







PNEUMATIC STANDING DRILL VSP 1

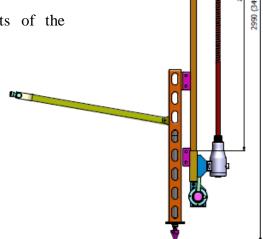
DESCRIPTION:

The pneumatic standing drill VSP 1 is used to drill holes up to Ø51mm in soft and medium hard rocks. The drill is equipped with water flushing and the possibility to use self-burrowing hydraulic bolts (expansion of hydraulic bolts immediately after burrowing) to lower dust creation. A steel rest that presses the grate against ceiling and using expansion cylinder pressure secures the ceiling against falling rocks and thus provides operator's safety is placed in the casing and used to guide the drill rod.

The pneumatic standing drill VSP1 meets the conditions for use in the I M2 explosive danger environment set by the EN 1127-2 standard.

The pneumatic standing drill VSP1 consists of the following basic parts:

- Pneumatic reversible drill
- Fixed column with expansion cylinder
- Drill travel
- Control handle



Operating pressure	[MPa]	0,4-0,6
Maximum water pressure/bolt expansion	[MPa]	0,6/30
Air consumption	$[m^3min^{-1}]$	2,7
Max. output	[kW]	3 ±10%
Column pressure	[N]	1500
Drill pressure	[N]	1000
Max. revolutions	[min ⁻¹]	1100
Torque	[Nm]	28
Filtration	[µm]	50
Basic dimensions (1 x h)	[mm]	





Weight	[kg]	Approx. 40kg
Inner diameter of inlet hose (air/water)	[mm]	Js19/Js10

PNEUMATIC TURBO DRILL DPT 450-011BXOEX

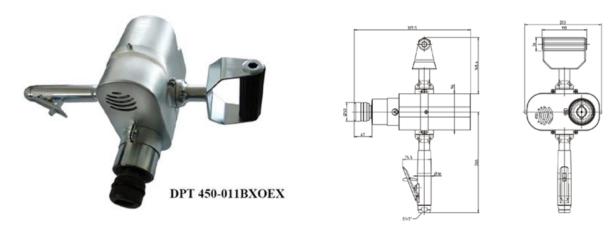
DESCRIPTION:

The pneumatic turbo drill DPT 450-011BXOEX is used for manual drilling with a drill rod equipped by a drill bit. The drill guarantees effective and economical work during industrial use in continuous operation even in environments with explosion danger (meets the IM2c II2GcIIBT6(80°C)X conditions). Drilling into soft and medium hard coal, shale or other soft rocks was never simpler.

The main technical difference against competition drills is use of a turbine engine. Another unique feature of this drill is the use of a belt in the first part of the gear to seal its oil contents during high speeds.

Due to its high gear ratio this drill achieves the torque of 45 Nm at maximum power and 105 Nm when stopped. A regulator of this drill works without air pressure that would influence its operation.

This drill is ready for drilling without water flushing. The lever start with safety is equipped by the 60 micron filtration. The exhaust points forward in the direction of spindle. Additional handle is used also as an anchor for a drill support. The drill rod clamp system is a flat hexagon — with an option to change according to customer's wishes or used drill rod ending. We recommend using an external filter to extend the drill service life.



Operating pressure	[MPa]	0,4-0,6
Max. air consumption at idle/max. output	$[m^3min^{-1}]$	1,25/4,3
Max. output	[kW]	$4,5 \pm 10\%$
Max. diameter of the bit	[mm]	42
Max. revs. at idle/max. output	[min ⁻¹]	1100/900
Torque	[Nm]	45
Filtration	[µm]	50





Weight	[kg]	8,7
Inside diameter of the supply hose	[mm]	Js19

PNEUMATIC DRILLS PV 13, 16

DESCRIPTION:

The pneumatic drills PV 13 and 16 are used for drilling holes into iron or non-metallic materials. They are used in machining, automotive and similar industries.

The drills consist of the pneumatic multi-plate motor that is seated in aluminum body with a handle, planetary transmission and output shaft where various type working tools are attached.



		PV 13B	PV 13C	PV 16B
Idle revs 1st gear / 2nd gear	min-1	1.450 / 1.950	350	600 / 850
Max. output 1st gear / 2nd gear	kW	0,45 / 0,50	0,35	0,45 / 0,50
Idle air consumption 1st gear / 2nd gear	m³.min-¹	0,45 / 0,90	0,95	0,45 / 0,90
Air consumption	m ³ .min- ¹	0,7	0,8	0,7
Operating pressure	MPa	0,6	0,6	0,6
Inside diameter of the supply hose	mm	10	10	10
Chuck range	mm	2,0 - 13,0	2,0 - 13,0	3,0 - 16,0
Inside diameter of the supply hose	mm	13	13	16
Max. diameter of drill bit for Aluminum and plastics	mm	13	13	23





Weight	kg	2,45	1,95	3,15
Basic dimensions (1 x h)	mm	230 x 167	246 x 189	290 x 167

PNEUMATIC DRILLS PV 32 AND PVR 32

DESCRIPTION:

The pneumatic drills PV 32 and PVR 32 are used for drilling holes into iron or non-metallic materials. They are used in machinery industry, construction etc.

The drills consist of the pneumatic multi-plate motor that is seated in aluminum body, handle with a lever controls, and the cover with planetary transmission.



		PV 32A-04X	PVR 32A-04X
RPMs	min-1	380	380
Max. output	kW	1,85	1,45
Air consumption	m³. min-1	2,1	2,4
Operating pressure	MPa	0,6	0,5-0,6
Inside diameter of the supply hose	mm	19	19
MORSE cone		3	3
Max. diameter of steel drill bit	mm	32	32
Max. diameter of drill bit for Aluminum and plastics	mm	32	32





Weight	kg	9,5	9,40
Basic dimensions (1 x h)	mm	335 x 410	335 x 410

REVERSIBLE PNEUMATIC DRILL VPR 20FE

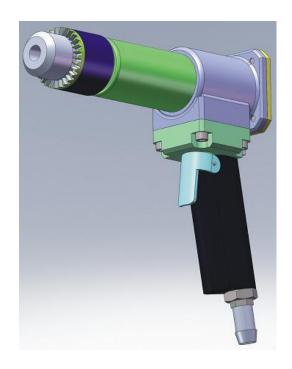
DESCRIPTION:

The reversible pneumatic drill VPR 20Fe is used to drill up to 20mm diameter holes in steel and other materials.

The VPN 42 reversible pneumatic drill meets conditions for use in the I M2 explosive danger environment set by the EN 1127-2 standard.

The VPN 42 reversible pneumatic drill consists of the following basic parts:

Body with motor and triggerWorking part0030 PD 10000030 PD 2000



Operating pressure	[MPa]	0,4-0,6
Air consumption	$[m^3min^{-1}]$	0,8
Max. output	[kW]	0,6
Max. diameter of the bit	[mm]	20
RPMs	[min ⁻¹]	500
Filtration	[µm]	50
Basic dimensions (1 x h)	[mm]	210 x 200





Weight	[kg]	3,5
Inside diameter of the supply hose	[mm]	Js10

VPU 23 ANGULAR PNEUMATIC DRILL

DESCRIPTION:

The VPU 23 angular pneumatic drill is used for drilling and rounding up holes of up to Ø23mm diameter in steel. Thrust of the 60mm max. length spacer bolt can be used while drilling.

The VPU 23 angular pneumatic drill consists of the following basic parts:

- Body with motor
- Complete control handle
- Angular transmission with chuck



TECHNICAL PARAMETERS:

Operating pressure	[MPa]	0,4-0,6
MORSE cone		MORSE 2
Air consumption	$[m^3min^{-1}]$	1,6
Max. output	[kW]	1,5 ±10%
Max. diameter of steel drill bit	[mm]	23
RPMs	[min ⁻¹]	280
Filtration	[µm]	50
Basic dimensions (1 x h)	[mm]	446 x 193





Weight	[kg]	8,3
Inside diameter of the supply hose	[mm]	Js15

PBO DIRECT PNEUMATIC GRINDERS

DESCRIPTION:

The PBO direct pneumatic grinders are used to grind welds in the machining industry, for grinding lugs or bosses in foundry industry etc.

They consist of the working part with the grinding wheel tightened to it, body with the multi-plate motor and control handle.



		PBO 100	PBO 150	PBO 180	PBO 230
RPMs	min-1	8500	5700	8500	6600
Max. output	kW	1,5	2,4	1,5	2,4
Spotřeba vzduchu naprázdno	m³. min-1	0,5	0,7	0,5	0,7
Air consumption	m ³ . min- ¹	1,55	1,9	1,5	1,9
Operating pressure	MPa	0,6	0,6	0,6	0,6
Inside diameter of the supply hose	mm	13	16	13	16





Weight	kg	3.7	5,1	4	5
Basic dimensions (1 x h)	mm	74 x 523	90 x 537	74 x 510	74 x 510

PBU ANGULAR PNEUMATIC GRINDERS

DESCRIPTION:

The PBU angular pneumatic grinders are used for grinding steel materials in the machine-building industry, grinding of lugs in the foundry industry etc.

The PBU angular pneumatic grinders consist of the body with the multi-plate motor, control handle and the working part with a grinding wheel.



