

HENDRICKSON[®] CONTROLS

Parts Catalog

TRAILER CONTROL SYSTEMS

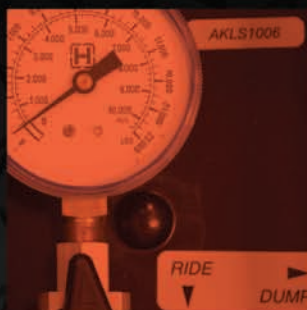
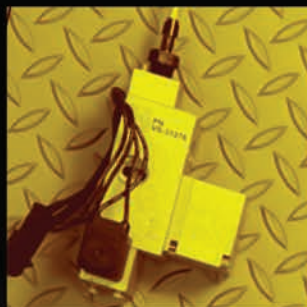
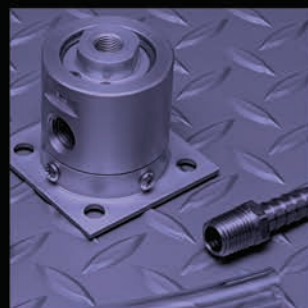


Table of Contents

Height Control Valves

Overview	2
Height Control Valves — Drum Brake	2
Height Control Valves — Disc Brake	5
Aftermarket	6

Load Scales

Overview	7
Load Scale Decals	7
Load Scales — Polycarbonate Box	8
Load Scales — Stainless Steel Box	9
Aftermarket	9

Lift Axle Controls

Overview	10
Electric / Manual Lift Controls	10
Reverse Lift Axle Control	11
Manual Lift Controls	11

Dump Valves

Overview	12
Dump Valves — Manual	12
Dump Valves — Automatic / Specialty	14
Aftermarket	14

QUIK-DRAW® Valves

Overview	15
QUIK-DRAW Valves	15
Aftermarket	16

SURELOK® Controls

Overview	17
SURELOK Controls	17

Single Axle Dump System

Single Axle Dump System	18
-----------------------------------	----



Height Control Valves

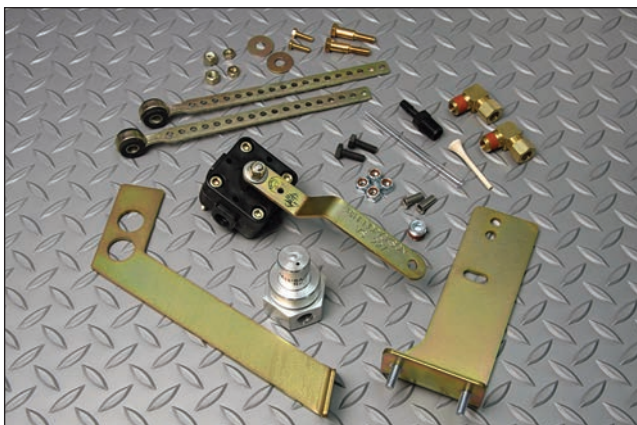
Trailer air suspension systems require precise air flow management. Using an Advanced Shear-Seal® design to ensure accurate air flow, Hendrickson Height Control Valves (HCV) deliver superior performance and durability.

- ◆ Precise, highly repeatable dead band
- ◆ High air flow and a proportional response
- ◆ Prolongs air spring and shock absorber life
- ◆ Specifically designed and tested for optimum performance with Hendrickson air suspensions

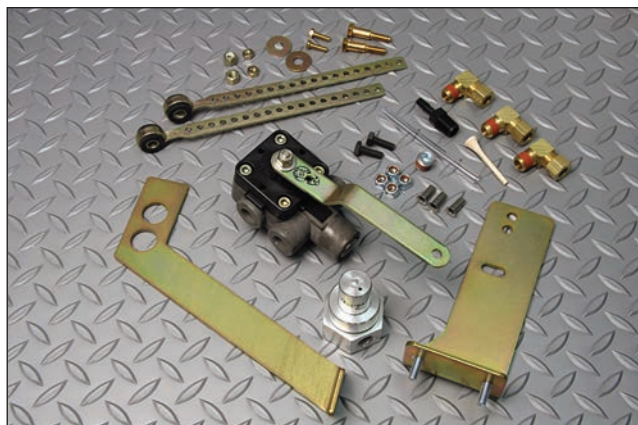
Height Control Valves — Drum Brake

Product Family	Suspension Model	Axle Diameter	Dump Feature		No PPV	No 90-degree Brass Fittings	Part Number
			Without	With			
INTRAAX®	AANT 23K	5 inch / 5.75 inch LDA™	X				AKH0270-3
			X		X		AKH0270B-3
				X			AKHD0270-3
				X		X	AKHD0270F-3
	AAT 23K AAT 25K AAT 30K	5 inch / 5.75 inch LDA	X				AKH-238-3
			X		X		AKH-238B-3
				X			AKHD-238-3
				X		X	AKHD-238F-3
	AAEDT 30K	5 inch	X				AKH-235-3
				X			AKHD-235-3
	AANLS 20K	5 inch	X				AKH0275-3
				X			AKHD0275-3
	AANL 23K	5.75 inch LDA	X				AKH0292-3
			X		X		AKH0292B-3
				X			AKHD0292-3
				X		X	AKHD0292F-3
	AAL 23K AAL 25K AAL 30K AAEDL 30K	5 inch	X				AKH-235-3
				X			AKHD-235-3
	AAL 23K AAL 25K AAL 30K	5.75 inch LDA	X				AKH0306-3
			X		X		AKH0306B-3
				X			AKHD0306-3
				X		X	AKHD0306F-3
HT™ Series	HT190T / HT190U HT230 HT250T / HT250U HT300T / HT300U HTHCR	5 inch	X				AKH-134-3
				X			AKHD-195-3
			X		X		AKH-179-2
	HT250US HT300US	5 inch	X				AKH-236-3
			X		X		AKH-236B-3
				X			AKHD-236-3
T Series	All Models	5 inch		X			AKHD-236F-3
			X				AKH-239-3
				X			AKHD-239-3

Kits listed include height control valve, mounting brackets, 3/8-inch tube fittings and bolted link assembly.



AKH-181-3



AKHD-203-3

Product Family	Suspension Model	Axle Diameter	Dump Feature		Part Number
			Without	With	
VANTRAAX®	HKANT 23K HKANT 40K HKANT 46K HKAT 50K HKAT 69K23 HKAT 69K25 HKANT 69K23	5 inch / 5.75 inch LDA™	X		AKH-181-3
				X	AKHD-203-3
	HKAL 46K HKARL 46K	5 inch	X		AKH-235-3
				X	AKHD-235-3
	HKANL 23K HKAL 46K HKARL 46K	5.75 inch LDA	X		AKH0306-3
				X	AKHD0306-3
HK™ Series	HK190 HK230	5 inch	X		AKH-187-3
				X	AKHD-205-3
INTRAAX®- SP	AAZNT 23K AAZNT 46K AAZNT 69K	5 inch / 5.75 inch LDA	X		AKH0270-3
				X	AKHD0270-3
	AAZL 23K AAZL 46K	5 inch	X		AKH-235-3
				X	AKHD-235-3
	AAZL 23K AAZL 46K	5.75 inch LDA	X		AKH0306-3
				X	AKHD0306-3

Kits listed include height control valve, mounting brackets, 3/8-inch tube fittings and bolted link assembly.



