 4 N** SHIFT OPTION (N = AIR LESS CAB CONTROL)

- 5 A1** INPUT GEAR (A1 = STANDARD EATON FULLER)

- 6 1** ASSEMBLY ARRANGEMENT (1, 2, 3, 4)

- 7 XB** OUTPUT OPTION
 XB = S.A.E. "B" 2 OR 4 - BOLT 7/8" - 13 TEETH
 XS = 1-1/4" ROUNDED STANDARD SHAFT

ASSEMBLY ARRANGEMENT



Please note: All parts supplied are Binotto. The use of other manufacturers' names, part numbers, descriptions or trademark is for cross reference and informational purposes only. The trademarks of others referred to herein are owned by their respective companies and are not affiliated in any way with Binotto USA, LLC.

Eaton Transmissions PTO

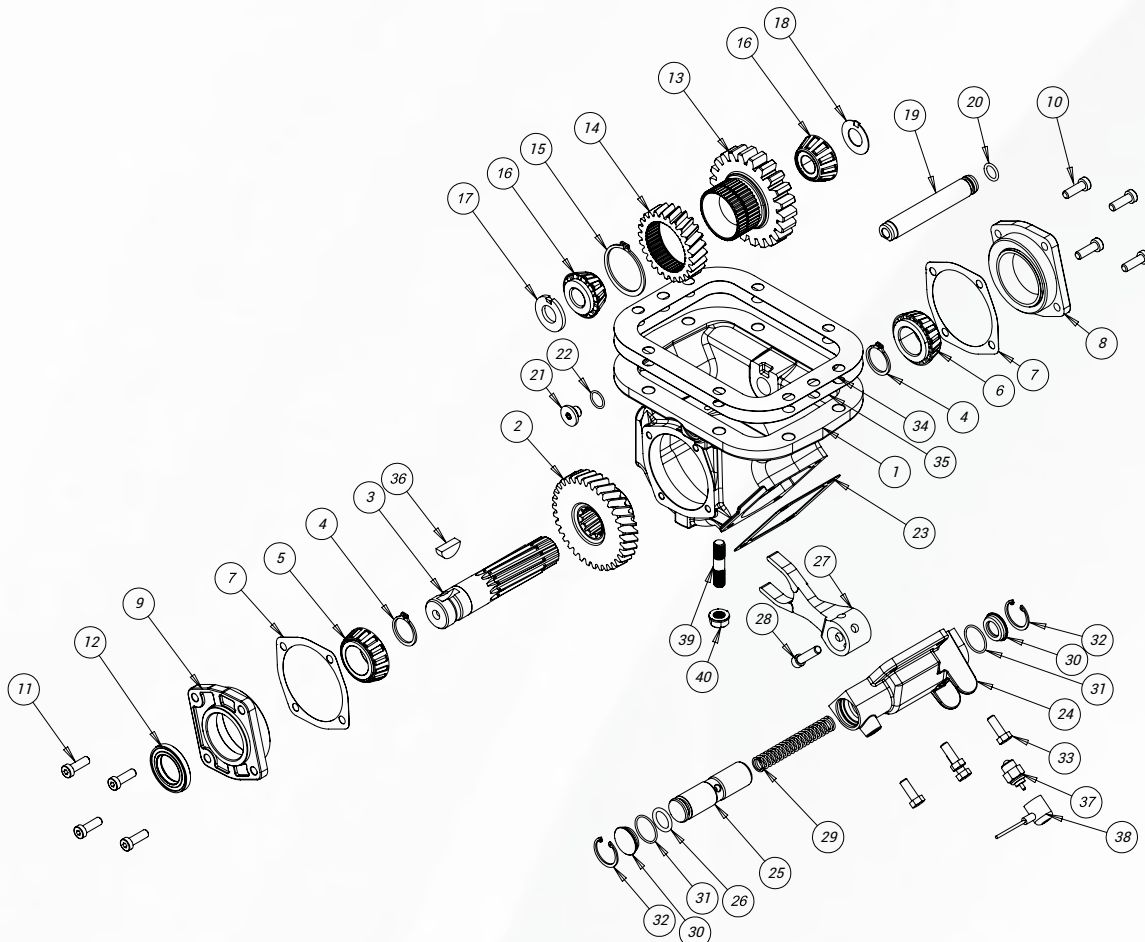
XS

KEY SHAFT



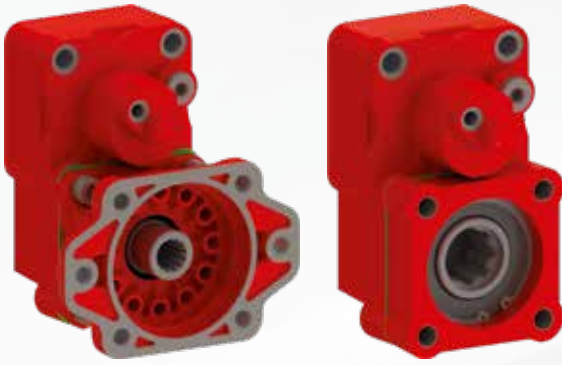
Bill Of Material		
Item	Qty	Description
1	1	Housing
2	1	Output gear-24t
3	1	"Output shaft 1.25 Keyed"
4	2	Lockring
5	1	Bearing
6	1	Bearing
7	2	Gasket
8	1	Bearing cap
9	1	Bearing cap
10	4	Hexagon socket
11	4	Hexagon socket
12	1	Oil seal
13	1	Input gear-22t s
14	1	Input ratio gear-22t r4 ratio
15	1	Lockring
16	2	Bearing
17	1	Spacer
18	1	Thrust washer
19	1	Idler shaft .75"
20	1	O-ring

Bill Of Material		
Item	Qty	Description
21	1	Plug
22	1	O-ring
23	1	Gasket for shifter cover
24	1	Shifter cover
25	1	Shaft, shifter
26	1	O-ring
27	1	Shifter fork
28	1	Hexagon socket
29	1	Shifter spring
30	2	Cover plug
31	2	O-ring
32	2	Lockring
33	4	Six head capscrew
34	1	Gasket
35	1	Gasket
36	1	Keyed
37	1	Indicator switch
38	1	Booted connector wire
39	8	Stud
40	8	Nuts



Please note: All parts supplied are Binotto. The use of other manufacturers' names, part numbers, descriptions or trademark is for cross reference and informational purposes only. The trademarks of others referred to herein are owned by their respective companies and are not affiliated in any way with Binotto USA, LLC.

REAR MOUNT PTOS



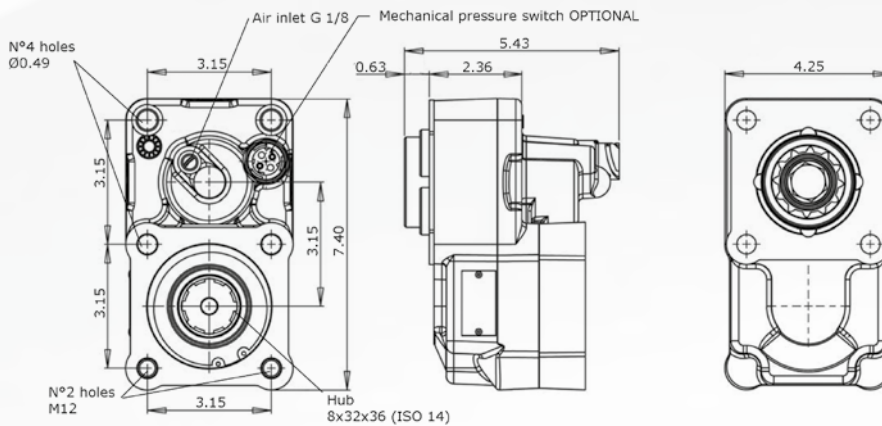
WIDE RANGE ON REAR MOUNTED PTOS FOR VOLVO I SHIFT, MACK M DRIVE, DETROIT DIESEL, ZF, IVECO, AND SEVERAL OTHER TRANSMISSIONS