PBU 180E



TECHNICAL PARAMETERS:

		PBU 115C	PBU 150G	PBU 180E	PBU 230E
RPMs	min-1	13200	10200	8500	6600
Max. output	kW	0,5	1,9	2,4	2,4
Spotř. vzduchu naprázdno	m³. min-1	0,52	0,9	1,1	0,7
Air consumption	m³. min-1	0,82	1,8	2,2	2
Operating pressure	MPa	0,6	0,6	0,6	0,6
Inside diameter of the supply	mm	10	16	16	16





hose					
Weight	kg	1,8	4	5,5	5,5
Basic dimensions (1 x h)	mm	160 x 157	234 x 192	335 x 220	335 x 200

SEK IMPACT HAMMERS

DESCRIPTION:

THE SEK impact hammers have all-round use and are used for example in:

- Construction light demolition work, cutting grooves, and removing of plaster
- Foundry industry cleaning of cast pieces, cutting of lugs
- Stone cutting wedging, dressing and so on

The SEK impact hammers consist of the control handle, cylinder with piston and ring valves. The air exhaust is muffled through a rubber muffler.





SEK 2 SEK 5



SEK 6

TECHNICAL PARAMETERS:

	Weight	Basic dimensions	Air consumption	Tool stop	Operating pressure	Connection thread
	[kg]	[mm]	$[m^3 \cdot min^{-1}]$	[mm]	[bar]	
SEK 2-1 CP	2,2	155×220	0,3	Ø 12,5 # 10,8 × 45	4–6	G 1/2 "
SEK 4-1 CA	4	225×353	0,2	# 19 × 50	4–7	G 1/2 "
SEK 5-2 CA	5	230×355	0,7	# 19 × 50 1)	4–7	G 1/2 "





SEK 5-2 BL	4,85	230×300	0,7	2)	4–7	G 1/2 "
SEK 6-2 CA	5,7	230×453	0,6	# $19 \times 50^{1)}$	4–7	G 1/2 "
SEK 6-2 BL	5.55	230×350	0.6	2)	4–7	G 1/2 "

SK 9 AND SK 13 IMPACT HAMMERS

DESCRIPTION:

THE SK 9 AND SK 13 IMPACT hammers are used to break down less and mediumhard rocks and materials (for example concrete, bituminous roads, coal etc.), during construction work and in mining and surface operations.

The jackhammers consist of the control handle, cylinder with piston and ring valves. The air exhaust is muffled through a rubber muffler.



SK 9-5

TECHNICAL PARAMETERS:

	Weight	Basic dimensions	Air consumption	Tool stop	Operating pressure	Connection thread
	[kg]	[mm]	$[m^3 \cdot min^{-1}]$	[mm]	[bar]	
SK 9-5	9	210×470	0,9	\emptyset 25 \times 75	4–6	R 3/4 "
SK 9-6	9	210×470	0,9	# 22 × 82	4–6	R 3/4 "
SK 9-6 A	10	210×470	0,9	# 22 × 82	4–6	R 3/4 "
SK 13 B	13	236×612	0,9	\emptyset 25 \times 75	4–7	R 3/4 "



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SK 13 D	12	271×604	0,9	# 22 × 82	4–7	R 3/4 "
SK 13 DZ	12	271×604	0,9	# 22 × 82	4–7	R 3/4 "

SKA 10 AND SKA 12 JACKHAMMERS with decreased vibrations

DESCRIPTION:

THE SKA 10 AND SKA 12 JACKHAMMERS with decreased vibration are used to break down less and medium-hard rocks and materials (for example concrete, bituminous roads, coal etc.), during construction work and in mining and surface operations.

The jackhammers consist of the spring-cushioned handle with control and integrated oil lubricating, cylinder with piston and ring valves. The air exhaust is muffled through a rubber muffler.



	Weight	Basic dimensions	Air consumption	Tool stop	Operating pressure	Connection thread
	[kg]	[mm]	$[\text{m}^3 \cdot \text{min}^{-1}]$	[mm]	[bar]	
SKA 12 B	12	210×650	1,0	\emptyset 25 \times 75	4–7	R 3/4 "
SKA 10 B	10	210×490	0,9	\emptyset 25 \times 75	4–7	R 3/4 "
SKA 10 D	10	210×490	0,9	# 22 × 82	4–7	R 3/4 "
SKA 10 DZ	10	210×490	0,9	# 22 × 82	4–7	R 3/4 "



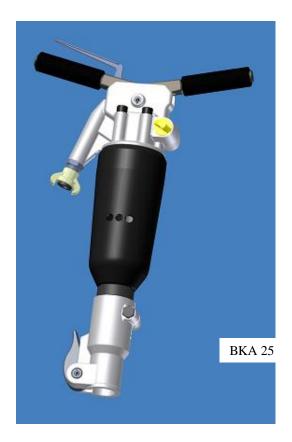
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SKA 12 D	12	210×650	1,0	# 22 × 82	4–7	R 3/4 "
SKA 12 DZ	12	210×650	1.0	# 22 × 82	4_7	R 3/4"

BKA DEMOLITION HAMMERS

DESCRIPTION:

THE BKA DEMOLITION hammers with reduced vibration are used to break down less and medium hard rocks and materials (for example concrete, bituminous roads, coal etc.), during construction work and in mining and surface operations. They are suitable for vertical or inclined work by their arrangement and weight.

The demolition hammers consist of the spring-cushioned handle with control and integrated oil lubricating, cylinder with piston and ring valves. The air exhaust is muffled through a rubber muffler



	Weight	Basic dimensions	Air consumption	Tool stop	Operating pressure	Connection thread
	[kg]	[mm]	$[m^3 \cdot min^{-1}]$	[mm]	[bar]	
BKA 15	15	455×635	0,8	# $22 \times 82 (#25 \times 108)$	4–7	R 3/4 "
BKA 20	21	455x640	1,4	# 25 × 108 (# 28 × 160)	4-7	R 3/4 "



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BKA 25	25	455×640	1,8	# 25 × 10(#28×160)(#32×160)	4–7	R 3/4 "
BKA 30	30	455×730	1,5	# 32 × 160	4–7	R 3/4 "

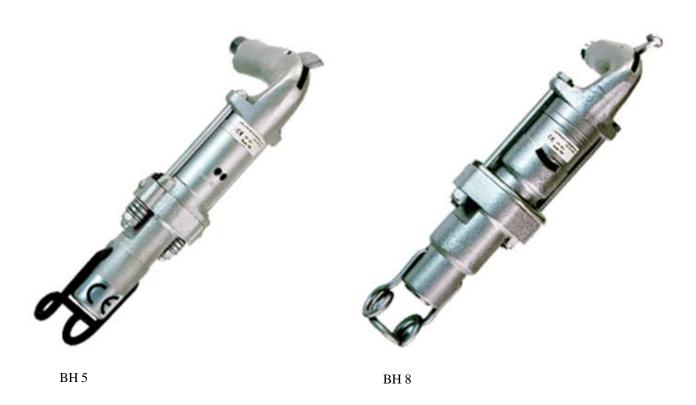
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PNEUMATIC DRILL HAMMERS BH 5 AND BH8

DESCRIPTION:

The pneumatic drill hammers BH 5 and BH8 belong to the light drill hammer weight category and are used to drill holes for blasting operations in rocks with various hardnesses, primarily in mines, then in road and railroad construction, in building construction etc.

The pneumatic drill hammers BH 5 and BH8 consist of the firm handle with a lever, cylinder with piston and the cylinder cover with a drill case.



TECHNICAL PARAMETERS:

	Weight	Basic dimensions	Air consumption	Tool stop	Operating pressure
	[kg]	[mm]	$[\mathrm{m}^3\cdot\mathrm{min}^{-1}]$	# [mm]	[bar]
BH 5	5	475×405	0,55	19×50	4–6



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BH 8	8,4	150×420	0,64	$19 \times 82,5$	4–6
BH 8	8,4	150×420	0,64	22 x 82,5	4–6

VK DRILL HAMMERS

DESCRIPTION:

THE VK drill hammers belong to the medium weight drill hammer category and are used to drill holes for blasting operations in rocks with various hardnesses, primarily in mines, then in road and railroad construction, building construction etc.

The VK drill hammers consist of the firm or spring-cushioned handle with control, cylinder with piston and the cylinder cover with a drill case.





VK 15 RO VK 22



NVK 0,3

TECHNICAL PARAMETERS:

	Weight	Basic dimensions	Air consumption	Tool stop	Operating pressure
	[kg]	[mm]	$[\mathrm{m}^3\cdot\mathrm{min}^{-1}]$	# [mm]	[bar]
VK 15 RO	17,1	475×645	2,2	19×108	4–6
VK 15-1 RO	17,1	475×645	2,2	22×108	4–6
VK 15-3	15,5	170×645	2,2	# 19 × 108	4–6
VK 15-4	15,5	170×645	2,2	# 22 × 108	4–6
VK 19	21,5	270×685	2,7	22×108	4–6
VK 22-1	23,5	280×720	4	22×108	4–6





NVK 0,3	26	280 × 680	4,3	22×108	3-4,5
VK 29-2	26	280×720	4	22×108, 25×108	4–6

VP DRILL SUPPORTS

DESCRIPTION:

THE VP drill SUPPORTS are used with manual pneumatic drill hammers tailored to drill using pneumatic supports, for example, VK 22, NVK 0,3, VK 29 and such.

THE VP drill SUPPORTS consist from the spring-cushioned upper extendable part with a handle and control and the firm part with a spur that is used to support the drill supports while working. The extendable part is sealed using several leather sleeves that prevent pressure air leaks from the support.