Bulk Height Control Valves — Drum Brake

Suspension Model	Kit Description	Part Number
AAL, AAEDL, AAEDT, HT250US, HT300US, HKAL, AAZL	Height Control Valve, Bulk 50 (includes A-24508 long arm)	AKH0249 ¹
AANT, AAT, AANL, AANLS, HT, HKANT, HKAT, HK, HTHKR, HKARL, HS, AAZNT	Height Control Valve, Bulk 50 (includes A-24642 short arm)	AKH0250
AAL, AAEDL, AAEDT, HT250US, HT300US, HKAL, AAZL	Integral Dump Height Control Valve, Bulk 35 (includes A-29391 long arm)	AKHD0249
AANT, AAT, AANL, AANLS, HT, HKANT, HKAT, HK, HTHKR, HKARL, HS, AAZNT	Integral Dump Height Control Valve, Bulk 35 (includes A-29393 long arm)	AKHD0250
ALL Models	Pressure Protection Valve, Bulk 50 (includes A-1128 valve)	AKH0251

¹ The long arm HCV can be used on short arm HCV applications. However, the installer must remove the end of the arm and use the bolt hole in the arm that is closest to the valve body.

Height Control Valve Hardware Kits — Drum Brake

Suspension Model	Axle Diameter	Fasteners	Mounting Brackets	Fittings	Bolted Link Assembly	Part Number
AAT	5 inch / 5.75 inch LDA™	X	X	X	X	AKH0252
		X	X			AKH0252-1
AAL, AAEDL, AAEDT, HKAL, HKARL, AAZL	5 inch	X	X	X	X	AKH0253
		X	X			AKH0253-1
AAL, HKAL, HKARL, AAZL	5.75 inch LDA	X	X	X	X	AKH0309
		X	X			AKH0309-1
HKANT, HKAT	5 inch / 5.75 inch LDA	X	X	X	X	AKH0256
		X	X			AKH0256-1
AANT, AAZNT	5 inch / 5.75 inch LDA	X	X	X	X	AKH0262
		X	X			AKH0262-1
AANL	5.75 inch LDA	X	X	X	X	AKH0289
		X	X			AKH0289-1
AANLS	5 inch	X	X	X	X	AKH0290
		X	X			AKH0290-1

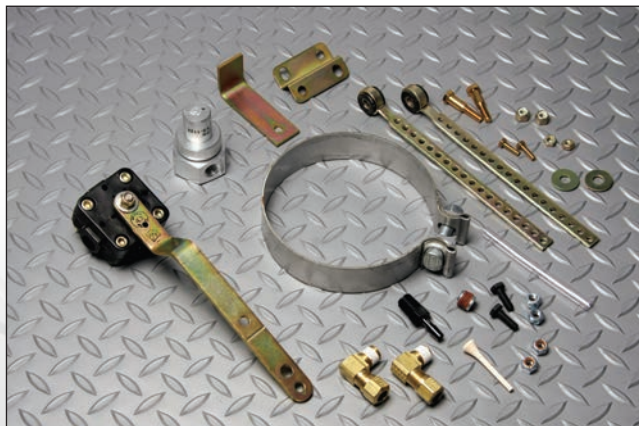
Specialty Height Control Valves — Drum Brake

Product Family	Suspension Model	Kit Description	Part Number
INTRAAX®	AAT at 14-inch ride height	Tube fittings and PPV NOT included; supplied with fixed bolt link	AKH-244B
	AANLS 20K	Includes a U-bolt for mounting the HCV	AKH0266-3
HT™ Series	HT250US and HT300US at 6.5-inch ride height	Tube fittings and PPV NOT included; supplied with fixed bolt link	AKH-242B
VANTRAAX®	HRRNT 40K	Tube fittings not included	AKH0261
INTRAAX®-SP	AAZL (5-inch)	Includes a valve to raise the trailer for slider positioning	AKH0267-3
	AAZL (5.75 inch LDA)		AKH0310-3

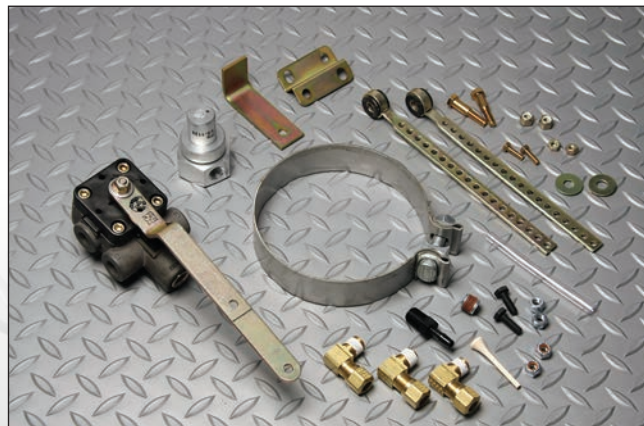
Height Control Valves — Disc Brake

Product Family	Suspension Model	Axle Diameter	Dump Feature		No PPV	No 90-degree Brass Fittings	Part Number
			Without	With			
INTRAAX®	AANT 23K	5 inch	X				AKH0281-3
				X			AKHD0281-3
		5.75 inch LDA™	X				AKH0282-3
			X			X	AKH0282F-3
				X			AKHD0282-3
				X		X	AKHD0282F-3
	AAT 23K AAT 25K AAT 30K AAL 23K AAL 25K AAL 30K AAEDL 30K AAEDT 30K	5 inch	X				AKH-235-3
				X			AKHD-235-3
	AAL 23K AAL 25K AAL 30K	5.75 inch LDA	X				AKH0306-3
			X		X		AKH0306B-3
				X			AKHD0306-3
	AAT 23K AAT 25K AAT 30K	5.75 inch LDA	X				AKH0288-3
			X		X		AKH0288B-3
				X			AKHD0288-3
VANTRAAX®	HKAT 50K HKAT 69K25	5 inch	X				AKH0283-3
				X			AKHD0283-3
	HKANT 23K HKANT 40K HKANT 46K HKANT 69K23	5.75 inch LDA	X				AKH0284-3
				X			AKHD0284-3
INTRAAX®-SP	AAZNT 23K AAZNT 46K AAZNT 69K	5 inch	X				AKH0281-3
				X			AKHD0281-3
		5.75 inch LDA	X				AKH0282-3
				X			AKHD0282-3

Kits listed include height control valve, mounting brackets, 3/8-inch tube fittings and bolted link assembly.



AKH-235-3



AKHD-235-3



Aftermarket

Description	Suspension Model	Ride Height	Attachment Method	Dump Feature		Part Number
				Without	With	
Replacement Height Control Valve	INTRAAX® HT™ Series T Series VANTRAAX® HK™ Series INTRAAX®-SP	All	Lower HCV mounting bracket attaches to brake chamber bracket	X		VS-227 ¹
					X	VS-228 ¹
	VANTRAAX HKANT/HKAT	All	Lower HCV mounting bracket attaches to air spring pedestal	X		VS-227 ¹
					X	VS-228 ¹
	VANTRAAX® ULTRAA-K®	16"	HCV fixed link assembly attaches directly to suspension beam	X		VS-33704-3 ²
					X	VS-33705-3 ²
Replacement DST® Valve (Height Control Differential Dump Valve)	VANTRAAX	All	Lower HCV mounting bracket attaches to air spring pedestal		X	VS-27116 ¹
	VANTRAAX ULTRAA-K	16"	HCV fixed link assembly attaches directly to suspension beam		X	VS-33703-3 ²

¹ Kits listed do not include fittings, pressure protection valve or link assembly.