PTO - ISO / SAE-B

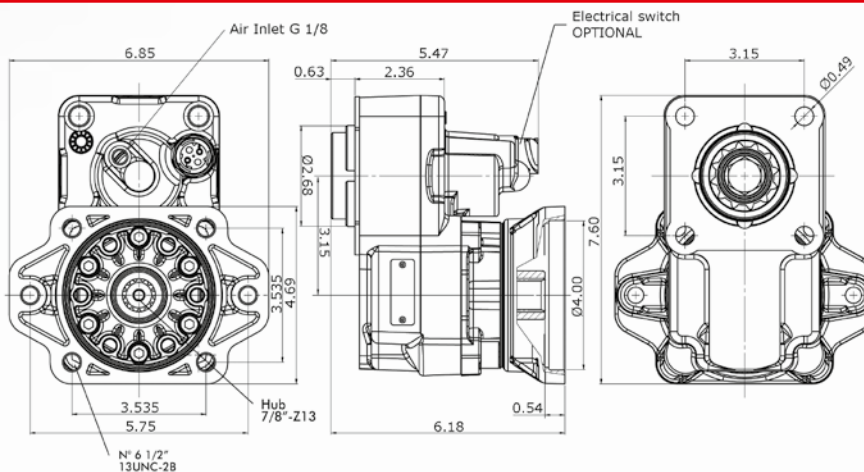
Technical Information

- Maximum Torque: 300 Nm (221 ft-lbs)
- Mounting side: Rear
- Output: Rear
- Internal Ratio: 1:1.35

PTO ISO Output Option Below:



PTO SAE-B Output Option Below:



Part Number	Output Option	Version	Rotation	Weight
PTO01007708170BI11	ISO	17	ACW	5.6 kg (12.34 lbs.)
PTO01007700525BI11	SAE-B	52	ACW	7.1 kg (15.65 lbs.)

Not for continuous use, intermittent use only!

Accessories

Part Number	Description
KMN15400304767BI11	STUD KIT (Included standard with PTO)
ITPIT0EG275BI10001	PRESSURE SWITCH REAR MOUNT PTO (Included standard with PTO)
RCARBBA00MAC014B01	AIR FITTING REAR MOUNT PTO (Included standard with PTO)
KCRC1030PPTWJ01001	SAE-B GASKET (Included standard with PTO)

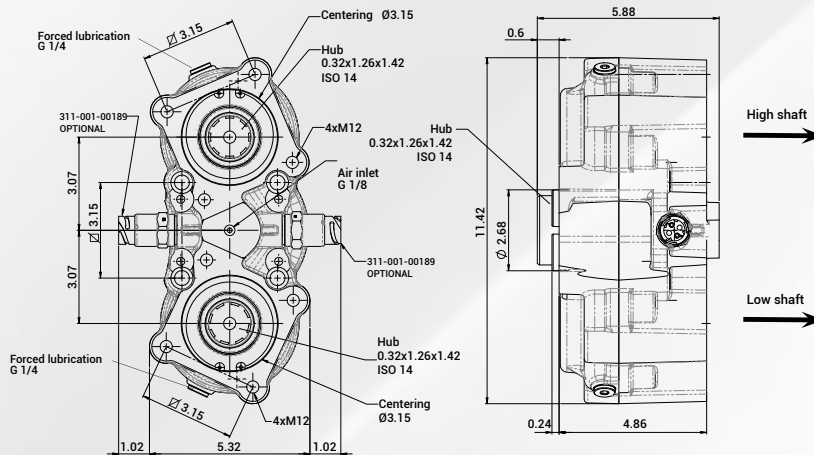


ZF, MERCEDES, EATON, VOLVO

DOUBLE SHAFT PTO

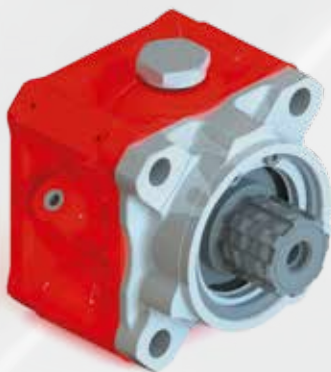
Technical Information

- Maximum Torque: 450 Nm (331.90 ft-lbs)
- Mounting side: Rear
- Output: Rear
- Internal Ratio: 1:1.27



Part Number	Output Option	Version	Weight
PTO01003912170BI11	ISO	217	17.9 kg (39.46 lbs.)

Not for continuous use, intermittent use only!

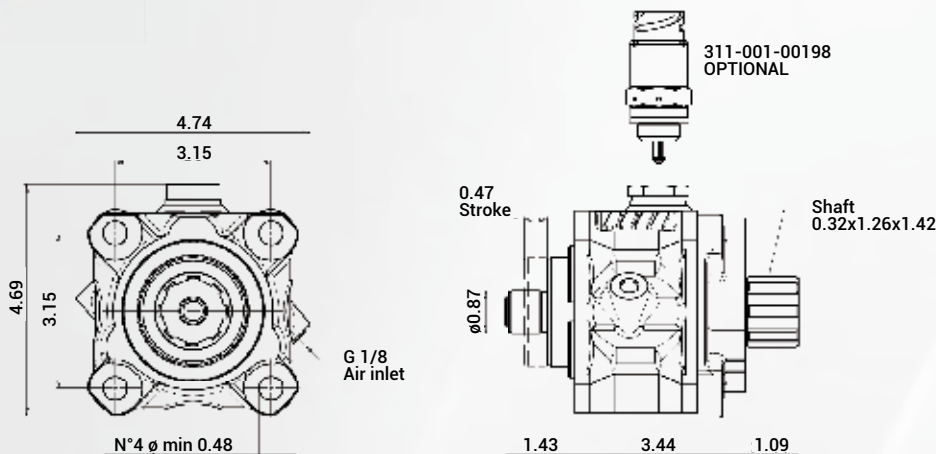


ZF, MERCEDES, EATON, VOLVO, SCANIA

ISO TYPE

Technical Information

- Maximum Torque: 1000 Nm (737.56 ft-lbs)
- Mounting side: Rear
- Output: Rear
- Internal Ratio: 1:1



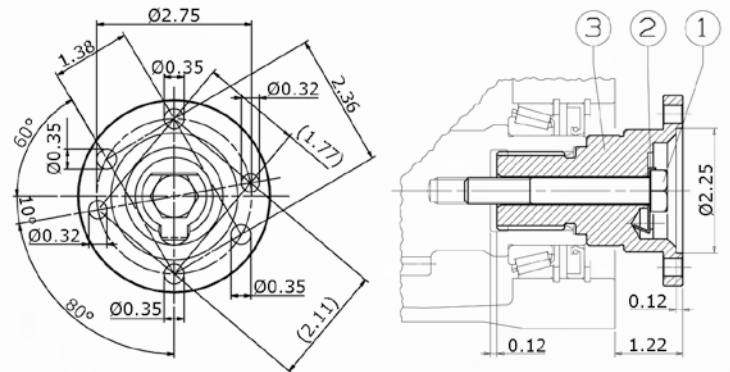
Part Number	Output Option	Version	Rotation	Weight
PTO01004000153BI11	ISO	15	CW	3.7 kg (8.15 lbs.)

Not for continuous use, intermittent use only! It can be used as PTO and as an output adapter for double shaft PTO.



**REAR MOUNT FLANGE KIT
(P/N: GCD11400001043BI11)**

SPICER 1120 EQUAL

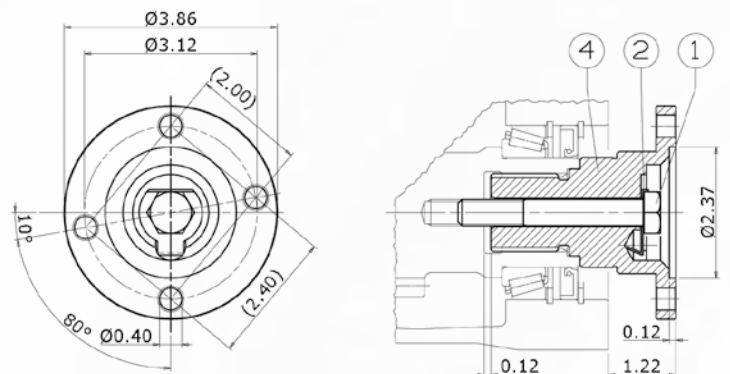


Bill Of Material		
Item	Qty	Description
1	1	Screw M12x85
2	1	Back-up Washer M12
3	1	1120 Flange