TECHNICAL PARAMETERS:

	Weight	Max. extension length	Max. thrust	Operating pressure
	[kg]	[mm]	[N]	[bar]
VP 600-1	16,9	600	1000	4–6
VP 800-1	19,0	800	1000	4–6





VP 1000-1	20,7	1000	1000	4–6
VP 1200-1	22,4	1200	1000	4–6

PPP 300 PNEUMATIC DIRECT SAW

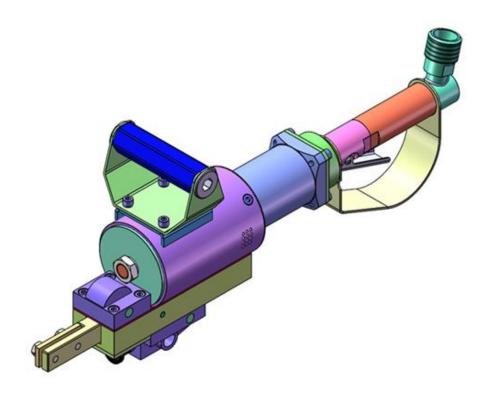
DESCRIPTION:

The PPP 300 pneumatic direct saw is designed for cutting and dividing of materials in heavy duty operations. Saw blade oscillations are induced by a cam mechanism that is driven by a lamellar engine.

The PPP 300 pneumatic direct saw does not contain any light metal alloys; therefore it can be used in environment with risk of explosion.

The saw consists of the following basic parts:

- Body with a cam mechanism
- Pneumatic motor with a control



Working pressure	[MPa]	0,4-0,6
Max. output	[kW]	1,1
Air consumption	$[m^3min^{-1}]$	1,2
Saw blade travel	[mm]	65
Filtration	[µm]	50
Number of oscillations (off-load)	[min ⁻¹]	380
Weight	[kg]	10,8





Inside diameter of the supply hose

[mm]

Js 19

PPP 80 PNEUMATIC BAND SAWS

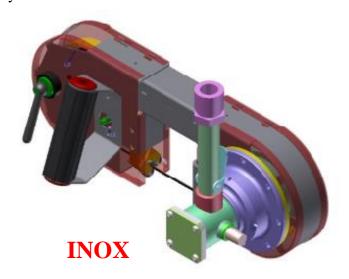
DESCRIPTION:

The PPP pneumatic band saws are designed for cutting and dividing materials in heavy duty operations. While sawing, there is no need to cool neither the material nor the saw band. The movement of the saw band is transferred by means of two pulleys that are driven by a lamellar engine with a control.

The PPP pneumatic band saw series do not contain any light metal alloys and can be used in environment with risk of explosion.

The saws consist of the following basic parts:

- Stainless steel frame
- Pneumatic motor with a control
- Planetary transmission



Operating pressure	[MPa]	$0,\!4-0,\!6$
Max. output	[kW]	0,7
Air consumption	$[m^3min^{-1}]$	0,9
Dimensions of cut material	[mm]	80 x 80
Filtration	[µm]	50
Band speed	[m/min ⁻¹]	65
Weight	[kg]	8,2
Saw chain attachment		Not supplied





Inside diameter of the supply hose

[mm]

Js 10

PPP 120, PPP 160 AND PPP 180 PNEUMATIC BAND SAWS

DESCRIPTION:

The PPP pneumatic band saws are designed for cutting and dividing materials in heavy duty operations. While sawing, there is no need to cool neither the material nor the saw band. The movement of the saw band is transferred by means of two pulleys that are driven by a lamellar engine with a control.

The PPP pneumatic band saw series do not contain any light metal alloys and can be used in environment with risk of explosion.

The saws consist of the following basic parts:

- Stainless steel frame
- Pneumatic motor with a control
- Planetary transmission



PPP 120

		PPP 120	PPP 160	PPP 140	PPP 180
Operating pressure	[MPa]		0,4 -	- 0,6	
Max. output	[kW]	0	,7	0.	,8
Air consumption	$[m^3min^{-1}]$		0,	,9	
Dimensions of cut material	[mm]	120 x 127	160 x 127	140 x 180	180 x 180
Filtration	[µm]	50			
Band speed	[m/min ⁻¹]	65			
Weight	[kg]	9	9,5	11	15 + 3
Saw chain attachment			no		yes
Inside diameter of the	[mm]	Js 10			



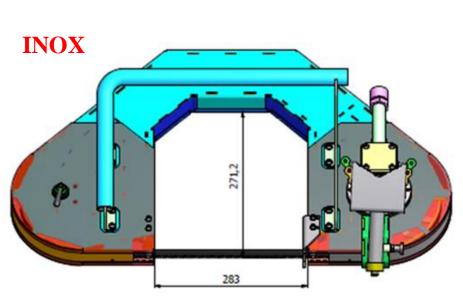


PPP 200, PHP 270 PNEUMATIC DIRECT SAWS

DESCRIPTION:

Pneumatic band saw PPP 200, PHP 270 is used for cutting and dividing materials in heavy production units. While sawing, there is no need to cool either the material or the saw band. The movement of the saw bend is transferred by means of four trolleys that are driven by plate engine with control. It is possible to use the saw as a hand saw or to fix it in chain holder.

The pneumatic band saw PPP 270 does not contain alloys and can be used in environment with explosion risk.





		PPP 200	PPP 270
Operating pressure	[MPa]	0,4-0,6	0,4-0,6
Max. output	[kW]	0,8	0,8
Air consumption	$[m^3 min^{-1}]$	0,9	0,9
Dimensions of cut material	[mm]	219 x 190	283 x 271,2
Filtration	[µm]	50	50
Band speed	[m/min ⁻¹]	65	65
Weight	[kg]	13,2+3	20,5+3
Saw chain attachment		Not included	Not included
Inside diameter of the supply hose	[mm]	Js 10	Js 10



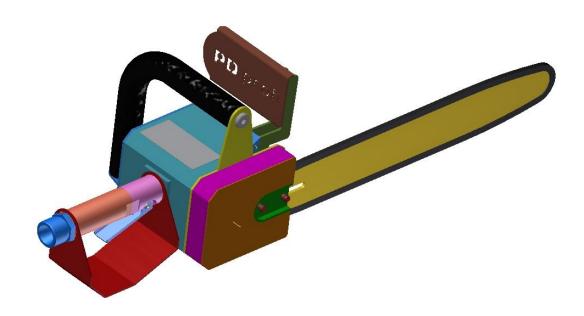


PPR 40 PNEUMATIC CHAIN SAW

DESCRIPTION:

The PPR 40 pneumatic chain saw is intended for manual cutting of wood only. The saw bar length is 400mm.

The PPR 40 pneumatic chain saw consists of a control handle, a body with a lamellar engine, a band brake, a lubricating device, a bar with a saw chain and a top handle with a cover. The saw design meets the requirements for use in mines (ATEX).



Working pressure	[MPa]	0,4-0,6
Max. output	[kW]	2
Air consumption	$[m^3min^{-1}]$	3,2
Blade length	[mm]	400
Filtration	[µm]	50
Cutting speed	[m/s ⁻¹]	1,8
Weight	[kg]	10
Inside diameter of the supply hose DN	[mm]	Js 19



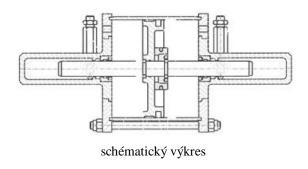


MP 20 PNEUMATIC BOOSTER (MULTIPLICATOR) PUMP

DESCRIPTION:

The MP 20 pneumatic booster (multiplicator) pump is used for irrigation of coal seams by high pressure water in order to reduce environmental dust.

The MP 20 pneumatic booster (multiplicator) pump is a single action, twin high pressure plunger pump. It is equipped by handles for easy handling at the workplace. The booster (multiplicator) pump is made from stainless material and meets conditions for use in the I M2 explosive danger environment set by the EN 1127-2 standard.





Operating pressure	[MPa]	0,4-0,5
Water supply pressure	[MPa]	0,5
Water supply pressure at 0.4 MPa	[MPa]	16,4
Water supply pressure at 0.5 MPa	[MPa]	20,5
Air consumption	$[m^3h^{-1}]$	
Water flow at 0.5 MPa	[l.min ⁻¹]	7
Filtration	[µm]	50
Basic dimensions	[mm]	450 x 280 x 280
Weight	[kg]	37
Inside diameter of the supply hose	[mm]	Ø16mm



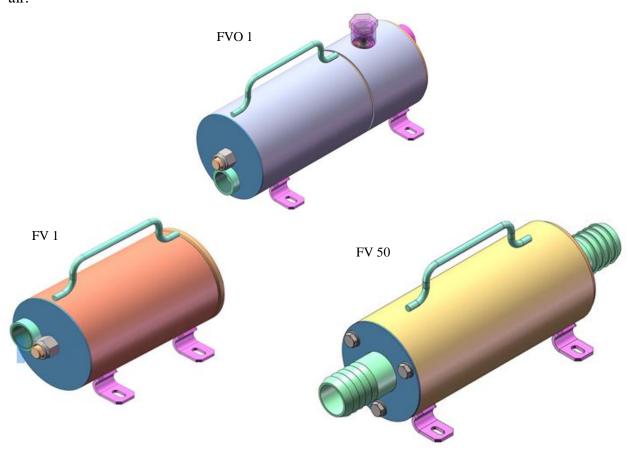


FV LINE AIR FILTERS

DESCRIPTION:

The FV line air filters are used for the filtration of pressure air for pneumatic tools and machines in heavy duty operations such as deep mines and foundries.