² Kits listed include fittings. They do not include pressure protection valve or link assembly.



VS-227



VS-228

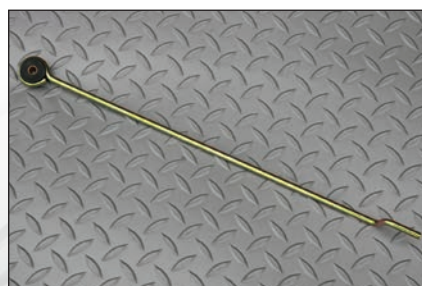
Description	Suspension Model	Ride Height	HCV Model	Part Number
Pressure Protection Valve	All	N/A	N/A	VS-1128
Bolted Link Assembly	INTRAAX® HT™ Series T Series VANTRAAX® HK™ Series INTRAAX®-SP	All	Use with VS-227 and VS-228 replacement HCVs	S-14187
Fixed Link Assembly	VANTRAAX® ULTRAA-K®	16"	Use with VS-33703-3, VS-33704-3 and VS-33705-3	VS-33702-1



VS-1128



S-14187

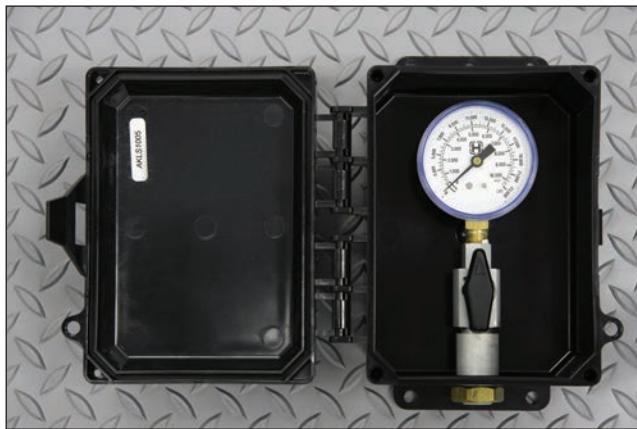


VS-33702-1

Load Scales

Hendrickson Load Scale kits provide an easy solution to quickly determine the approximate suspension load. Each contains a gauge that measures air pressure and a method for converting pressure to suspension load. Depending on the load scale model, the gauge provides a reading of suspension weight or a reading of air spring pressure with a conversion table.

- ◆ Compact enclosure size and external mounting tabs provided for convenient installation
- ◆ Integrated valve body reduces fittings and potential leak points
- ◆ Anodized aluminum valve body for light weight and high corrosion resistance
- ◆ Teflon seals ensure a wide operating temperature range and high chemical resistance
- ◆ Polycarbonate enclosure for cold impact resistance includes molded-in hinge and latch



AKLS1005



AKLS1006

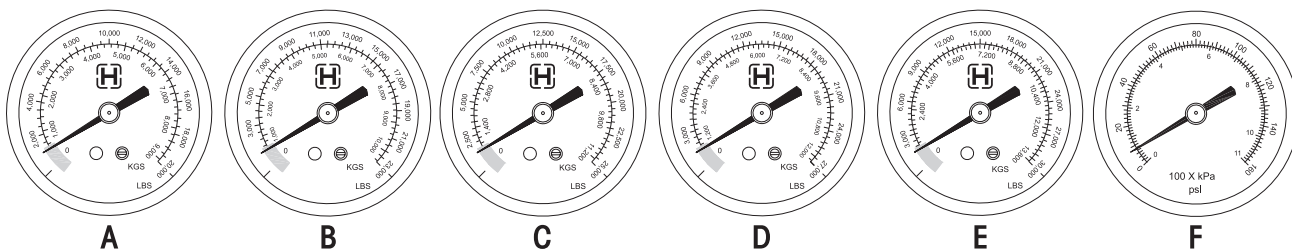
Load Scale Decals

Product Family	Suspension Model	Part Number
INTRAAAX®	AANLS 20K	L912
	AAL, AAT, AANL, AANT 23K	L911
	AAEDL, AAEDT 30K	L927
	AAL, AAT 25K	L912
	AAL, AAT 30K	L913
INTRAAAX®-SP	AAZNT, AAZL 23K	L911
	AAZNT, AAZL 46K	
	AAZNT 69K	
HT™ Series	HT190	L905
	HT190U	L903
	HT230	L914
	HT250T	L904
	HT250U, HT250US (Air Spring C-20124)	L904
	HT250U, HT250US (Air Spring C-20127)	L906
	HT300	L909
	HT300U	L908
	HT300US	T90004

Product Family	Suspension Model	Part Number
VANTRAAX®	HKANT 23K	L911
	HKANT 40K	L1045 ¹
		L911 ²
	HKANT 40K with ZMD®	T90003
	HKANT 46K	L911
	HKANT 69K	L911
	HKANT 50K	L912
	HKAT 69K23	L911
	HKAT 69K25	L912
	HKAL, HKARL 46K	L911
HK™ Series	ULTRA-K® UTKNT 40K	T90003
	HK190T	L907
	HK230T	L910

¹ For HKANT 40K built in 2008 or later.

² For HKANT 40K built prior to 2008 or HKANT 40K with SMARTLIFT® option.