**REAR MOUNT FLANGE KIT
(P/N: GCD11400001105BI11)**

SPICER 1300 EQUAL

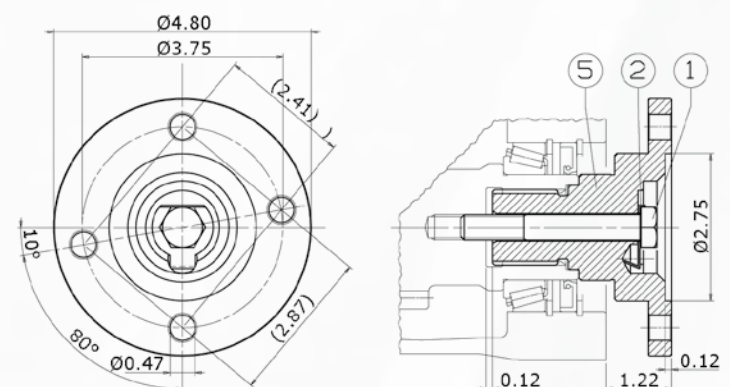


Bill Of Material		
Item	Qty	Description
1	1	Screw M12x85
2	1	Back-up Washer M12
4	1	1300 Flange

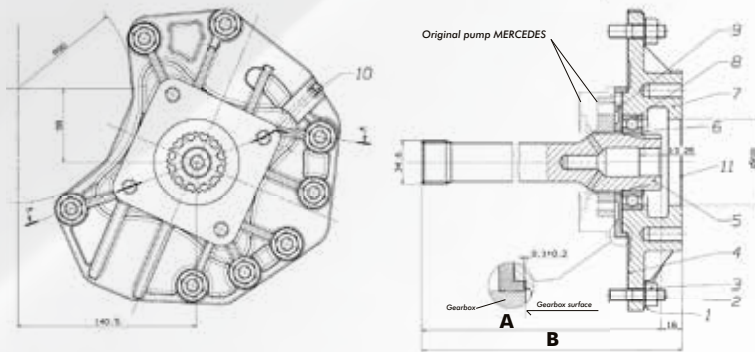
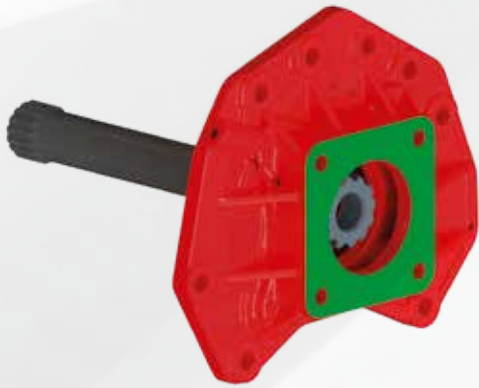


**REAR MOUNT FLANGE KIT
(P/N: GCD11400001516BI11)**

SPICER 1400 EQUAL



Bill Of Material		
Item	Qty	Description
1	1	Screw M12x85
2	1	Back-up Washer M12
5	1	1410 Flange



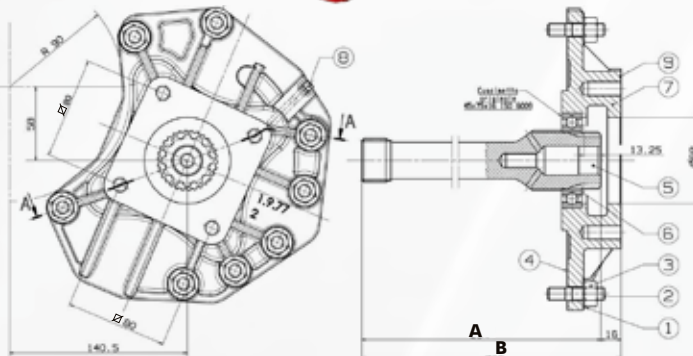
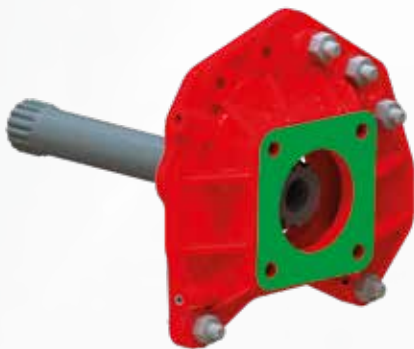
Part Number	Adapter Shaft/ Transmission
ALB09391600338BI11	DT12 OA/DA (MBG281/330-12)

QUILL SHAFT WITH LUBRIFICATION PUMP RING (MERCEDES)

Quill Shaft & Flange

Bill Of Material

Item	Qty	Description
1	8	Washer A10 UNI 8840
2	8	Stud M10x30 UNI 591
3	8	Nut M10 CH.17 UNI 5587
4	1	Gasket PTO-CAMBIO
5	1	Quill shaft G 131 ... G 330
5	1	Quill shaft G 131 ... G 330 + RETARDER
5	1	Quill shaft G 281-12 POWERSHIFT 3
5	1	Quill shaft G 281-12 POWERSHIFT 3 + AQUATARDER
6	1	Circlip 45E
7	1	Flange CAMBIO-PTO
8	1	Ball bearing 45x75x16
9	1	Centering ring
10	1	Conical screw 1/16"
11	1	Gasket finestra ISO 7707



Part Number	Adapter Shaft/ Transmission
ALB09301600015BI11	DT12-OB/DB G230/G211

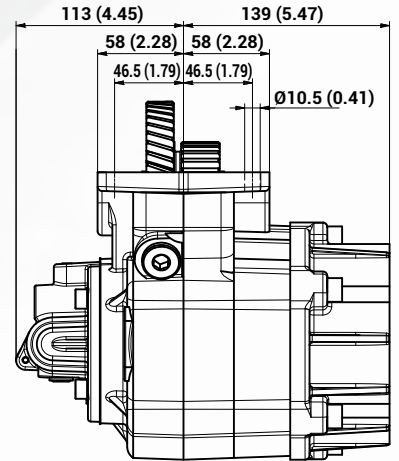
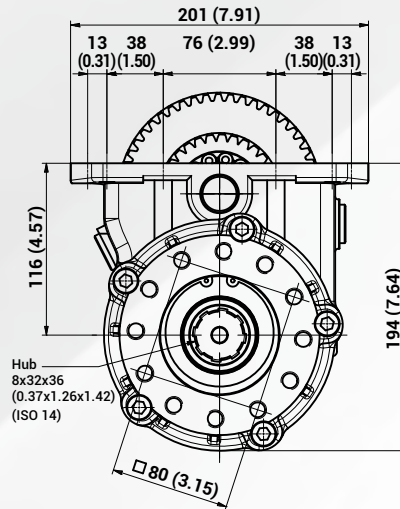
QUILL SHAFT (MERCEDES)

Quill Shaft & Flange

Bill Of Material

Item	Qty	Description
1	8	Washer A10 UNI 8840
2	8	Stud M10x30 UNI 5911
3	8	Nut M10 CH.17 UNI 5587
4	1	Gasket PTO-CAMBIO
5	1	Quill shaft G 131 ... G 330
5	1	Quill shaft G 131 ... G 330 + RETARDER
5	1	Quill shaft G 281-12 POWERSHIFT 3
5	1	Quill shaft G 281-12 POWERSHIFT 3 + AQUATARDER
6	1	Circlip 45E
7	1	Flange CAMBIO-PTO
8	1	Conical screw 1/16"
9	1	Gasket finestra ISO 7707

ALLISON TRANSMISSIONS - Allison 10-bolt PTO



Part Number	Trans. Series	Solenoid Valve	Hose Kit Used	PTO Ratio @1000 RPM	Max Torque	Rotation	Weight	Flow [l/min]
PTO05613712175BI11	4500 RDS	12v	KLB09401100107BI11	183.70%	300 Nm	Ant. CCW	24.6 Kg	54.2
	3000 RDS	12v	KLB09401100090BI11	127.10%	450 Nm	Ant. CCW	24.6 Kg	54.2
PTO05613212170BI11	4500 RDS	12v	KLB09401100107BI11	129.30%	420 Nm	Ant. CCW	24.6 Kg	54.2
	3000 RDS	12v	KLB09401100090BI11	90.60%	450 Nm	Ant. CCW	24.6 Kg	54.2
PTO05613212171BI11	4500 RDS	12v	KLB09401100107BI11	111.20%	540 Nm	Ant. CCW	23.6 Kg	52.0
	3000 RDS	12v	KLB09401100090BI11	78.00%	540 Nm	Ant. CCW	23.6 Kg	52.0

Notes: Additional options on request, please contact Binotto USA for more info.