The FV 1" and FV 50 air filters consist of a steel pipe with a handle (or supports) of the cylindrical filter and a removable front. The FVO 1" filter is additionally equipped by lubrication to help oiling supplied pneumatic tools. Cleaning of the cylindrical filter is done by loosening of the central M16 nut and blowing off of the cylindrical filter by compressed air.



		FV 1"	FV 50	FVO 1"
Operating pressure	[MPa]		0,2-0,7	
DN		Závit 1"	50mm	Závit 1"
Filtration	[µm]		50, 100	
Basic dimensions	[mm]	Ø127x230	Ø127x453	Ø127x357
Weight	[kg]	4,5	7,3	7,8
Inside diameter of the supply hose	[mm]	Js 25	Js 50	Js 25





OVP 1 FLOAT WATER SEPARATOR

DESCRIPTION:

The OVP 1 float water separator is used for rough water filtration and separating of water droplets from pressure air for pneumatic tools and machines in heavy duty operations like deep mines, quarries, foundries, forges and others. The condensate is automatically drained after accumulation.

The OVP 1 float water separator consists of a pipe, two flanges, float mechanism and four bolts. Cleaning of the filter insert is done by reverse connection and flushing by pressure water.



Operating pressure	[MPa]	max 0,8
Input thread		1"
Output thread		2 x 3/4"
Filtration	[µm]	500
Dimensions	[mm]	250 x 250 x 450
Weight	[kg]	31





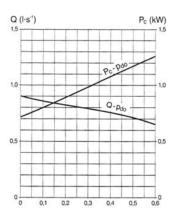
CPV 1 SCREW PNEUMATIC PUMP

DESCRIPTION:

The CPV 1 screw pneumatic pump is used to pump clean or slightly polluted water with the particle size up to 5 mm or oil. It is intended for explosion atmosphere danger environment, where compressed air is available as a driving medium. This is primarily in underground parts and surface installations of deep mines with danger of methane and combustible dust. The pump is recommended to be used with the FVO 1" lubricating filter.

The CPV 1 pneumatic screw pump consists of:

- Pneumatic multi-plate moto
- Screw pump
- Mechanical clutch





Air pressure	[MPa]	0.4 - 0.6
Flow through rate - max.	[l.sec ⁻¹]	0.7
Input	[kW]	Approx. 1.1
Filtration	[µm]	50
Air supply	[mm]	DN 25 (G 1")
Discharge branch	[mm]	DN 25 ("1")
Weight	[kg]	11.5





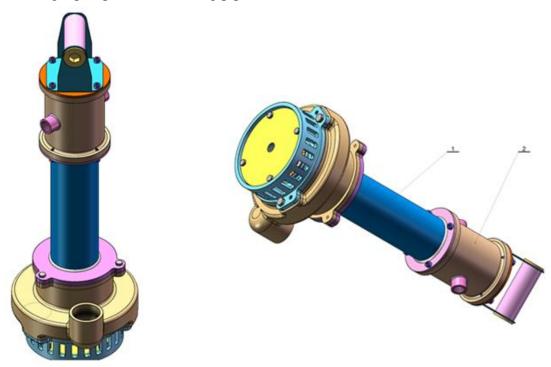
CPO 40 CENTRIFUGAL PNEUMATIC PUMP

DESCRIPTION:

The CPO 40 centrifugal pneumatic pump is used to pump clean or slightly polluted water with the particle size up to 5 mm. It is intended for explosion atmosphere danger environment, where pressure air is available as driving medium. This is primarily in underground parts and surface installations of deep mines with danger of methane and combustible dust. The pump is recommended to be used with the FVO 1" lubricating filter.

The CPO 40 centrifugal pneumatic pump consists of:

- pneumatic multi-plate motor
- centrifugal pump with connecting pipe with shaft



Air pressure	[MPa]	0,4 - 0,6
Flow through rate - max.	[l.sec ⁻¹]	6
Delivery height - max.	[m]	40
Input	[kW]	3
Filtration	[µm]	100
Air supply	[mm]	DN 20 (inside thread G 1")
Discharge branch	[mm]	DN 50 (inside thread 2")
Weight	[kg]	18



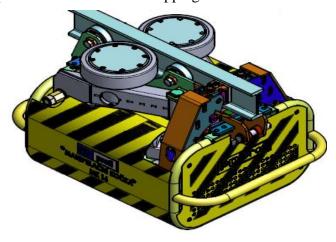


MK P12 HANDLING TROLLEY

DESCRIPTION:

The MK P12 pneumatic tractor is a device for pulling materials and equipment in the mine working on the single suspension rail ZD 24,I155 working with slopes up to $\pm 30^{\circ}$.

The tractor uses compressed air that is manually controlled through the air pipe to the air distributor that feeds the engine through the reduction mechanism to the friction drive wheels pressed against both sides of the suspension rail to move and have Independent pneumatic brake when stopping the machine.



Nominal traction force version P12	[N]	22 000
Nominal braking force version P12	[N]	30 000
Max. travel speed on level surface	[m.min. ⁻¹]	24
Installed power supply – 0,6MPa	[kW]	2 x 5.2
Maximum track incline	[°]	± 30°
Operational air pressure	[MPa]	0,4-0,6
Inside diameter of the supply hose	[mm]	32
Track type		ZD 24,ZD24A,I155
Dimensions (h x w x l)	[mm]	800 x 874 x 1.126
Weight	[kg]	450
Max. weight of pulled load	[kg]	Incline 0° 22.000
(with friction coefficient 0.1)		Incline 5° 11 799
At 0,4MPa pressure		Incline 10° 8 084
		Incline 15° 6 190
		Incline 20° 5 046
		Incline 25° 4 286
		Incline 30° 3 750





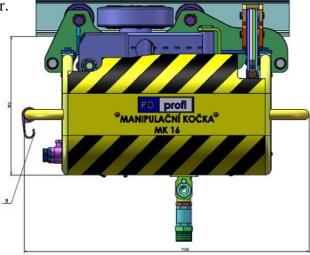
MK P2X HANDLING TROLLEY

DESCRIPTION:

The MK P2X handling trolley (further called only the trolley) is an air powered tool for manipulation with loads hanging on carts moving on the ZD 24,I155 hanging track or its modifications for short distances. Compared to the previous type MK 10 has a separate brake jaw and increased braking force 25kN.

The trolley is equipped by a lever control hanging on supply hoses. It work on the principle of transfer of movement from driving wheels pushed against both sides of ZD 24

hanging track I profile vertical member.



	,		
Nominal traction	[N]	P 21 – 16 000	P22 - 22 000
Brake force	[N]	22 000	30 000
Max. travel speed on level surface	[m.min. ⁻¹]	24	24
Installed power supply – 0,6MPa	[kW]	2 x 4	4
Maximum path incline	[°]	± 30	o
Operating pressure	[MPa]	0,4-0	0,6
Inside diameter of the supply hose	[mm]	32	
Used track		ZD 24,ZD 2	24A,I155
Basic dimensions	[mm]	800 x 874	x 1126
Weight	[kg]	390	450

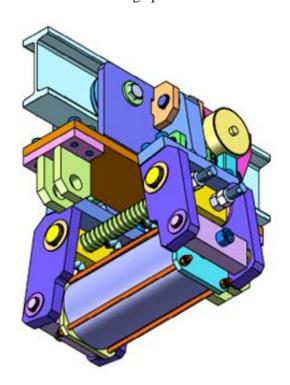




TROLLEY WITH BRAKE VB 20

DESCRIPTION:

The trolley with brake VB 20 works as mechanically-pneumatic self-supporting brake on running cradles functioning as safety equipment in mine units. With its functionality, the trolley safeguards the equipment and its parts against unwanted travelling and provides for higher security when the maximum travelling speed is exceeded as it grips the track profile with its jaws. The construction design matches the requirements for mining equipment for environment with dangerous atmospheric conditions - 2 according to ČSN EN 1127-2 and legal requirements of Czech Republic and European Union. The operating incline of the traveling track is 0-25°, the maximum traveling speed 30 m.min-1.



Brake force	[N]	20 000
Max. travel speed on level surface	[m.min. ⁻¹]	28
Maximum path incline	[°]	± 25°
Operational air pressure	[MPa]	0,35 - 0,4
Inside diameter of the supply hose	[mm]	10
Used track		ZD 24,ZD 24A,I155
Dimensions – h x w x l	[mm]	475 x 475 x 510
Weight of the trolley + cart	[kg]	200
Max. weight of pulled load	[kg]	15 000



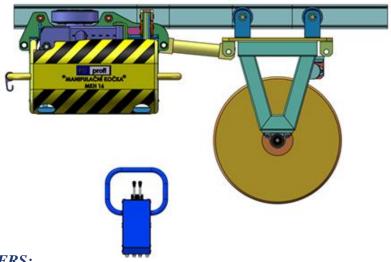


MKH 16 – 16 000N HYDRAULIC HANDLING TROLLEY

DESCRIPTION:

The MK 16 handling trolley (further called only the trolley) is an air powered tool for manipulation with loads hanging on carts moving on the ZD 24 hanging track or its modifications for short distances. The trolley is supplied through the winding drum by 5 m long hydraulic hoses from the AG-63/16Z hydraulic aggregate.

The trolley is equipped by a lever control hanging on supply hoses. It work on the principle of transfer of movement from driving wheels pushed against both sides of ZD 24 hanging track I profile vertical member.