Load Scales — Polycarbonate Box

Product Family	Suspension Model	Gauge Type	Gauge Range	Gauge Face	Part Number	
					Without Dump (AKLS1005)	With Dump (AKLS1006)
INTRAAX®	AANLS 20K	Dry	0 - 25,000	C	-4	-4
	AAL, AAT, AANL, AANT 23K (Standard Air Spring)	Dry	0 - 23,000	B	-3	-3
	AAL, AAT, AANL, AANT 23K (Low Pressure Air Spring)	Dry	0 - 25,000	C	-4	-4
	AAL 25K, AAT 25K	Dry	0 - 25,000	C	-4	-4
	AAL 30K, AAT 30K	Dry	0 - 30,000	E	-6	-6
	AAEDL 30K, AAEDT 30K	Dry	0 - 30,000	E	-6	-6
INTRAAX®-SP	AAZNT 23K, AAZNT 46K, AAZNT 69K	Dry	0 - 23,000	B	-3	-3
	AAZL 23K, AAZL 46K	Dry	0 - 23,000	B	-3	-3
HK™ Series	HK190T	Dry	0 - 23,000	B	-3	-3
	HK230T	Dry	0 - 23,000	B	-3	-3
VANTRAAX®	HKANT 23K, HKANT 46K	Dry	0 - 23,000	B	-3	-3
	HKANT 40K	Dry	0 - 20,000	A	-2	-2
	HKAT 50K, HKAT 69K25	Dry	0 - 25,000	C	-4	-4
	HKANT 69K23					
	HKAT 69K23	Dry	0 - 23,000	B	-3	-3
	HKARL 46K	Dry	0 - 23,000	B	-3	-3
	HKANL 23K	Dry	0 - 23,000	B	-3	-3
	HKAL 46K	Dry	0 - 23,000	B	-3	-3
	ULTRA-A-K® UTKNT 40K	Dry	0 - 20,000	A	-2	-2
HT™ Series	HTHKKR	Dry	0 - 23,000	B	-3	-3
	HT190	Dry	0 - 20,000	A	-2	-2
	HT190U	Dry	0 - 23,000	B	-3	-3
	HT230	Dry	0 - 23,000	B	-3	-3
	HT250T	Dry	0 - 25,000	C	-4	-4
	HT250U (Air Spring C-20124)	Dry	0 - 25,000	C	-4	-4
	HT250U (Air Spring C-20127)	Dry	0 - 30,000	E	-6	-6
	HT250U (Air Spring C-13122, 9" Ride Height)	Dry	0 - 30,000	E	-6	-6
	HT250U (Air Spring C-13122, 15" Ride Height)	Dry	0 - 27,000	D	-5	-5
	HT250US (Air Spring C-20124)	Dry	0 - 25,000	C	-4	-4
	HT250US (Air Spring C-20127)	Dry	0 - 30,000	E	-6	-6
	HT300	Dry	0 - 30,000	E	-6	-6
	HT300U	Dry	0 - 30,000	E	-6	-6
	HT300US	Dry	0 - 30,000	E	-6	-6
T Series	T-6-068	Dry	0 - 25,000	C	-4	-4
	T-6-252	Dry	0 - 27,000	D	-5	-5
	T-RL	Dry	0 - 30,000	E	-6	-6
All	All Models	Liquid	0 - 160 psi	F	-1	-1

Load Scales — Stainless Steel Box

Product Family	Suspension Model	Gauge Type	Gauge Range	Gauge Face	Part Number	
					Without Dump (AKLS2005)	With Dump (AKLS2006)
INTRAAX®	AANLS 20K	Dry	0 - 25,000	C	-4	-4
	AAL, AAT, AANL, AANT 23K (Standard Air Spring)	Dry	0 - 23,000	B	-3	-3
	AAL, AAT, AANL, AANT 23K (Low Pressure Air Spring)	Dry	0 - 25,000	C	-4	-4
	AAL 25K, AAT 25K	Dry	0 - 25,000	C	-4	-4
	AAL 30K, AAT 30K	Dry	0 - 30,000	E	-6	-6
	AAEDL 30K, AAEDT 30K	Dry	0 - 30,000	E	-6	-6
INTRAAX®-SP	AAZNT 23K, AAZNT 46K, AAZNT 69K	Dry	0 - 23,000	B	-3	-3
	AAZL 23K, AAZL 46K	Dry	0 - 23,000	B	-3	-3
HK™ Series	HK190T	Dry	0 - 23,000	B	-3	-3
	HK230T	Dry	0 - 23,000	B	-3	-3
VANTRAAX®	HKANT 23K, HKANT 46K	Dry	0 - 23,000	B	-3	-3
	HKANT 40K	Dry	0 - 20,000	A	-2	-2
	HKAT 50K, HKAT 69K25	Dry	0 - 25,000	C	-4	-4
	HKANT 69K23, HKAT 69K23					
	HKARL 46K	Dry	0 - 23,000	B	-3	-3
	HKANL 23K	Dry	0 - 23,000	B	-3	-3
	HKAL 46K	Dry	0 - 23,000	B	-3	-3
	ULTRAA-K® UTKNT 40K	Dry	0 - 20,000	A	-2	-2
HT™ Series	HTHCR	Dry	0 - 23,000	B	-3	-3
	HT190	Dry	0 - 20,000	A	-2	-2
	HT190U	Dry	0 - 23,000	B	-3	-3
	HT230	Dry	0 - 23,000	B	-3	-3
	HT250T	Dry	0 - 25,000	C	-4	-4
	HT250U (Air Spring C-20124)	Dry	0 - 25,000	C	-4	-4
	HT250U (Air Spring C-20127)	Dry	0 - 30,000	E	-6	-6
	HT250U (Air Spring C-13122, 9" Ride Height)	Dry	0 - 30,000	E	-6	-6
	HT250U (Air Spring C-13122, 15" Ride Height)	Dry	0 - 27,000	D	-5	-5
	HT250US (Air Spring C-20124)	Dry	0 - 25,000	C	-4	-4
	HT250US (Air Spring C-20127)	Dry	0 - 30,000	E	-6	-6
	HT300	Dry	0 - 30,000	E	-6	-6
	HT300U	Dry	0 - 30,000	E	-6	-6
	HT300US	Dry	0 - 30,000	E	-6	-6
T Series	T-6-068	Dry	0 - 25,000	C	-4	-4
	T-6-252	Dry	0 - 27,000	D	-5	-5
	T-RL	Dry	0 - 30,000	E	-6	-6
All	All Models	Liquid	0 - 160 psi	F	-1	-1

Aftermarket

Description	Load Scale Model	Part Number
Replacement Polycarbonate Enclosure	AKLS1005	VS-31845-3
Replacement Polycarbonate Enclosure	AKLS1006	VS-31845-2
Replacement Stainless Steel Enclosure	AKLS2005, AKLS2006	VS-32312
Replacement Liquid-Filled Gauge	All Models with Liquid-Filled Gauge	VS-24120

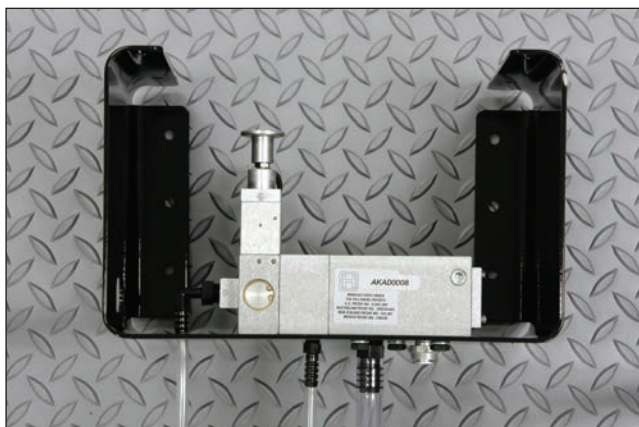
Lift Axle Controls

Electric / Manual Lift Controls

Specify Hendrickson's popular line of electric/manual lift axle controls to simplify trailer plumbing. The compact design incorporates an electric solenoid, manual operator, lift bag valve and ride bag valve into one integrated body. For regulated versions, the regulator and gauge are incorporated into the main valve body to eliminate the need for external plumbing and fittings.