Accessories

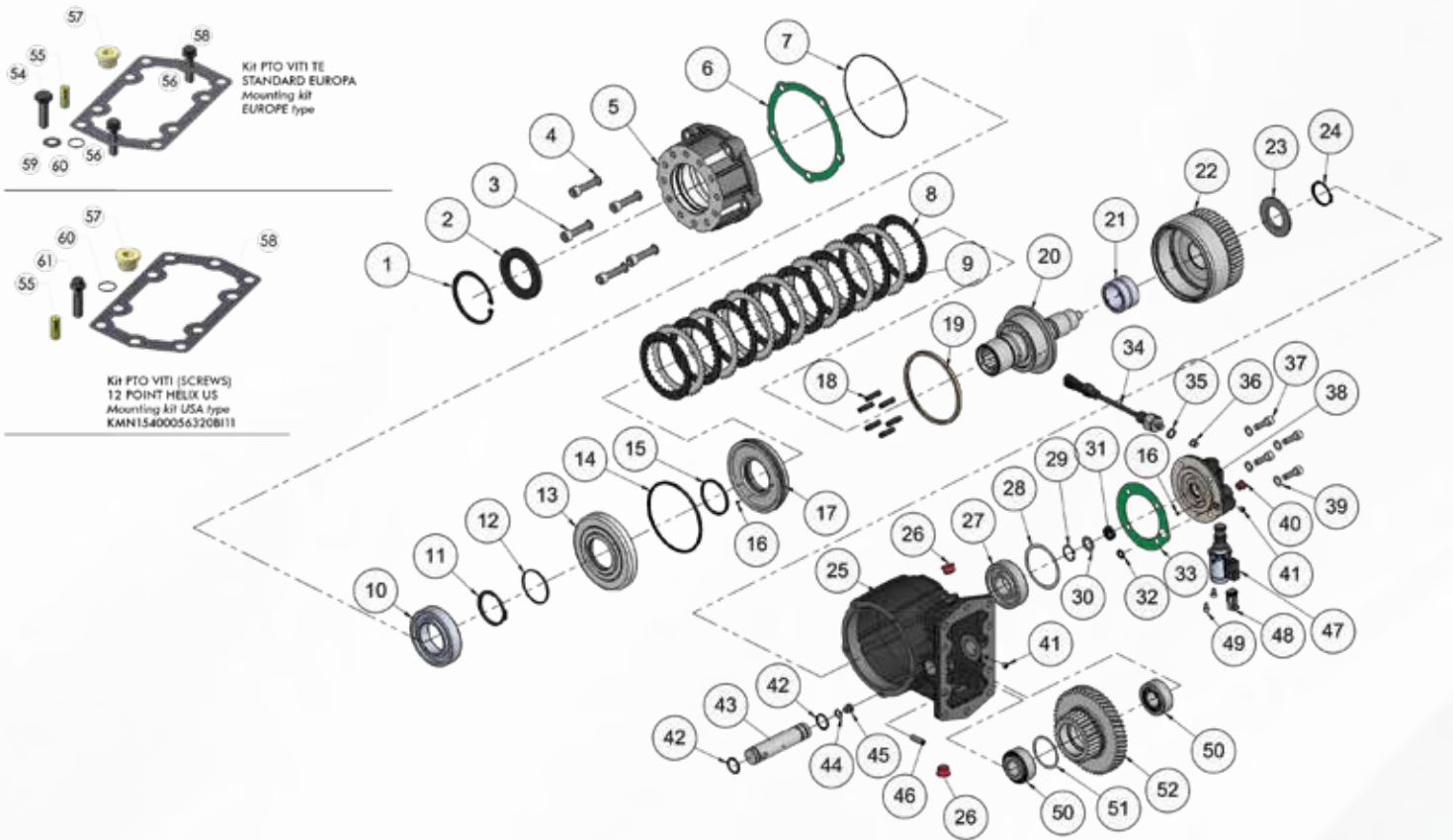


Part Number	Description	Part Number	Description
KMN15400056320BI11	MOUNTING KIT	KLT30110600102BI11	WIRE HARNESS KIT



Part Number	Description
KLB09401100090BI11	HOSE KIT'S
KLB09401100107BI11	HOSE KIT'S

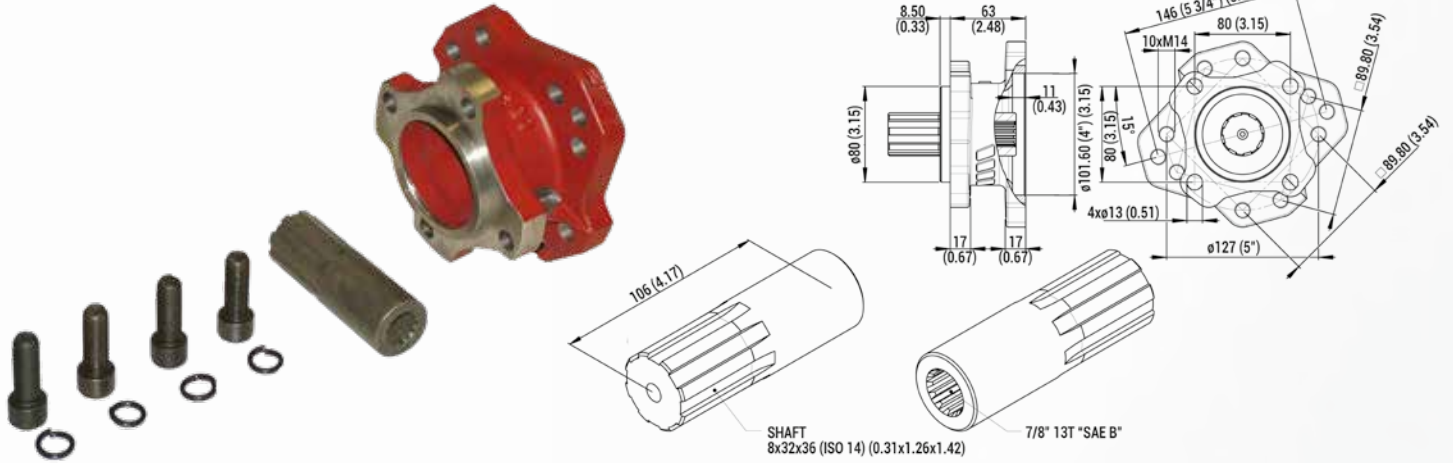
ALLISON TRANSMISSIONS - Allison 10-bolt PTO



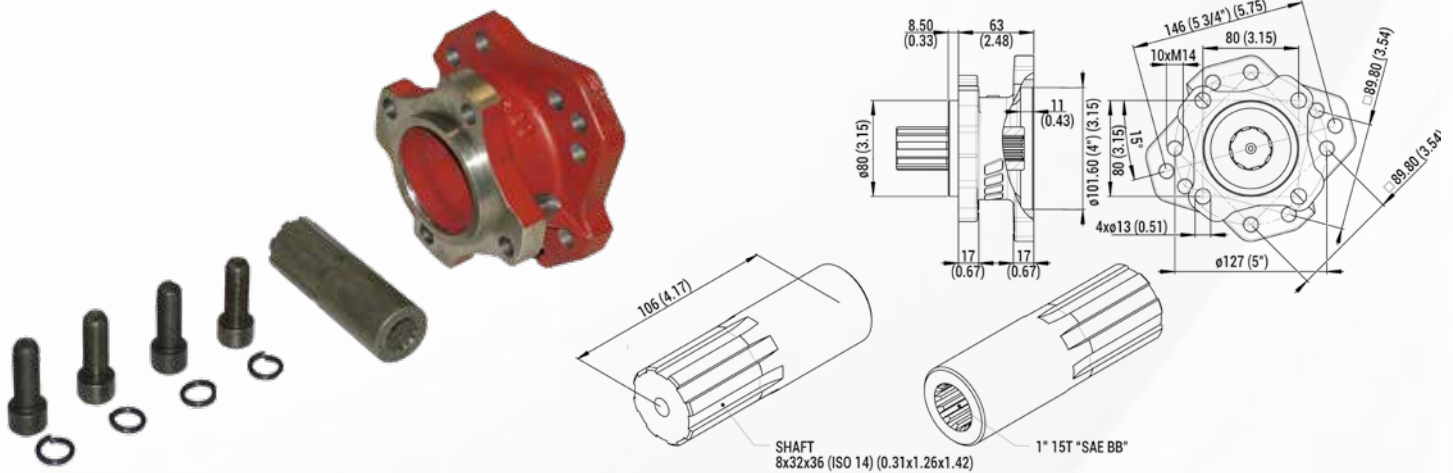
Bill Of Material		
Item	Qty	Description
01	1	Retaining ring
02	1	Oil seal
03	5	Cap screw
04	5	Washer
05	1	Output flange
06	1	Gasket
07	1	O-Ring 049
08	8	Clutch plate (friction)
09	7	Clutch plate (steel)
10	1	Ball bearing
11	1	Retaining ring
12	1	O-Ring
13	1	Clutch backup cyl.
14	1	Block vee ring
15	1	O-Ring
16	2	Screw
17	1	Piston
18	6	Return spring
19	1	Bushing ring
20	1	Output shaft
21	1	Needle roller bearing