Nominal traction	[N]	16 000	
Brake force	[N]	20 000 + 20 000	
Max. travel speed on level surface	[m.min. ⁻¹]	24	
Pressure medium	Oil 46mm ² /s		
Maximum path incline	[°]	± 25°	
Operational oil pressure	[MPa]	16	
Inside diameter of the supply hose	[mm]	16	
Used track		ZD 24,ZD 24A,I155	
Dimensions – h x w x l	[mm]	800 x 800 x 950	
Weight	[kg]	approx. 350 + 150	
Max. weight of pulled load (with the friction coefficient 0.1)	[kg]	Incline 0° 16 000 Incline 5° 8 566 Incline 10° 5 880 Incline 15° 4 502 Incline 20° 3 670	



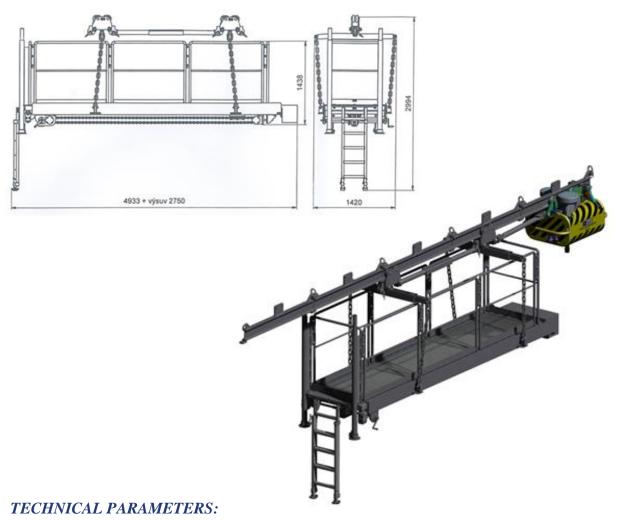


HANGING WORK PLATFORM

DESCRIPTION:

The hanging work platform (hereinafter only platform) is an equipment moving on an "I" profile of the travelling track ZD 24,I155 thanks to the handling trolley with pneumatic drive MK 16 or with hydraulic drive MKH 16. The platform is used for building, disassembling or controlling the travelling track.

The technological mining platform is used for equipment of mine galleries. It is basically a moving floor, hanging on two pendent trails, adjustable in vertical movement. From the platform, it is possible to do all different works in necessary height, transport instruments and build arches for mining supports. It is delivered in two different designs.



Loading	[kg]	400kg
Maximum path incline	[°]	± 18°
Used track		ZD 24,ZD 24A,I155
Dimensions – h x w x l	[mm]	4933(7683) x 1420 x 1438
Weight	[kg]	1875





MINE TECHNOLOGY PLATFORM

DESCRIPTION:

The mine technology platform is used to equip tunnels in mines. Basically it is a mobile floor that is hung on two hanging rails and adjustable in the vertical direction. Various operations at needed height, like transport of tools and material and setting of mining support arches, can be done from this platform. The platform is supplied in two versions: The P1 version is 4735 mm wide and it is intended for 30m² profiles. The P2 version is 3735 mm wide and it is intended for 20m² profiles. The platforms are pneumatically driven. Their movement along the rails is provided by two pneumatic MK10 trolleys, lifting of the platform is done by four mobile hoists. The platform pneumatic control system allows continuous regulation of all device functions. The maximum lengthwise incline of a mining work is allowed in the range of \pm 12°, the maximum cross incline of the mine work is \pm 5°. The platform is safeguarded against running away by two brake carts. The work lengthwise incline of the platform is limited by the range of \pm 4°, the maximum allowed crosswise incline of the equipment is \pm 3°. The platform in a working position can be horizontally and vertically fixed against movement.





Nominal traction force	[N]	32 000
Brake force	[N]	44 000
Max. travel speed on level surface	[m.min. ⁻¹]	24
Maximum path incline	[°]	± 12°
Operational pressure	[MPa]	0,4
Inside diameter of the supply hose	[mm]	50
Used tracks		ZD 24,ZD 24A,I155
Dimensions w x l	[mm]	4735 (3735) x 6686
Weight	[kg]	6400





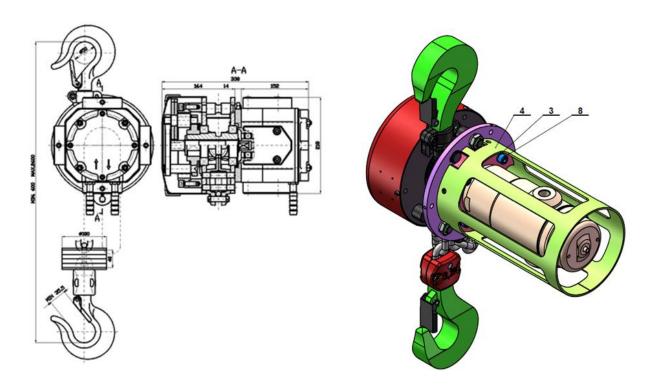
Z 295 PNEUMATIC MANIPULATION DEVICE 1,6t, 3,2t, 5t

DESCRIPTION:

The Z 295 pneumatic manipulation device is used for vertical lifting and lowering of loads in places with pressure air supply.

The Z 295 pneumatic manipulation device consists of the following basic parts:

- Body with the hook assembly 1,6t, 3,2t, 5t
- Pneumatic motor MPP2, MPL 3



Loading	[t]	1,6	3,2	5
Load chain	[mm]	9 x 27	11 2	x 31
Operating pressure	[MPa]	0,45-0,6		
Nominal motor output	[kW]	2	3	3
Lifting speed	[m.mim ⁻¹]		1	0,5
Air consumption	$[m^3h^{-1}]$	37	14	14
Filtration	[µm]		50	
Weight	[kg]	48	65	70
Inside diameter of the supply hose	[mm]	ø 16	Ø	20



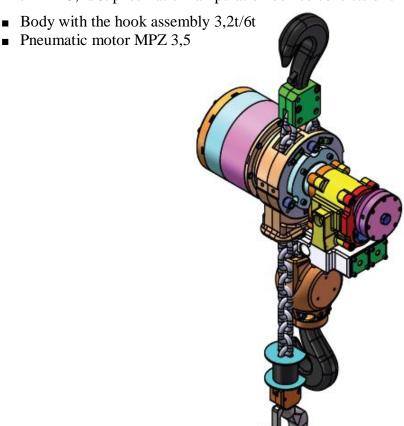


THE ZMP 3,2t/6t PNEUMATIC MANIPULATION DEVICE

DESCRIPTION:

The ZMP 3,2t/6t pneumatic manipulation device is used for vertical lifting and lowering of loads in places with pressure air supply.

The ZMP 3,2t/6t pneumatic manipulation device consists of the following basic parts:



Loading	[t]	3,2	6
Load chain	[mm]	13	x 36
Operating pressure	[MPa]	(),4
Nominal motor output	[kW]	3	3,5
Lifting speed	[m.mim ⁻¹]	3	1,5
Air consumption	$[m^3h^{-1}]$	3	50
Filtration	[µm]		50
Weight	[kg]	1	50
Inside diameter of the supply hose	[mm]	Ø	25





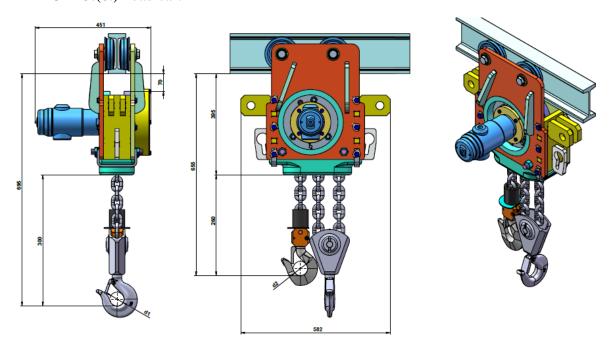
ZMPP 3.2t/5t(6t) TRAVELLING PNEUMATIC MANIPULATION DEVICE

DESCRIPTION:

The ZMPP 3.2t/5t(6t) travelling pneumatic manipulation device is used for vertical lifting and lowering of loads on the ZD 24,I155 hanging track in places with pressure air supply.

The ZMPP 3.2t/5t(6t) travelling pneumatic manipulation device consists of the following basic parts:

- Pneumatic multi-plate motor MPL 3, version P2
- ZMPP 3.2t/5t(6t) load cart



TECHNICAL PARAMETERS:

Loading	[t]	3,2	5 (6)
Load chain	[mm]	11:	x31
Operating pressure	[MPa]	0,4	-0,6
Nominal motor output	[kW]		3
Lifting speed	[m.mim ⁻¹]	1	0,5
Air consumption	$[m^3h^{-1}]$	1-	44
Filtration	[µm]	5	50
Weight	[kg]	1.	50
Inside diameter of the supply hose	[mm]	Ø	16





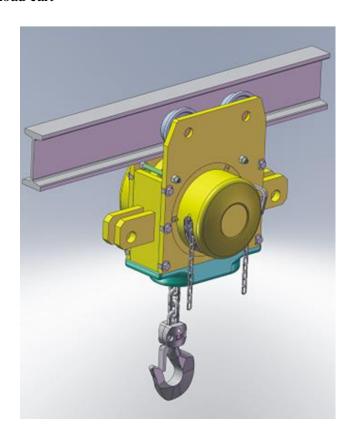
ZMRP 3,2t MANUAL TRAVELLING MANIPULATION DEVICE

DESCRIPTION:

The ZMRP 3,2t manual travelling manipulation device is used for vertical lifting and lowering of loads on the ZD 24 hanging track.