- ◆ Modular, high flow design is available in regulated and equalizing versions
- ◆ Designed to survive harsh trailer environment with or without an enclosure
- ◆ Fail mode is field configurable from "normally down" to "normally up"

Mounting Option		Valve Configuration		Brake Isolation		Part Number
Stainless Steel Enclosure	Mounting Bracket	Regulating	Equalizing	Without	With	
	X		X	X		AKAD0008-1
	X		X		X	AKAD0008-2
	X	X		X		AKAD0009-1
	X	X			X	AKAD0009-2
X			X	X		AKAD2010-1
X			X		X	AKAD2010-2
X		X		X		AKAD2011-1
X		X			X	AKAD2011-2



AKAD0008



AKAD2011

Reverse Lift Axle Control

- ◆ For use with liftable/steerable trailer axles
- ◆ Moving in reverse 3 feet automatically keys lifting of axle
- ◆ Moving forward 80 feet automatically triggers lowering of axle
- ◆ To be used in conjunction with electro-pneumatic lift controls: AKAD0008, AKAD0009, AKAD2010 and AKAD2011

Description	Part Number
Automatic Lift Axle Control Kit	EKAD0001



EKAD0001

Manual Lift Controls

- ◆ Available in regulating and equalizing versions
- ◆ The Dial-A-Ride Control utilizes a convenient mounting panel

Description	Valve Configuration	Part Number
Manual Dial-A-Ride	Regulating	VS-1314-C
Manual	Equalizing	AKAM0001



VS-1314-C



AKAM0001

Dump Valves

Hendrickson offers a wide variety of dump valve kits. Dump valves are typically used to exhaust the air from the suspension during loading and unloading. Exhausting the suspension helps prevent trailer walk, provides increased stability and lowers the trailer deck height.

Manual Dump Valves

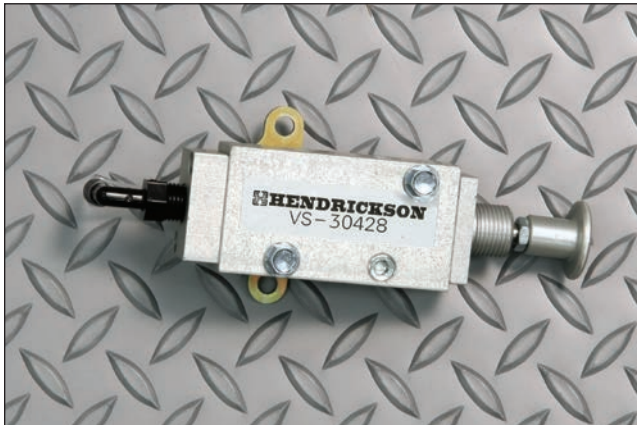
- ◆ Rated for -40° F to 180° F
- ◆ Highly tolerant to contamination and chemicals
- ◆ Anodized aluminum construction for superior corrosion resistance and strength
- ◆ Stainless steel shaft for better wear and corrosion resistance
- ◆ Protected vent prevents contamination from entering the valve

Box Type			Auto Reset		Liquid Gauge		Part Number
None	Polycarbonate	Stainless Steel	Without	With	Without	With	
	X		X		X		AKEM1007-1
	X		X			X	AKEM1007-2
	X			X	X		AKER1004-1
	X			X		X	AKER1004-2
		X	X		X		AKEM2006-1
		X	X			X	AKEM2006-2
		X		X	X		AKER2003-1
		X		X		X	AKER2003-2
X			X	X	X		AKEM0005-1 ¹
X			X	X	X		AKEM0005-2 ^{1,2} (Includes auto dump)

¹ Can be used as an auto-reset valve by removing the vent protector.

² Provides a manual dump control and a remote auto reset dump that is activated by the trailer parking brakes.

Manual Dump Valves



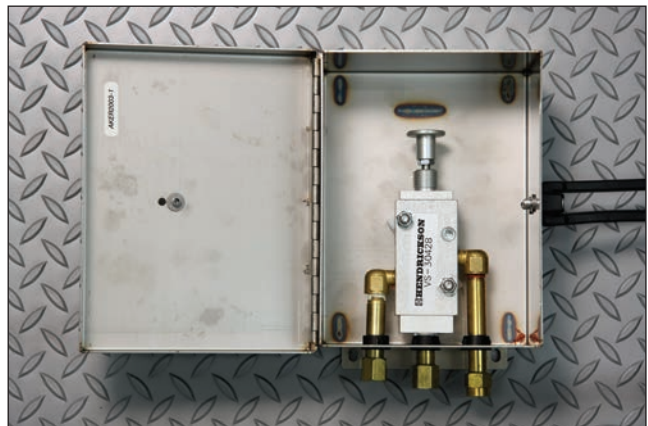
AKEM0005-1



AKER1004-2



AKEM2006-2



AKER2003-1



Automatic / Specialty Dump Valves

Description	Box Type		Valve Type			Auto Reset		Compatible with SURELOK®		Part Number
	None	Polycarbonate	Manual	Electric	Auto	Without	With	Yes	No	
Ball Valve	X		X			X			X	AK-147-1
Ball Valve		X	X			X			X	AKEM1008
Solenoid Valve	X			X		X			X	AK-53
Auto Dump	X				X		X		X	AK-54
Integral Auto Dump	X				X		X		X	AKHD-XXX ¹

¹ Automatic dump feature is integrated into the height control valve. Reference the Height Control Valve section for specific kit numbers.



AK-53



AK-54



AK-147-1

Aftermarket

Description	Dump Valve Model	Part Number
Replacement Polycarbonate Enclosure	AKEM1007-1, AKEM1007-2	VS-31335
Replacement Polycarbonate Enclosure	AKER1004-1, AKER1004-2	VS-31325
Replacement Stainless Steel Enclosure	AKEM2006-1, AKEM2006-2 AKER2003-1, AKER2003-2	VS-31320

QUIK-DRAW® Pneumatic Pin-Pull Mechanism

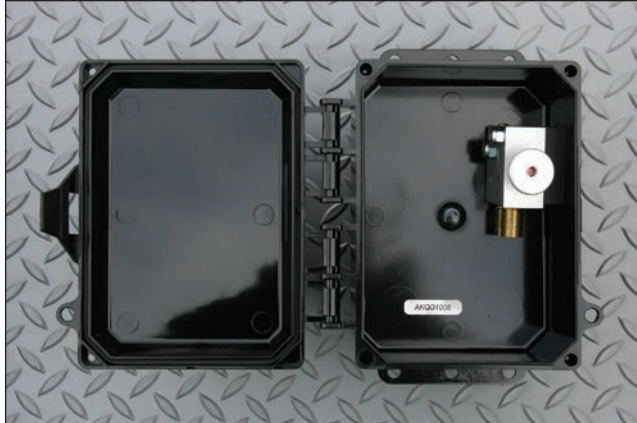
Hendrickson's VANTRAAX® and INTRAAX®-SP air suspension slider systems come standard with the QUIK-DRAW® pneumatic pin-pull mechanism. Triggered with a simple pull of a knob, it applies continuous pressure until the pins release. Pins automatically reset with the release of the emergency brake. For instances when additional features are required and an enclosure is preferred, a variety of QUIK-DRAW kits are also available.

- ◆ Only completely pneumatic pin-pull mechanism on the market
- ◆ Enhanced driver productivity and satisfaction
- ◆ Tested to meet stringent durability and environmental conditions — operating in temperatures to -40 degrees.

QUIK-DRAW® Valves

Box Type		Auto Reset		Dump Feature		Liquid Gauge		SURELOK® Bypass	Part Number
Polycarbonate	Stainless Steel	Without	With	Without	With	Without	With		
X			X	X		X			AKQD1008
X			X ¹		X	X			AKQD1009 ¹
X			X ¹		X		X		AKQD1010 ¹
X			X ¹		X	X		X	AKQD1011 ¹
	X		X ¹		X	X			AKQD2006 ¹

¹ Auto reset function resets the QUIK-DRAW valve only, not the manual dump.