Bill Of Material		
Item	Qty	Description
22	1	Input gear
23	1	Thrust washer
24	1	Retaining ring
25	1	Housing
26	2	Plug
27	1	Ball bearing
28	1	Shim ring
29	1	Retaining ring
30	1	Spacer
31	1	High pressure oil seal
32	1	O-ring
33	1	Gasket
34	1	Pressure switch
35	1	Washer
36	1	Plug
37	4	Hex Cap screws
38	1	Valve cap
39	4	Washer
40	1	Plug
41	2	Conical Screw
42	2	O-ring

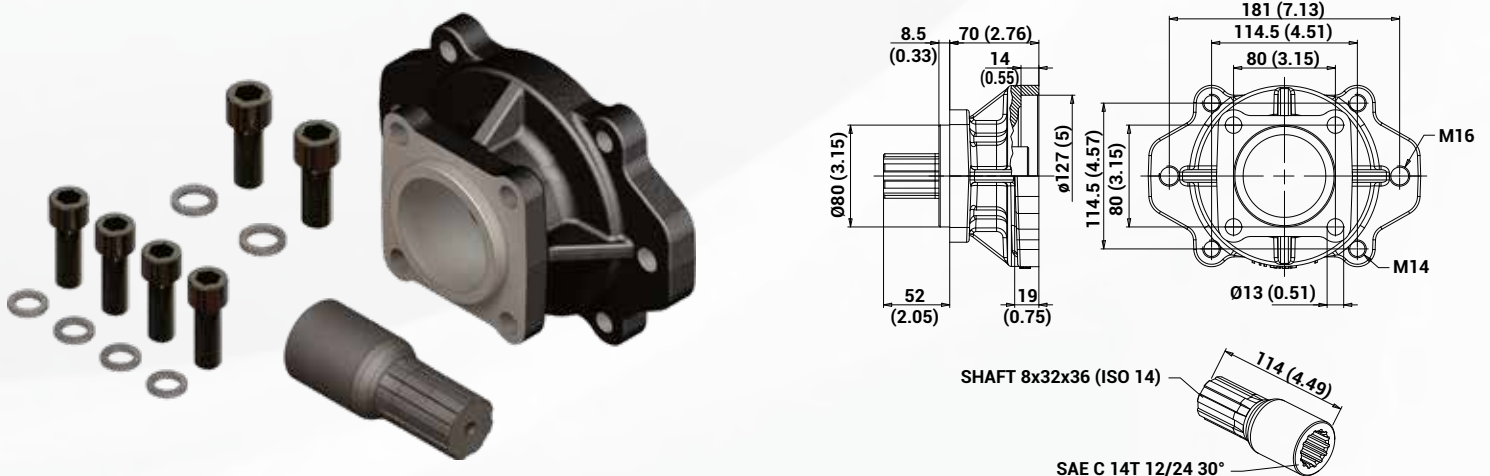
Bill Of Material		
Item	Qty	Description
43	1	Idler Pin
44	1	Washer
45	1	Plug
46	1	Straight thread plug
47	1	Solenoid valve
48	1	Deutsch plug
49	2	Hex cap screw
50	2	Tapered bearing
51	2	Tapered bearing
52	1	Shim ring
53	1	Input gear
55	2	Pin
57	2	O-ring boss plug
58	1	Mounting gasket
60	2	O-ring
61	8	Screw



Part Number	Description	Theoretical transmitted torque [ft-lb]
APP11400011701BI11	ADAPTOR ISO 4 BOLT PTO / SAE B PUMP	184



Part Number	Description	Theoretical transmitted torque [ft-lb]
APP11400011756BI11	ADAPTOR ISO 4 BOLT PTO / SAE BB PUMP	295



Part Number	Description	Theoretical transmitted torque [ft-lb]
APP11400011827BI11	ADAPTOR ISO 4 BOLT PTO / SAE C PUMP	590

The allowed torque is referred to the maximum value transmitted under theoretical conditions.



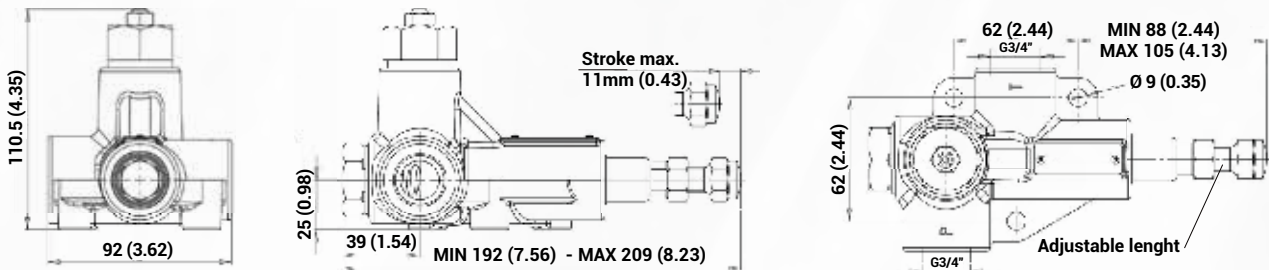
Part Number
FNC1621500RJOAG101

END-OF-STROKE VALVES

HYDRAULIC VERSION

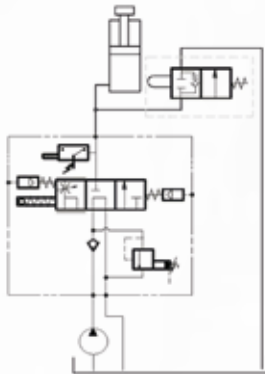
Technical Information

- Mechanical activation by pushing.
- Flow up to 150 l/min (39.6 GAL/min).
- Nodular cast iron body for pressure up to 400 bar (5801 PSI).
- Antishock valve setting pressure: 190 bar (2755 PSI)
- Cataphoresis coated casting.
- Reduced overall dimensions.

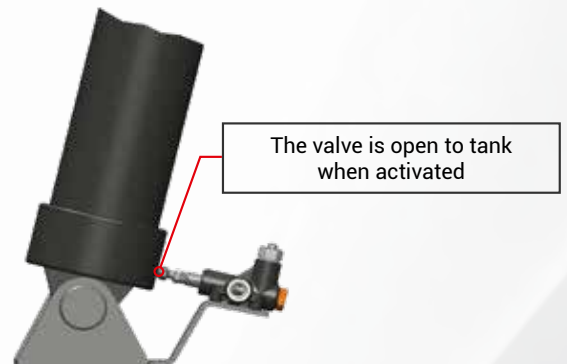


FUNCTIONAL DIAGRAM

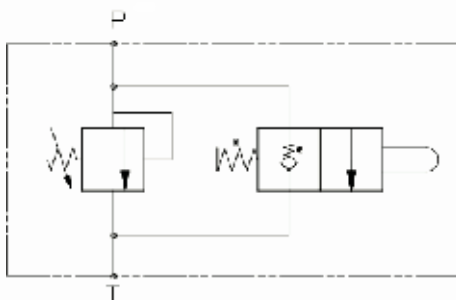
1. EXAMPLE OF MOUNTING SCHEME



2. EXAMPLE OF APPLICATION



3. FUNCTIONAL DIAGRAM



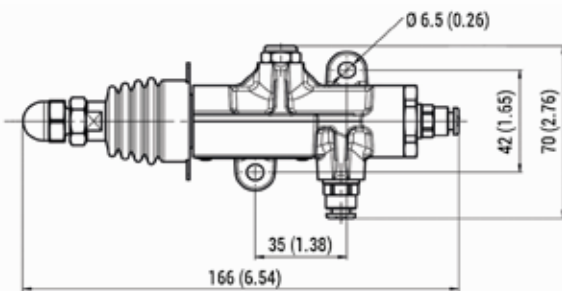
4. IMPORTANT



The working force **F** has to be higher than
15 + p x 3.8
when **p** is the air pressure in bar.