The ZMRP 3,2t manual travelling manipulation device consists of the following basic parts:

- ZMRP 3.2t manual tackle
- ZMRP 3.2t load cart



Loading	[t]	3,2
Load chain	[mm]	Ø 11 x 31
Control force	[N]	400
Hand chain	[mm]	ø 4 x 20
Lifting speed	[m.mim ⁻¹]	0,29
Weight	[kg]	140



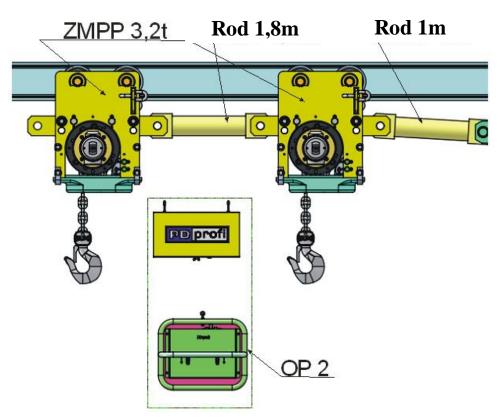


MZP 2x3.2t TRAVELLING MANIPULATION DEVICE

DESCRIPTION:

The MZP 2x3.2t travelling manipulation device is used for transport of material in mining operations along the ZD 24 type hanging track.

The MZP 2x3.2t travelling manipulation device consists of two ZMPP 3.2t manipulation devices connected by a connecting rod. MZP 2x3.2t can be pulled, for example, by the MK manipulation trolley connected by the connecting rod. Both ZMPP 3.2t manipulation devices are operated by the PO-2 control panel. The breaking cart is not a part of delivery.



TECHNICAL PARAMETERS:

Maximum tension load MZP 2x3,2t	[kN]	62
Axis distance of hooks (hitches)	[mm]	as required
Elevation of hooks (basic)	[mm]	3000
Max. loading	[t]	2 x 3,2
Max. incline during lifting	$\begin{bmatrix} 0 \end{bmatrix}$	±20
Operating pressure	[MPa]	0,4-0,6
Weight	[kg]	Approx. 320

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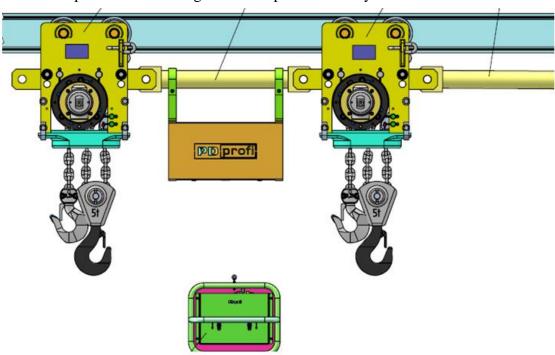


MZP 2x3,2t/5t, MZP 2x3,2t/6t - pneumatic SUSPENDED TROLLEY MANIPULATION DEVICE

DESCRIPTION:

The MZP 2x3,2t/5t and MZP 2x3,2t/6t suspended trolley manipulation devices are designed for transport of material in mining operations along the ZD 24 type suspension monorail.

The MZP 2x3,2t/5t and MZP 2x3,2t/6t suspended trolley devices consist of two ZMPP 3.2t/5t(6t) manipulation devices connected by a connecting rod. MZP 2x3,2t/5t or MZP 2x3,2t/6t can be pulled, for example, by the MK10 handling trolley connected by the connecting rod. Both ZMPP 3,2t/5t or 3,2t/6t suspended trolley devices are operated with the PO-2 control panel. The breaking cart is not part of delivery.



Maximum tension load MZP 2x3,2t/5t	[kN]	100
Axis distance of hooks (hitches)	[mm]	as required
Max. travel height of hooks	[mm]	3.000
Max. load	[t]	2 x 3,2/5, 2 x 3,2/6
Max. incline during lift	[0]	±20
Working media pressure	[MPa]	0,4-0,6
Total weight	[kg]	approx. 340kg



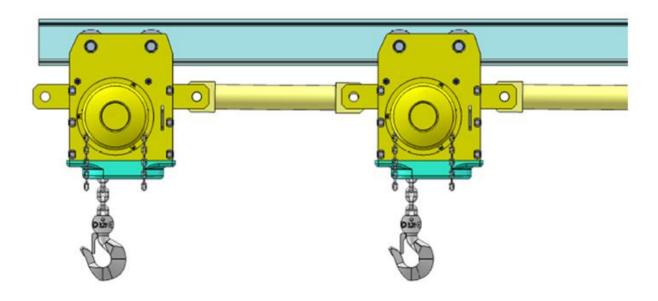


MZP 2x3.2t MANUAL MOBILE MANIPULATION DEVICE

DESCRIPTION:

The MZP 2x3.2t mobile manipulation device is used for transport of material in mining operations along the ZD 24 type hanging tracks.

The MZP 2x3.2t mobile manipulation device consists of two ZMPR 3.2t manipulation devices connected by a connecting rod. MZP 2x3.2t can be pulled, for example, by the MK10 manipulation trolley connected by the connecting rod. Both ZMPR 3.2t manipulation devices are operated by manual control chain. A brake cart is not a part of delivery.



Maximum tension load MZP 2x3.2/5t	[kN]	6,4
Axis distance of hooks (hitches)	[mm]	as required
Lift of hooks (basic)	[mm]	3000
Max. loading	[t]	2 x 3,2
Max. incline during lifting	$\begin{bmatrix} 0 \end{bmatrix}$	±20
Total weight	[kg]	Approx. 300kg





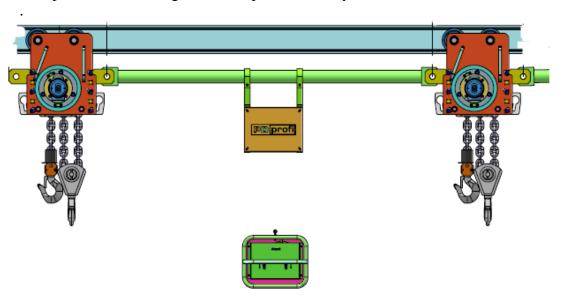
MZP 2x3.2t/5t- PNEUMATIC SUSPENDED TROLLEY MANIPULATION DEVICE

DESCRIPTION:

The MZP 2x3,2t/5t suspended trolley manipulation devices are designed for transport of material in mining operations along the ZD 24,I155 type suspension monorail.

The MZP 2x3.2t/5t suspended trolley devices consist of two MZP 3.2t/5t Each MZP 3.2t/5t pneumatic hoist includes two hooks, one 3.2t hook and one 5t hook for convenient operation. manipulation devices connected by a connecting rod. MZP 2x3,2t/5t can be pulled, for example, by the MK handling trolley connected by the

connecting rod Both MZP 3,2t/5t suspended trolley devices are operated with the PO-2 control panel. The breaking cart is not part of delivery..



Maximum tension load MZP 2x3,2t/5t	[kN]	100
Axis distance of hooks (hitches)	[mm]	as required
Max. travel height of hooks	[mm]	3.000
Max. load	[t]	2x3,2t/5t
Max. incline during lift	[0]	±25
Working media pressure	[MPa]	0,4-0,6



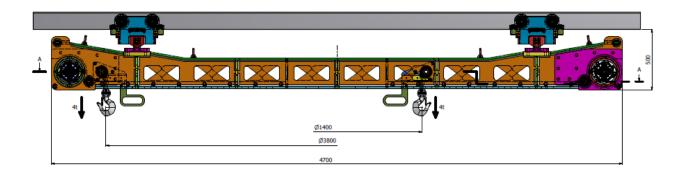


PNEUMATIC TRANSPORT EQUIPMENT ZTP 2x3,2t

DESCRIPTION:

Pneumatic transport equipment **ZTP 2x3,2t** is used for transport of material in mines on hanging grooves, type ZD 24.

Pneumatic transport equipment **ZTP 2x3,2t** consists of frame with lifting equipment, operating and connecting pull rod. Two trolleys are used to hang it on the rails. The lifting part is composed by two units, formed by a hoist with pneumatic brake motor. The movement of the lifting chain is drawn by the nut of the hoist. The chain continues further inside the frame to an adjustable shuttle and towing hook with turn that protects the chain from twisting. Shuttles, together with the pitch between towing hooks, can be easily adjusted in the range from 1.4 m up to 3.8 m in steps by 0.1 m. The unloaded end of the chain is laid aside into the storage grip. The pneumatic control is hanged on the connecting pull rod, outside the dangerous area of hanging weight.



Maximum tension load ZTP 2x3,2t	[kN]	62
Axis distance of hooks	[mm]	1400 - 3800
Elevation of hooks (basic)	[mm]	3000
Max. loading	[t]	2 x 3,2
Max. incline during lifting	$\begin{bmatrix} 0 \end{bmatrix}$	±20
Operating pressure	[MPa]	0,4-0,6
Weight	[kg]	Approx. 850



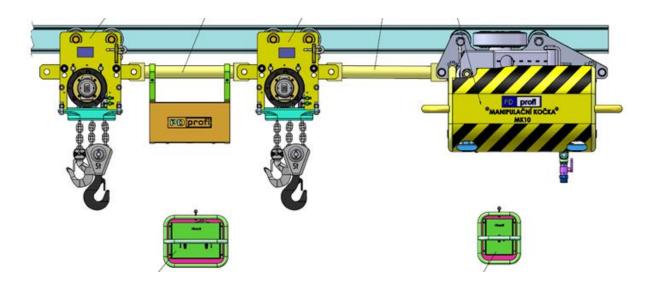


PNEUMATIC MANIPULATION SET SMP 1

DESCRIPTION:

The **SMP 1** pneumatic manipulation set is used for transport of material in mining operations along the ZD 24 type hanging tracks.