AKQD1008



AKQD1011



Aftermarket

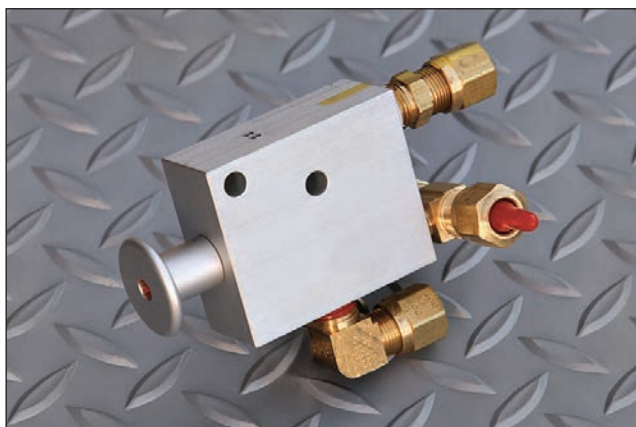
Description	Suspension Model	Part Number
3-way Auto Reset Valve, No Fittings	VANTRAAX® HKA, INTRAAX®-SP	VS-25223
3-way Auto Reset Valve, Straight Fittings	VANTRAAX HKA, INTRAAX-SP	VS-25224
3-way Auto Reset Valve, Straight and Tee Fittings	VANTRAAX HKA	VS-29866
	VANTRAAX® ULTRA-K®	VS-34932



VS-25223



VS-25224



VS-29866

SURELOK®

Hendrickson's SURELOK® features locking legs that provide maximum engagement with the suspension beam. Designed for the customer who must maintain ride height during loading and unloading, SURELOK automatically engages when the trailer's parking brakes are set. SURELOK is an available option on VANTRAAX® air suspension slider systems or can be purchased separately for use in a variety of other Hendrickson suspensions. For instances when additional features are required and an enclosure is preferred, a variety of SURELOK controls are also available.

- ◆ Maintains ride height during loading/unloading for efficient trailer dock operations
- ◆ Eliminates trailer walk by limiting vertical and horizontal movement

SURELOK® Controls

Polycarbonate Box	Auto Reset		Dump Feature		Liquid Gauge		SURELOK® Bypass	Part Number
	Without	With	Without	With	Without	With		
X	X		X		X		X	AKSL1002
X	X			X	X		X	AKSL1003
X		X		X	X		X	AKSL1004
X		X		X		X	X	AKSL1004-1



AKSL1002



AKSL1004-1

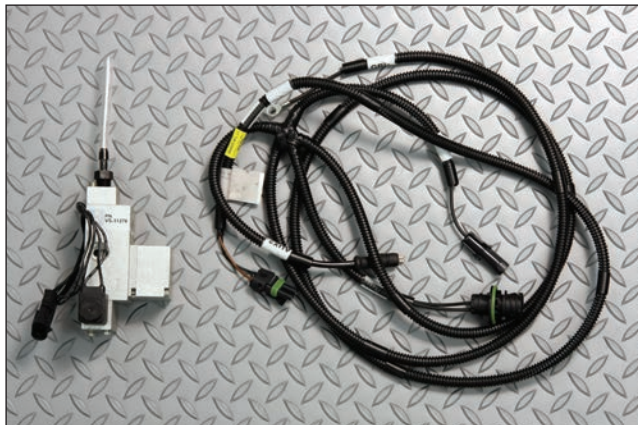


Single Axle Dump System

Hendrickson's single axle dump system gives operators an effective solution to improve low speed maneuverability. Under certain conditions, it will allow the operator to exhaust the air from one suspension. The system automatically monitors trailer speed and only activates at speeds less than 10 mph. Requires upgraded ABS valve ECU with applicable software. (Supplied by ABS manufacturer.)

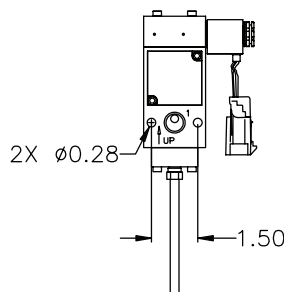
- ◆ Provides fast exhaust without the need for an additional relay valve — dumps in less than 2 seconds
- ◆ Consumes less air than other relay valve systems
- ◆ Utilizes Hendrickson's patented speed-control reset
- ◆ Successfully passed rigorous environmental testing and operates effectively at -40 degrees
- ◆ Effectively exhausts air springs under all loading conditions including lightly loaded trailers with low air spring pressures
- ◆ Hendrickson approved — speed limiting feature maintains Hendrickson's suspension and wheel-end warranty

Single Axle Dump System

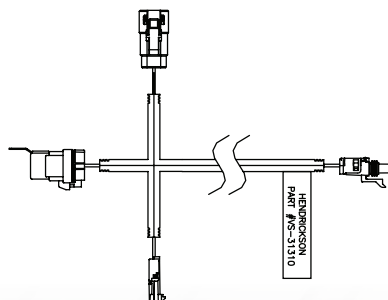


Single Axle Dump Valve

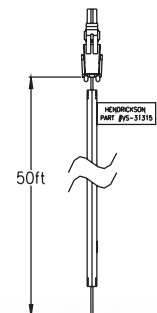
ABS Compatibility	Part Number
Wabco	AKES0001
Bendix	AKES0002
Hallex	AKES0003



Rear Axle Dump Valve



System Harness



Actuation Harness

NOTE: Requires application approval from Hendrickson.

[illegible]





Call your trailer dealer or Hendrickson at **330.489.0045** or **866.RIDEAIR (743.3247)** for additional information.



www.hendrickson-intl.com

TRAILER COMMERCIAL VEHICLE SYSTEMS

2070 Industrial Place SE
Canton, OH 44707-2641 USA
866.RIDEAIR (743.3247)
330.489.0045 • Fax 800.696.4416

Hendrickson Canada

250 Chrysler Drive, Unit #3
Brampton, ON Canada L6S 6B6
800.668.5360
905.789.1030 • Fax 905.789.1033

Hendrickson Mexicana

Circuito El Marqués Sur #29
Parque Industrial El Marqués
Pob. El Colorado, Municipio El Marqués,
Querétaro, México C.P. 76246
+52 (442) 296.3600 • Fax +52 (442) 296.3601

APPLICATION GUIDE

TRAILER SUSPENSION SYSTEMS

LIT NO: L707

DATE: October 2014

REVISION: H



APPLICATION PROCESS

A– Suspension Type	2
Application Table - Primary Suspension Application Guide (Includes INTRAAX®, HT™ Series and INTRAAX®-SP)	2
Application Table - Slider Suspension Application Guide (Includes VANTRAAX™ and VANTRAAX™ ULTRA-K™)	4
B– Available Ride Heights	5
INTRAAX Primary Suspension Systems	5
HT Primary Suspensions	5
INTRAAX-SP Platform Slider Suspension Systems	6
VANTRAAX Slider Suspension Systems	6
ULTRA-K Slider Suspension System	6
C– Other Application Guides and Literature	7

This guide provides general suspension model recommendations for specific applications, as well as necessary ride height and capacity information. The model recommendations listed are guidelines based on trailer design and usage patterns typical of the given trailer type and may not be suitable for every application. Lift axle recommendations are also provided based on suspension model, total number of axles and country of use. For additional assistance regarding specific trailers or applications, contact the Hendrickson Trailer Commercial Vehicle Systems product engineering department in the United States at 866-RIDEAIR (743-3247), in Canada at 905-789-1030 or in Mexico at +52 (81) 8288 1300.