Part Number
FNC4610000A0400101



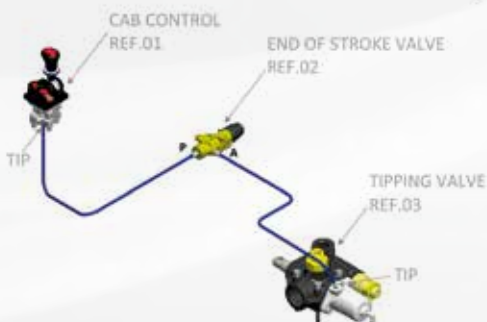
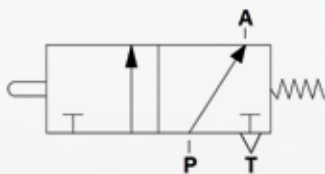
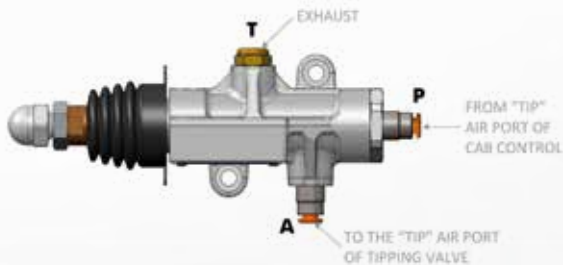
END-OF-STROKE VALVES

PNEUMATIC VERSION

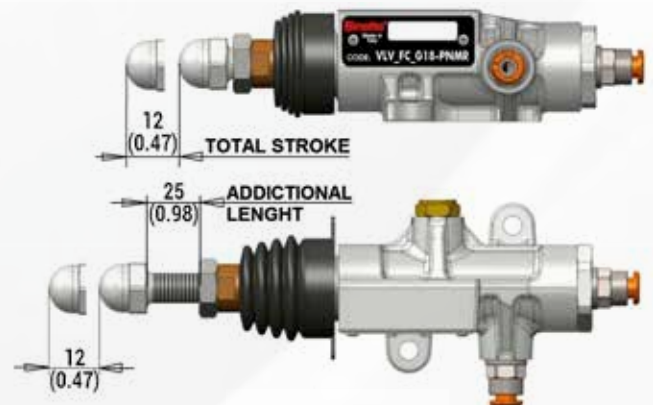
Technical Information

- Maximum pressure: 12 bar (174 PSI)
- Temperature of use:
-40° / +140° C (-40° / +284° F)
- Mechanical activation, by pushing
- Feed tube: Ø 1/4"
- Utilization tube: Ø 1/4"

1. FUNCTIONAL DIAGRAM



2. ADJUSTING THE POSITION OF TOUCH PROBE



WARNING: DO NOT EXCEED THE MEASURE INDICATED OF 0.98 in

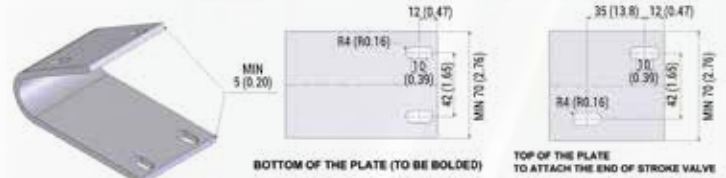
The pneumatic end of stroke must be adjusted so that the cylinder will not reach its end of stroke even when tipping with max engine r.p.m. It is safe to leave always minimum 5.90 in of unused cylinder stroke to let the end of stroke valve to operate.

3. MOUNTING INSTRUCTIONS

- Lift the cylinder until you reach the required tipping angle (and in any case at least 5.90 in before reaching the end of the stroke of the cylinder).
- Prop the body safely.
- Check the position where to fix the metal plate on the cross member. Position and angle of the metal plate must be decided in order to allow the button of the valve to operate at approximately 90° with the surface of the cylinder.
- Fix the metal plate with the button of the end of stroke already pushed at the required tipping angle;
- Test it few times in order to hear the hissing sound from the end of stroke valve and adjust (if you need) the mounting of the valve by using the slotted holes.

4. HOW TO PREPARE THE METAL PLATE

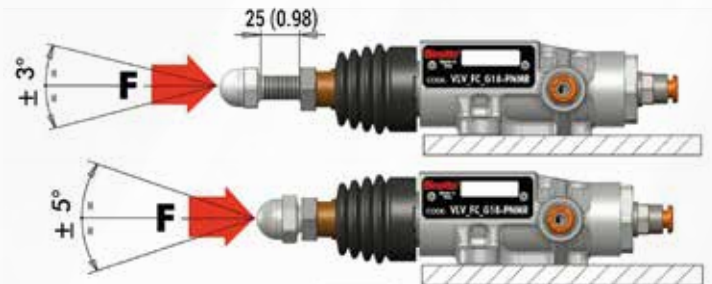
The metal plate can be attached to the cross member by fixing it with bolts (prepare slotted holes in case you will need to adjust it) or by simply welding it (see metal plate examples in pictures here below).



5. MOUNTING EXAMPLES



6. GENERAL RECOMMENDATIONS



THE STRENGTH **F** OF ACTUATION IN **KG** MUST BE HIGHER THAN $[10 + p \times 3.14]$ WHERE **p** IS THE AIR PRESSURE INDICATED IN BAR.

7. WORK POSITIONS



DO NOT REACH THE POSITION "TOTAL STROKE" TO AVOID DAMAGING THE END OF STROKE VALVE.

HYDRAULIC TANKS - SADDLE MOUNTED



TANKS

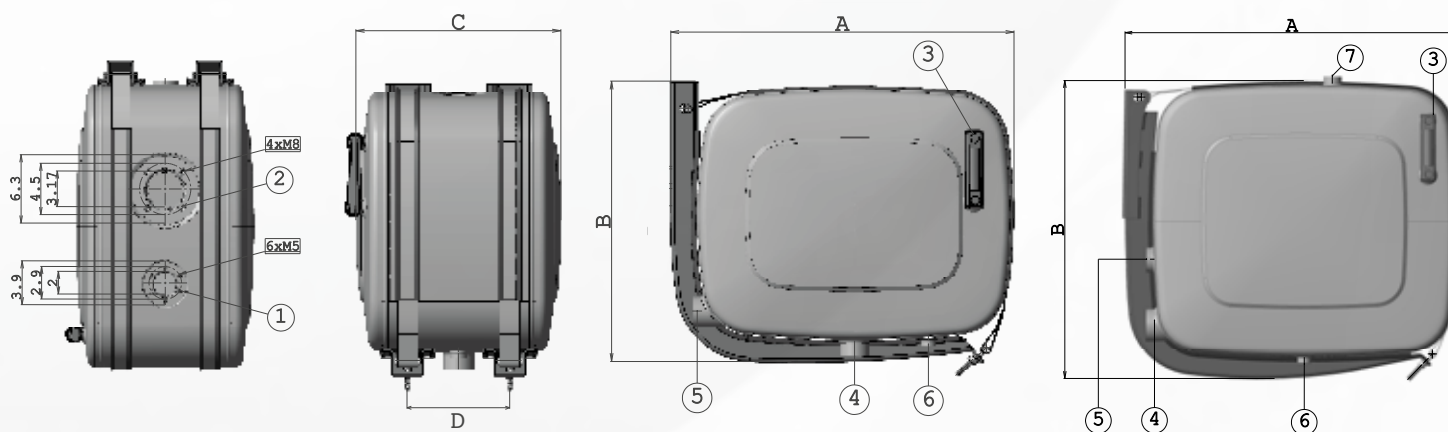
SADDLE MOUNT

Technical Information

- Aluminum construction
- 5" Sight Glass with temperature included
- Magnetic drain plug included
- Sleek design
- Return filter port
- Versatile mounting (saddle or upright)

Item	Description	Qty
1	Oil Cap Flange	1
2	Return Filter Flange	1
3	Level Gauge (5") with temperature	1
4	Oil Suction Connection 1" 1/2 NPT (2" for 51.5 gallon tanks)	1
5	Oil Return Connection 1-1/4" NPT	1
6	Drain Plug 3/4" NPT	1
7	Air Filter Connection 3/4" NPT (only for 51.5 gallon tanks)	1