The **SMP 1** pneumatic manipulation set consists of two pneumatic travelling manipulation units ZMPP 3.2t/5t or ZMPP 3.2t/6t that are controlled by the OP 2 pneumatic control. The units are connected by connecting rods and pulled by the MK10-16 000N manipulation trolley. A brake cart is not a part of delivery.



Nominal traction force	[N]	16 000
Axis distance of hooks (hitches)	[mm]	as required
Elevation of hooks (basic)	[mm]	3000
Max. loading	[t]	2 x 3,2/5, 2 x 3,2/6
Inside diameter of the supply hose	[mm]	32
Max. incline during lifting	[0]	±25
Working medium pressure	[MPa]	0,4-0,6
Total weight	[kg]	Approx. 710 kg



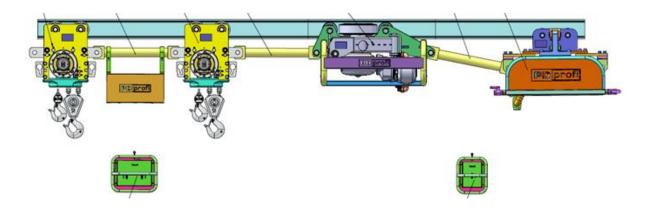


PNEUMATIC MANIPULATION SET SMP 2

DESCRIPTION:

The **SMP 2** pneumatic manipulation set is used for transport of material in mining operations with lowered travel profile along the ZD 24 type hanging tracks.

The SMP 2 pneumatic manipulation set consists of two pneumatic travelling manipulation units ZMPP 3.2t/5t or ZMPP 3.2t/6t that are controlled by the OP 2 pneumatic control. The units are connected by connecting rods and pulled by the MK10.1-16 000N manipulation trolley with a VB 25 cart with a brake and the frame with the trolley pneumatic control. The VB 25 cart can be equipped by a speed limiter. A brake cart is not a part of delivery.



Nominal traction force	[N]	16 000
Axis distance of hooks (hitches)	[mm]	as required
Elevation of hooks (basic)	[mm]	3000
Max. loading	[t]	2 x 3,2/5, 2 x 3,2/6
Inside diameter of the supply hose	[mm]	32
Max. incline during lifting	[0]	±25
Working medium pressure	[MPa]	0,4-0,6
Total weight	[kg]	Approx. 800 kg





PL 0.25t AND 0.5t PNEUMATIC TACKLES

DESCRIPTION:

The PL 0.25t a 0.5t pneumatic tackles consist of the body with a hook set, multi-plate motor and a pneumatic control.

The PL 0.25t a 0.5t pneumatic tackles are used as classical stable hoists to lift and lower loads at places with the supply of compressed air:

- as a manipulation hoist for installation and maintenance work in all kinds of technological operations
- it is especially useful in the dust or gas explosion danger environments, where electric motor hoists cannot be used (gasworks, deep mines, chemical plants etc.)
- version with the NEXP designation



Loading	[t]	0,25	0,5				
Load chain	[mm]	4x12	2x (4x12)				
Operating pressure	[MPa]	0,4-0,6					
Nominal motor output	[kW]	0,8					
Lifting speed	[m.mim ⁻¹]	0,5	0,5				
Air consumption	$[m^3h^{-1}]$						
Filtration	[µm]	50					
Weight	[kg]	15 16					
Inside diameter of the supply hose	de diameter of the supply hose [mm] Ø13						





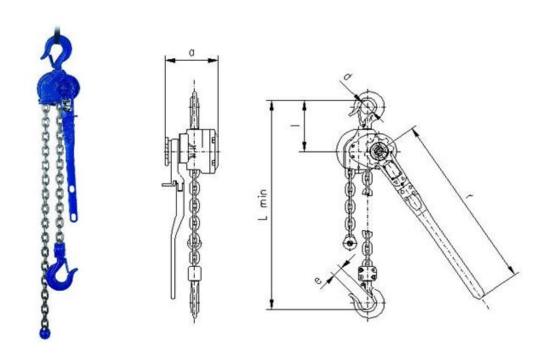
RZC RATCHET HOISTS – NEXP

DESCRIPTION:

The RZC ratchet hoists consist of the body with hook and gear assembly, control lever and load-link chain with a hook.

The RZC ratchet hoists are widely used in places where loads need to be manipulated in the explosion danger environment. By their design these hoists meet requirements set for the group I (mining), category M2 devices.

- for lifting and dragging of loads
- for tensioning of fences, salvage work, pulling out of supports
- as lifting devices for mine hanging tracks
- for assembly and manipulation work of all kinds
- suitable for use in heavy duty operations mines, chemical industry etc.



Loading (t)	Number of load strands	Load chain	Control force (N)	Lifting speed (m/min)	a	Ba d	sic dime e min	ensions ((mm) L min	r	Weight (kg)	Weight gain per 1m of lift (kg)
0,8	1	Ø 5 x 15	400	1,27	145	36	23,5	145	327	560	8,9	0,55
1,6	1	Ø 9 x 27	370	0,52	165	43	29,5	160	380	560	16,7	1,84
3,2	1	Ø 11 x 31	400	0,37	173	50	35,5	223	417	560	21	2,73
5	2	Ø 11 x 31	300	0,18	173	56	42	242	630	560	34	5,46
6,3	2	Ø 11 x 31	400	0,18	173	63	48	265	650	560	40	5,46





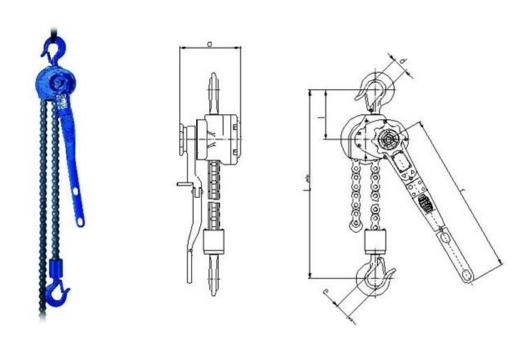
RZV RATCHET HOISTS – NEXP

DESCRIPTION:

The RZV ratchet hoists consist of the body with hook and gear assembly, control lever and load-roller chain with a hook.

The RZV ratchet hoists are widely used in places where loads need to be manipulated in the explosion danger environment. By their design these hoists meet requirements set for the group I (mining), category M2 devices.

- for lifting and dragging of loads
- for tensioning of fences, salvage work, pulling out of supports
- as lifting devices for mine hanging tracks
- for assembly and manipulation work of all kinds
- suitable for use in heavy duty operations mines, chemical industry etc.



Loading	Number of	Control	Lifting							
(t)	load strands	force speed (m/min)		a	d	e (min)	1	L (min)	r	(kg)
0,8	1	400	1,27	145	36	23,5	145	327	560	9,4
1,6	1	370	0,52	165	43	29,5	160	395	560	16,5
3,2	2	370	0,26	165	50	35,5	223	500	560	24
5	3	440	0,22	160	56	39,5	213	555	560	41
6,3	4	430	0,17	160	63	48	260	640	560	46





ROPE HOISTS

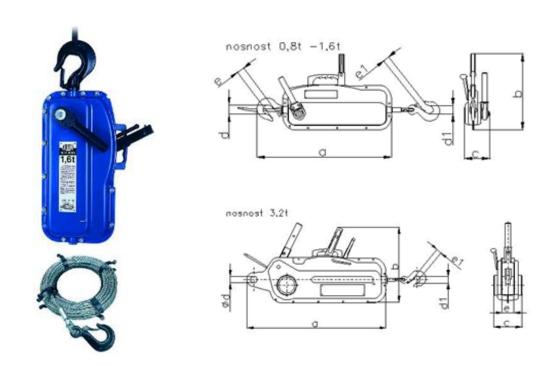
DESCRIPTION:

The rope hoists consist of the body with hook and gear assembly, control lever and a rope with a hook.

They are widely used especially in construction, agriculture, forestry, transport etc., for example:

- for lifting and dragging of loads in all directions
- for salvage work and construction demolitions
- for erecting of posts, installation of electrical lines, tensioning of cableway return trolleys
- for logging
- for installation and manipulation work of all kinds

Ropes are delivered separately, wound on rope reels. The rope length is optional from the 10, 20, 30 and 40m lengths. Longer ropes need to be special ordered.



	Loading (t)	Lifting		Basic dimensions (mm)							
	(1)	speed (m/min)	force (N)	a	b	c	d	d1	e	e1	(kg)
30-10	0,8	2	250	535	260	125	36	32	23,5	23,5	11,5
30-00	1,6	2	450	630	365	155	43	46	32,5	32,5	21,5
30-11	3,2	0,45 0,84	380 (B) 750 (A)	680	345	140	28	64	47	45,5	33,5





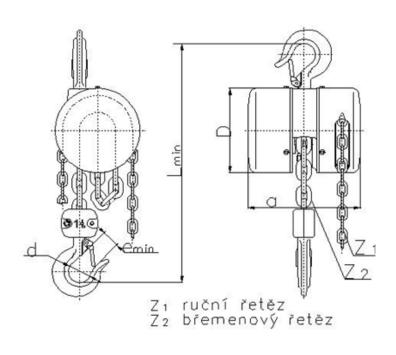
Z100 CHAIN TROLLEYS

DESCRIPTION:

THE Z100 chain trolleys consist of the body with hook, gear box and manual wheel and the load chain with hook.