A– SUSPENSION TYPE

HENDRICKSON PRIMARY SUSPENSION APPLICATION GUIDE

Primary (Fixed) Suspension Application Guide														
Suspension		Converter Dollies		Van Type Trailers				Frame Type Trailers						
		Single Axle*	Tandem Axle*	Van Type Frt. Van Refrig. Van	Drop Frame Van Furniture Van	Chip Van Highway Transprt	Live-stock	Platform Trailer Straight Frame	Platform Trailer Drop Frame	Curtain-side	Equip-ment Trailer Lowboy	Extend-ible Tandem Axle	Extend-ible Multi-Axle	Con-tainer Chassis
Category	Model	Chart A For Highway Use, Good Paved Roads, Well Maintained Unpaved Roads												
INTRAAX Top Mount	AANT 23K	R		O		R	R	R		R		R		R
	AAT 23K													
	AAT 25K		R										R	
	AAT 30K													
	AAEDT 30K													
INTRAAX Low Mount or Liftable	AANLS 20K				R									
	AANL 23K	O		O		O	O	O	R	O				O
	AAL 23K											O		
	AAL 25K		O								R		O	
	AAL 30K													
	AAEDL 30K													
HT Top Mount	HT190T													
	HT230	O		O		O	O	O		O		O		O
	HT300		O										O	
HT Liftable	HT250T			O		O	O	O		O		O	O	O
HT Low Mount	HT190U													
	HT250US	O	O		O			O	O	R	O	O		
	HT250YS							O		R				
	HT300YB													
	HT300US													
INTRAAX-SP (Plat. Z Rail Sliders)	AAZNT 23K							O		O		O		
	AAZL 23K								O	O		O		
	AAZNT 46/69K							R		O		R		
	AAZL 46K								O	O		O		
Category	Model	Chart B For Switchback, Washboard, Rough and Poorly Maintained Roads; Areas with Underdeveloped Infrastructure												
INTRAAX Top Mount	AAT 25K	R	R	O			R	R		R		R	R	R
	AAT 30K													
	AAEDT 30K					R								R
INTRAAX Low Mount or Liftable	AAL 25K	O	O	O	R		O	O	R	O	R			O
	AAL 30K													
	AAEDL 30K					O								O
HT Top Mount	HT300	R	R	O		R	O	O		O				O
HT Low Mount	HT300US				O				O	O	O			O
	HT300YB								O		R			
Explanation of Chart Use and Legend														
R	These are the most commonly recommended suspension for this trailer type, however, this may not be correct for all applications:													
	<ul style="list-style-type: none"> • Lesser capacity suspensions are not recommended • Higher capacity suspensions in the category can freely be used and should be used as suspension demands are increased. 													
O	"O" is an optional suspension for each suspension category type.													
	These suspensions are not intended for use in this application.													

See footnotes at top of page 4



HENDRICKSON PRIMARY SUSPENSION APPLICATION GUIDE (CONTINUED)

Primary (Fixed) Suspension Application Guide															
Suspension		Open Top Trailers						Shell Type Trailers ²						Skeleton Type Trailers	
		Chip Van Logging Use	Transfer Trailer Tilt or Walking Floor	Belt Unload Rear Discharge	Grain Trailer Hopper Style Highway Use	Grain Trailer Hopper Style Farm Use	Dump Trailer ¹ (Rear and Side Discharge)	Dump Trailer ¹ (Bottom Discharge)	Bulk Hopper Tandem Axle	Bulk Hopper 3+ axles and/or B-Train	Tanker Tandem Axle	Crude Oil Tanker	Pup Trailer with single lunette eye	Tanker 3+ axles and/or B-Train and/or "High C.G."	Auto Hauler
Category	Model	Chart A For Highway Use, Good Paved Roads, Well Maintained Unpaved Roads													
INTRAAAX Top Mount	AANT 23K			R	R			R	R		R				
	AAT 23K														
	AAT 25K		R			R	R			R		R	R	R	
	AAT 30K														
	AAEDT 30K														
INTRAAAX Low Mount or Liftable	AANLS 20K														R
	AANL 23K			O	O			O	O		O				
	AAL 23K														
	AAL 25K		O			O	O			O		O		O	
	AAL 30K														
	AAEDL 30K														
HT Top Mount	HT190T														
	HT230			O	O			O							
	HT300		O			O	O		O	O	O	O		O	
HT Liftable	HT250T			O	O			O							
HT Low Mount	HT190U														O
	HT250US			O	O	O		O							
	HT250YS														
	HT300YB														
	HT300US								O	O	O	O		O	
INTRAAAX-SP (Flat, Z Rail Sliders)	AAZNT 23K														
	AAZL 23K														
	AAZNT 46K														
	AAZL 46K														
Category	Model	Chart B For Switchback, Washboard, Rough and Poorly Maintained Roads; Areas with Underdeveloped Infrastructure													
INTRAAAX Top Mount	AAT 25K		R	R		R		R	R						
	AAT 30K														
	AAEDT 30K	R					R			R	R	R	R	R	
INTRAAAX Low Mount or Liftable	AAL 25K		O	O		O		O	O						R
	AAL 30K														
	AAEDL 30K	O					O			O	O	O		O	
HT Top Mount	HT300	R	O	O		O	O		O	O	O	O	O	O	
HT Low Mount	HT300US	O					O		O	O	O	O		O	O
	HT300YB														
Explanation of Chart Use and Legend															
R	These are the most commonly recommended suspension for this trailer type, however, this may not be correct for all applications: <ul style="list-style-type: none"> • Lesser capacity suspensions are not recommended • Higher capacity suspensions in the category can freely be used and should be used as suspension demands are increased. 														
O	"O" is an optional suspension for each suspension category type.														
	These suspensions are not intended for use in this application.														

See footnotes at top of page 4



GENERAL NOTES (PRIMARY SUSPENSIONS)

Important application information (Footnotes for chart on pages 2-3):

1. Use of a suspension air exhaust (dump) valve is required for dump trailer applications.
2. Cap style bushing tube spacers are required for logging and tanker applications using AAT and AAL suspensions.
3. For severe operation conditions, the use of a higher capacity suspension is recommended.
4. High Control versions of suspension models are recommended for dollies, single axle pups and single axle/multi-trailer applications.