Notes: All dimensions are in inches • Saddle brackets with straps and steel cap included



18, 21, and 28 gallon tanks

35 and 51.5 gallon tanks

Part Number	Volume [us gal]	A [in]	B [in]	C [in]	D [in]
SRBL2N03502TANSNJ1	18.0	23.9	22.5	13.8	7.00
SRBL2N04003TANSNJ1	21.0	23.9	22.5	15.7	7.00 ÷ 8.66
SRBL2Q04004TANSNJ1	28.0	27.5	23.6	15.7	7.00 ÷ 8.66
SRBL2S03506TANSNJ1	35.0	31.0	28.0	13.8	7.00
SRBL2S05008TANSNJ1	51.5	31.0	28.0	19.7	11.41 ÷ 12.99

HYDRAULIC TANKS - UPRIGHT MOUNTED



TANKS

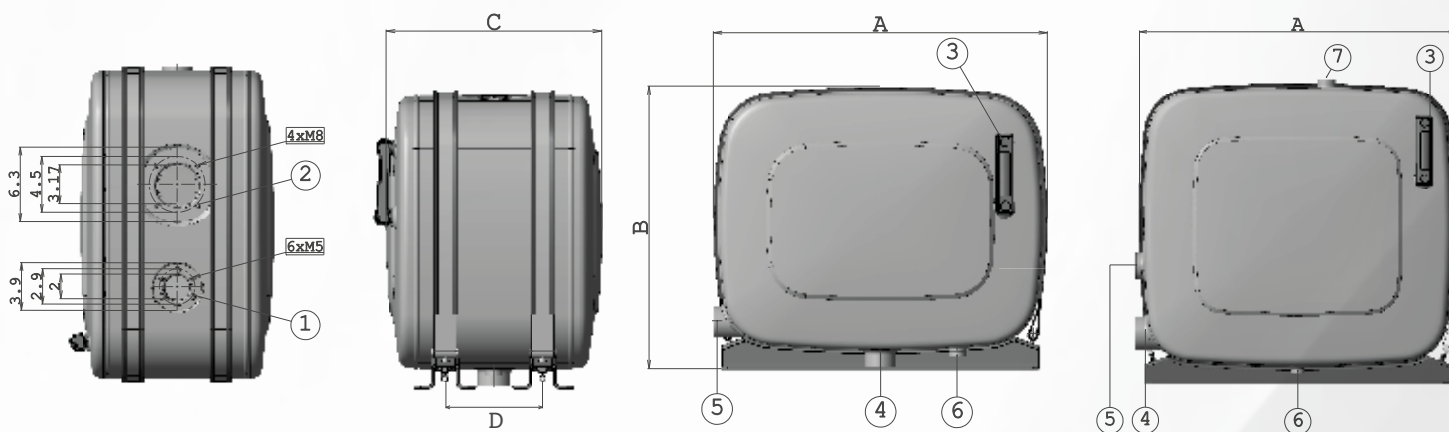
UPRIGHT MOUNT

Technical Information

- Aluminum construction
- 5" Sight Glass with temperature included
- Magnetic drain plug included
- Sleek design
- Return filter port
- Versatile mounting (saddle or upright)

Item	Description	Qty
1	Oil Cap Flange	1
2	Return Filter Flange	1
3	Level Gauge (5") with temperature	1
4	Oil Suction Connection 1" 1/2 NPT (2" for 51.5 gallon tanks)	1
5	Oil Return Connection 1-1/4" NPT	1
6	Drain Plug 3/4" NPT	1
7	Air Filter Connection 3/4" NPT (only for 51.5 gallon tanks)	1

Notes: All dimensions are in inches • Upright brackets with straps and steel cap included



18, 21, and 28 gallon tanks

35 and 51.5 gallon tanks

Part Number	Volume [us gal]	A [in]	B [in]	C [in]	D [in]
SRBL2N03502TANRNJ1	18.0	22.0	20.0	13.8	7.00
SRBL2N04003TANRNJ1	21.0	22.0	20.0	15.7	7.00 ÷ 8.66
SRBL2Q04004TANRNJ1	28.0	26.0	22.0	15.7	7.00 ÷ 8.66
SRBL2S03506TANRNJ1	35.0	29.0	27.0	13.8	7.00
SRBL2S05008TANRNJ1	51.5	29.0	27.0	19.7	11.41 ÷ 12.99

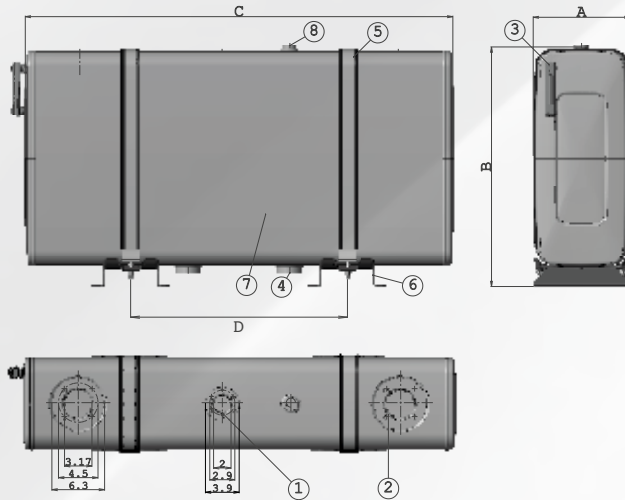


TANKS

UPRIGHT MOUNT

Technical Information

- Aluminum construction
- 5" Sight Glass with temperature included
- Magnetic drain plug included
- Sleek design
- Return filter port



Item	Description	Qty
1	Oil Cap Flange	1
2	Return Filter Flange	2
3	Level Gauge (5") with temperature	1
4	Oil Suction Connection 2" NPT	2
5	Straps	2
6	Upright Brackets	2
7	Partition	3
8	Air Filter Connection 3/4" NPT	1

Notes: All dimensions are in inches • Upright brackets with straps and steel cap included

Part Number	Volume [us gal]	A [in]	B [in]	C [in]	D [in]
SRBR2D12605TCN2NJ1	53.0	10.6	28.0	49.7	25.20 ÷ 27.56

OIL TANK BRACKETS

MOUNTING DIMENSIONS

SADDLE MOUNTING BRACKETS

UPRIGHT MOUNTING BRACKETS

18 - 21 - 28 GAL OIL TANK

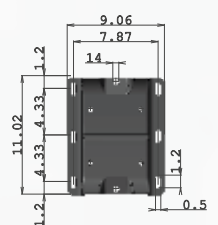
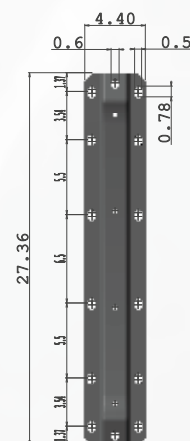
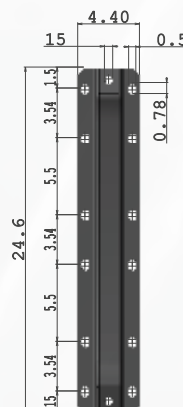
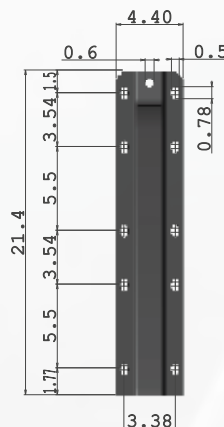
35-51.5 GAL OIL TANK

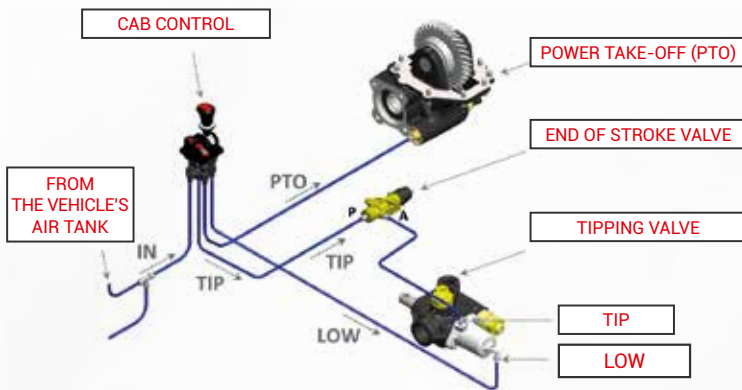
18 - 21 GAL OIL TANK

28 GAL OIL TANK

35-51.5 GAL OIL TANK

53 GAL OIL TANK



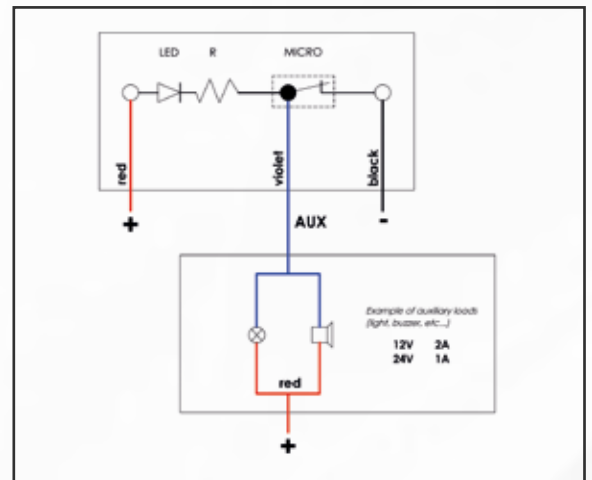


ACCESSORIES

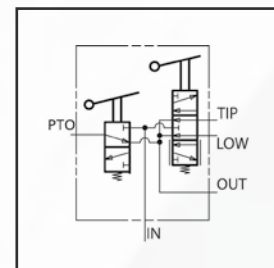
CAB CONTROLS

B-POWER pneumatic cab control

- 3-way pneumatic proportional cab control (TIP/LOW and PTO) with automatic lever return. Led indicator included.
- Connect the lamp to the feeding (max. 24V). LED absorption 20 mA. Fasten the red wire to the positive pole and the black wire to the negative one.
- Air Connection: 1/4"



ELECTRICAL CONNECTION



FUNCTIONAL DIAGRAM

Cab Control Product Code



No Detent

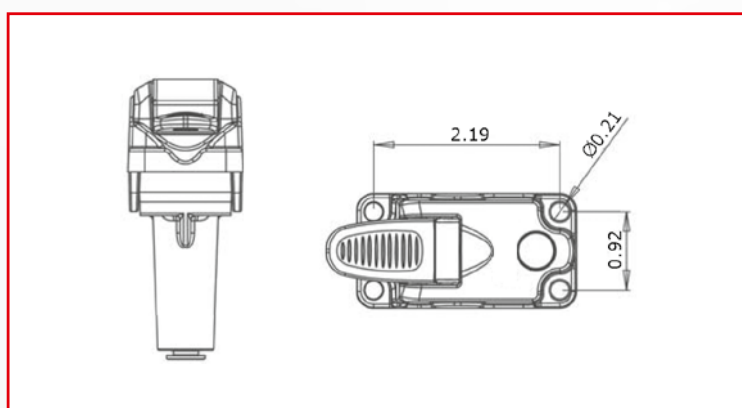
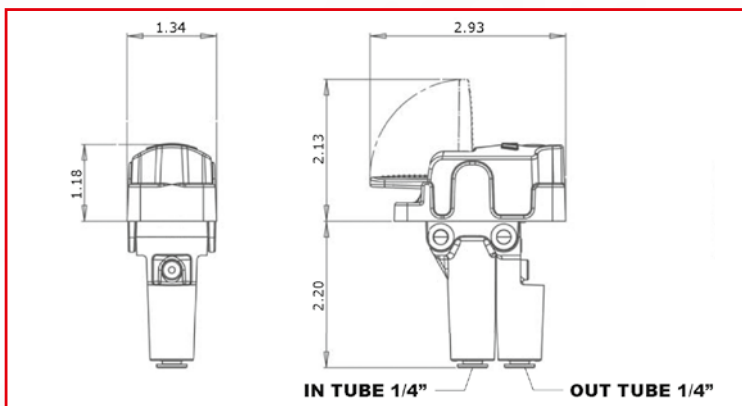


Detent Tip & Lower



Detent Lower Only

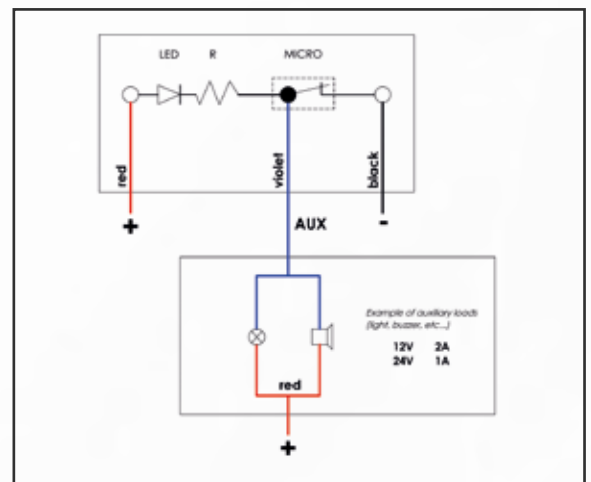
With PTO Switch	Automatic PTO Knock-off	CCRPC7L1ADLD14S101	CCRPC7L2ADLD14S101	Special Order
	Manual PTO Knock-off	Special Order	CCRPC7L2MDLD14S101	CCRPC7L3MDLD14S101
Without PTO control switch		Special Order	CCRPC5S2NNND14S101	Special Order



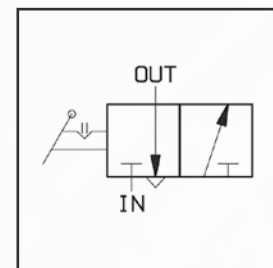
ACCESSORIES

PNEUMATIC LEVER

- Pneumatic lever with led indicator for PTO control (max pressure 174 PSI).
- Connect the lamp to the feeding (max. 24V). LED absorption 20 mA. Fasten the red wire to the positive pole and the black wire to the negative one.



ELECTRICAL CONNECTION



FUNCTIONAL DIAGRAM

Part Number	Description	Air Connection
CCRPC1L0000D14S101	Pneumatic lever with led indicator	1/4"

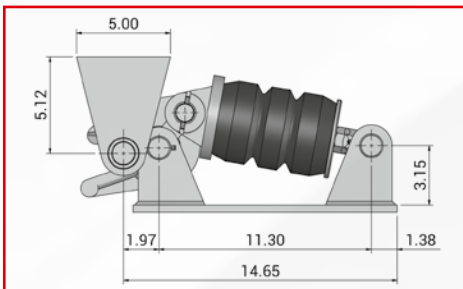


ACCESSORIES

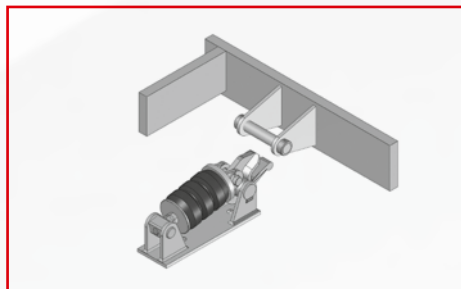
BODY CLAMP

Bodyfix

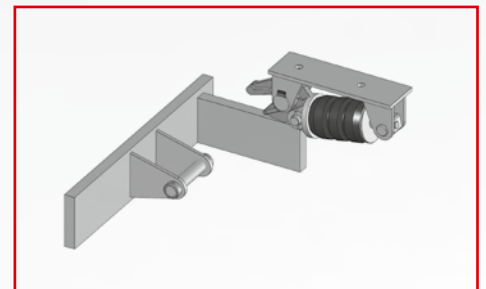
This mechanism creates a fixed connection between the dump trailer and the chassis. A locking bar (mounted on the chassis underneath the dump trailer) engages with the hook (installed on the body) as the body is lowered. The weight of the body itself forces the hook over center into the lock position, preventing rattling.



Mounting dimensions



Installation view with hook installed on the chassis



Installation view with hook installed on the body



ACCESSORIES

RETURN FILTER

Submerged return filter for saddle and upright oil tanks.

Part Number	Description
FLTEN1MDAE5DH058J1	Easy Oil Filter 135mm flg. 21m 1NPT 47.5GPM




ACCESSORIES

RETURN FILTER

Standard return filter for saddle and upright oil tanks.

Part Number	Description
FLTAF1MDAD3DI097J1	Semi-submerged. Oil Filter 135mm flg. 21m 1-1/4" NPT 53GPM



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