Contact Hendrickson application engineering for:

- Suspensions used more than three per group
- Special applications/applications not shown
- INTRAAX® AAL in applications where axle loads may exceed the rated capacity such as rear position on end dumps (Do Not Use)
- Review of INTRAAX AANT and AANL applications
- Trailer applications unique to local markets and/or markets outside the USA, Canada and Mexico
- Use of HT™ Series suspensions for liftable/steerable applications
- Oil/Gas Field applications

Application information needed for suspension recommendations:

- Trailer type
- Area of operation
- Load per suspension
- Road conditions
- Duty cycle (24/7 or 8/5)
- Number of suspensions per trailer
- Ride height (bottom of frame to axle center)
- Number of lift axles, position on trailer and when they are lifted
- Wheel and tire sizes

HENDRICKSON AIR SLIDER SUSPENSION SYSTEMS APPLICATION GUIDE

Air Slider Suspension Systems Application Guide														
Category	Model	Pup Trailers		Dry Freight				Reefer				Miscellaneous ⁸		
		Single Axle	Tandem Axle	Single Axle	Tandem Axle 49"	Tandem Axle 102"	Tridem Axle 49", 60" & 72"	Single Axle	Tandem Axle 49"	Tandem Axle 102"	Tridem Axle 49", 60" & 72"	Liftable ¹⁰	Drop Frame Tandem	Ramp Storage Tandem
VANTRAAX™ Top Mount Narrow Pivot	HKANT 23K	R		R				R						
	HKANT 40K		R		R				R					
	HKANT 46K ⁵		O		O	R			O	R				
VANTRAAX Top Mount Wide Pivot	HKAT 50K ⁶		O		O				O					
	HKANT 69K23						R				R			
	HKAT 69K25						O ⁹				O ⁹			
VANTRAAX Low Mount or Liftable	HKANL 23K ⁷											R		
	HKAL 46K												R	
	HKARL 46K													R
ULTRAAX-K™ Top Mount Narrow Pivot	UTKNT 40K		R		R				R					
R	These are the most commonly recommended suspension for this trailer type, however, this may not be correct for all applications: <ul style="list-style-type: none">• Lesser capacity suspensions are not recommended.• Higher capacity suspensions can freely be used and should be used as suspension demands are increased.													
O	Optional suspension for each suspension category type.													

⁵. The 46K is recommended for applications with higher continuous loading or use on unimproved road surfaces.

⁶. The 50K is required for trailers domiciled in Mexico.

⁷. The trailer must be designed to allow for sufficient clearance above the tire for liftable applications.

⁸. Contact Hendrickson for recommendations for applications not shown.

⁹. 49" spacing not available.

¹⁰. All VANTRAAX sliders can be used with an axle lift kit for minimal tire ground clearance. Contact Hendrickson for more information.

**B— AVAILABLE RIDE HEIGHTS****INTRAAX® PRIMARY SUSPENSION SYSTEMS**

Model	Suspension Capacity ¹¹	Axle Rating ¹²	Ride Height ^{13,16}
	pounds	pounds	inches
AANLS 20K	20,000	20,000	6.25 - 12
AANT 23K	23,000	23,000	12 - 19
AANL 23K			6.5 - 17
AAT 23K			13.5 - 19
AAL 23K			6.5 - 19
AAT 25K			13.5 - 19
AAL 25K	25,000	25,000	6.5 - 19
AAT 30K	30,000	25,000	13.5 - 19
AAL 30K			9 - 19
AAEDT 30K	30,000	30,000	14 - 17
AAEDL 30K			9 - 19

HT™ SERIES PRIMARY SUSPENSIONS

Model	Suspension Capacity ¹⁴	Ride Height ^{13,16}
	pounds	inches
HT190T	20,000	14 - 17
HT190U		6 - 12
HT230	23,000	14 - 19
HT250T ¹⁵	25,000	12 - 19
HT250US		3.5 - 14
HT250YS		6.5 - 9
HT300	30,000	15 - 23
HT300US		7.5 - 17
HT300YB		7.5 - 9

¹¹. Capacity of primary suspension system: axle, brakes, wheels and tires rated separately.

¹². Axle structure rating only: suspension, brakes, wheels and tires rated separately. For Raised-Center Axle (RCA) option, the axle is rated only for 23,000 pounds.

¹³. Suspension ride heights must be set within Hendrickson specifications in order to ensure proper suspension performance. Failure to maintain proper ride height settings can lead to suspension, axle or trailer damage. Varying ride heights between suspensions may impact equalization.

¹⁴. Capacity of primary suspension only, axle not included.

¹⁵. The HT250T is intended for use as a liftable suspension, in combination with other HT primary air suspension models. It may also be used in place of an HT230 when the application calls for high travel or lower ride height.

¹⁶. Due to the wide variety of suspension frame bracket options, there may be some ride heights that are not supported by certain frame bracket options. Please contact Hendrickson application engineering if considering other frame bracket options outside your current usage.



INTRAAX®-SP PLATFORM SLIDER SUSPENSION SYSTEMS

Model	Slider Capacity ¹⁷	Number of Axles	Axle Spacing	I-beam Centers	Ride Height ¹³
	pounds		inches		inches
AAZNT 23K	23,000	1	N/A	37 38 43 44	13.5 - 17
AAZNT 46K	46,000	2	49		
AAZL 23K	23,000	1	N/A		6.5 - 12
AAZL 46K	46,000	2	49		
AAZNT 69K23	69,000	3	60 72		13.5 - 17

AIR SLIDER SUSPENSION SYSTEMS

Model	Slider Capacity ¹⁷	Number of Axles	Axle Spacing	Box Width	Ride Height ^{13,18}
	pounds		inches	inches	inches
HKANT 23K	23,000	1	N/A	42	16 - 17
HKANL 23K	23,000	1	N/A	48 54	
ULTRAA-K™	40,000	2	49	48	16
HKANT 40K	40,000	2	49	42	16 - 17
HKANT 46K	46,000	2	49	48 54	
HKANT 46K Widespread	46,000	2	121	48 54	
HKAL Low Mount	46,000	2	49	42 48	10 - 11
HKARL 46K Ramp-ready	46,000	2	49	48	9 - 12
HKAT 50K	50,000	2	49	42 48	16 - 19
HKANT 69K23¹⁹	69,000	3	49 60 72	42 48 54	16 - 18
HKAT 69K25¹⁹	69,000	3	60 72		

¹⁷. Capacity of slider suspension system includes slider box, suspensions and axles. Brakes, wheels and tires rated separately.

¹⁸. To calculate total system height for HKANT, HKAT and ULTRAA-K sliders, add the suspension ride height and 8.5 in. for the slider box. For HKARL ramp-ready sliders, add the suspension ride height and 14 in. for the slider box.

¹⁹. For Triaxle sliders, the first value indicates slider box capacity, the second value indicates axle capacity. The higher capacity is intended for higher duty cycle applications. The maximum slider capacity should not be exceeded.



More application information can be found in the following documents.

NOTES:

*Call your trailer dealer or Hendrickson at **330.489.0045** or **866.RIDEAIR (743.3247)** for additional information.*



www.hendrickson-intl.com

TRAILER COMMERCIAL VEHICLE SYSTEMS

2070 Industrial Place SE
Canton, OH 44707-2641 USA
866.RIDEAIR (743.3247)
330.489.0045 • Fax 800.696.4416

Hendrickson Canada

250 Chrysler Drive, Unit #3
Brampton, ON Canada L6S 6B6
800.668.5360
905.789.1030 • Fax 905.789.1033

Hendrickson Mexicana

Circuito El Marqués Sur #29
Parque Industrial El Marqués
Pob. El Colorado, Municipio El Marqués,
Querétaro, México C.P. 76246
+52 (442) 296.3600 • Fax +52 (442) 296.3601