THE Z100 chain trolleys are used as classical stable manually operated hoists for lifting and lowering of loads

- especially suitable for use in places where hoists are not used extensively
- for occasional work
- in places without a power source
- as the service hoist for assembly and maintenance work in all kinds of technological operations
- they can be used in the explosion danger environment (the NEXP designation)





	Loading	Number	Load	Hand	Control	Lifting		Basi	e dimens	sions (mm	1)	Weight
	(t)	of load strands	chain	chain	force (N)	speed (m/min)	a	d	D	e (min)	L (min)	(kg)
Z 100	0,5	1	Ø 5 x 15	Ø 4 x 20	300	1,10	165	30	115	18,5	250	10
Z 100-1	1	1	Ø 7 x 21	Ø 4 x 20	350	0,70	180	36	136	23,5	330	12,5
Z 100	1,6	1	Ø 9 x 27	Ø 4 x 20	320	0,36	220	43	198	29,5	410	25
Z 100-1	3,2	1	Ø 11 x 31	Ø 4 x 20	400	0,29	254	50	220	35,5	510	36,5
Z 100-2	5	2	Ø 11 x 31	Ø 4 x 20	400	0,145	254	56	220	39,5	655	57
Z 100	7,5	2	Ø 11 x 31	Ø 4 x 20	480	0,15	254	56	220	43	875	70
Z 100	10	3	Ø 11 x 31	Ø 4 x 20	400	0,10	254	63	200	47	1000	85





SHOE RACK JACKS

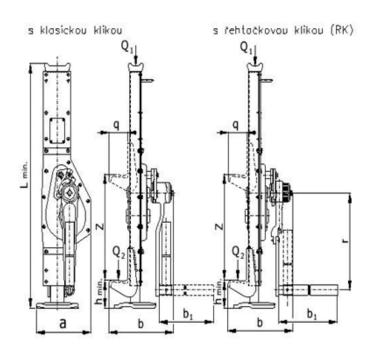
DESCRIPTION:

Shoe rack jacks consist of the casing, rack with a shoe and operating handle with gears.

The shoe rack jacks are widely used especially in construction and mining industries and everywhere, where loads need to be manipulated.

- for lifting and manipulation with all kinds of loads
- for installation work especially in construction
- they can be used in the explosion danger environment (the NEXP designation)





	Load	ling (t)	Control			Basi	c din	nension	s (mm)			Weight
	Q1	Q2	force (N)	a	b	b1	q	h min	L min	r	Z	(kg)
15-00	2,5	1,8	380	162	198	200	61	73	735	250	345	15
15-00 RK	2,3	1,0	360	102	190	200	01	13	755	230	343	16
15-00	7	3,5	550	188	235	200	77	83	765	300	360	22
15-00 RK	3	3,3	330	100	233	200	//	63	703	300	300	23
15-01	10	7	540	234	290	200	95	90	770	300	320	38
15-01 RK	10	/	340	234	290	200	93	90	770	300	320	39
15-01	16	11	730	280	315	280	92	160	900	400	320	65
Z23	20	14	800	325	330	280	85	150	960	400	300	90





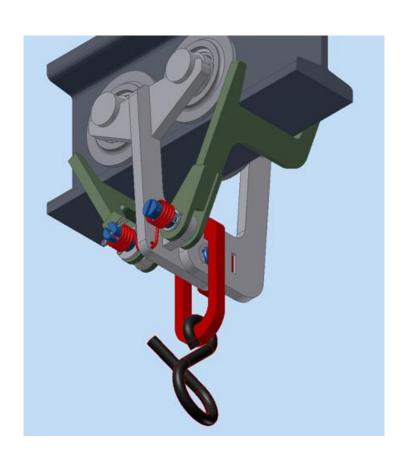
VR 1 HAND CART

DESCRIPTION:

The VR 1 hand cart is used for manual transport of loads of up to 60kg along the ZD 24 hanging track. The cart can be put on at any place on the track. The cart is operated using a strap through a pawl that will block the cart at the nearest track joint if it runs away.

The VR 1 hand cart consists of:

- Two arms with driving wheels
- Two pawls with return springs
- Hanging
- Control strap



Loading	[kg]	60
Max. travel speed on level surface	[mm]	20
Maximum path incline	[0]	30
Basic dimensions	[mm]	150 x 390 x 215
Weight	[kg]	5,5





JKL AND KO UNIVERSAL TACKLES

DESCRIPTION:

The JKL and KO universal tackles are used for manipulation in mines, in construction for lifting of loads and materials using a steel rope. The tackles are designed with fourfold safety limit over the failure strength. These tackles can be used everywhere with fourfold strength of construction over failure limit and the ratio of the tackle diameter to rope one at least D/d=7. Size of the hanging eyelet allows double hanging of the tackle by, for example, high-strength chain.

JKL 231 – The auxiliary front tackle for leading of a steel rope during transport and manipulation of loads, where the tackle load does not exceed 12kN (2x6kN at the wrap angle 180°)

JKL 42/1 – The tackle for leading of a steel rope during transport and manipulation of loads, where the tackle load does not exceed 92kN (2x46kN at the wrap angle 180°). The rope is inserted by lifting off of the safety catch.

KO 2x60kN - The tackle consists of the oval eyelet with shank hinge attached in the tackle body and turning side that is secured by a pin extendable into the body of the tackle. It is used for the maximum tension in the rope of 60kN and the angle of wrap 180°.





		JKL 231	JKL 42/1	KO 2 x 60kN
Max. pulley load	kN	2 x 6	2 x 46	2 x 60
Max. Ø of rope	mm	16	20	20
Pulley diameter	mm	120	128	142
Basic dimensions	mm	160 x 240 x 108	168 x 450 x 124	220 x 158 x 452
Weight	kg	4,3	12	25





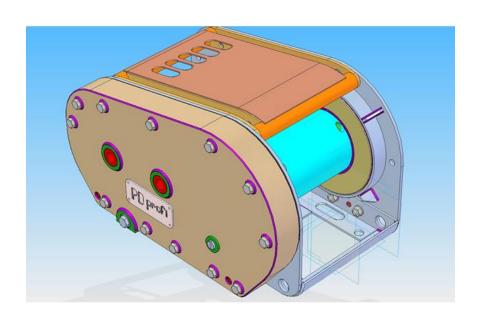
PNEUMATIC TOWING WINCH VVP 10

DESCRIPTION:

The VVP pneumatic towing winch is used for transport and moving of material, machines and their parts in mines along horizontal tracks.

The VVP pneumatic towing winch consists of the following basic parts:

- Winch frame with drum
- Pneumatic gear motor MPZ 3.5
- Control with pneumatic distribution



Max. tension within rope	[kN]	9,6
Rope length of the 8mm diameter rope	[m]	65
Operating pressure	[MPa]	0,4
Nominal motor output	[kW]	3,2
Medium rope speed	$[m.s^{-1}]$	0,36
Air consumption	$[m^3h^{-1}]$	350
Filtration	[µm]	50
Weight	[kg]	75
Inside diameter of the supply hose	[mm]	25





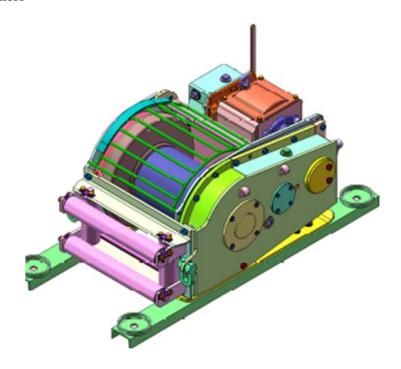
VP 40 PD REMOVAL WINCH

DESCRIPTION:

The VP 40 PD removal winch is a device intended for purposes requiring large traction strength and slow rope speed, for example for removal of supports, steel equipment etc.

The winch consists of these main parts:

- Frame
- Pneumatic gear motor MPZ 15
- Gears with shifting device
- Drum with planetary gears and cover
- Limit rollers



Max. tension within rope	[kN]	58,2
Rope length of the 20mm diameter rope	[m]	125
Operating pressure	[MPa]	0,4
Nominal motor output MPZ 15	[kW]	15
Medium rope speed	$[m.s^{-1}]$	1,52
Air consumption	$[m^3h^{-1}]$	950
Filtration	[µm]	50
Weight	[kg]	1000
Inside diameter of the supply hose	[mm]	ø 50





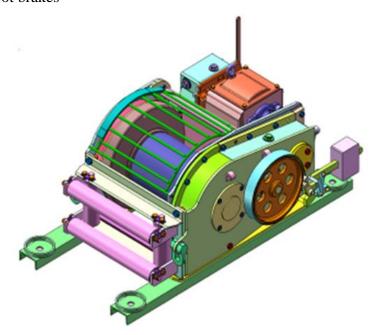
VV 40 PD TOWING WINCH

DESCRIPTION:

The VP 40 PD towing winch is a device intended for purposes requiring large traction strength and slow rope speed, for example for transport of material by skidding along a coalface etc.

The winch consists of these main parts:

- Frame
- Pneumatic gear motor MPZ 15
- Gears with shifting device
- Drum with planetary gears and cover
- Limit rollers
- Band foot brakes



Max. tension within rope	[kN]	58,2
Rope length of the 20mm diameter rope	[m]	125
Operating pressure	[MPa]	0,4
Nominal motor output MPZ 15	[kW]	15
Medium rope speed	$[m.s^{-1}]$	1,52
Air consumption	$[m^3h^{-1}]$	950
Filtration	[µm]	50
Weight	[kg]	1100
Inside diameter of the supply hose	[mm]	ø 50





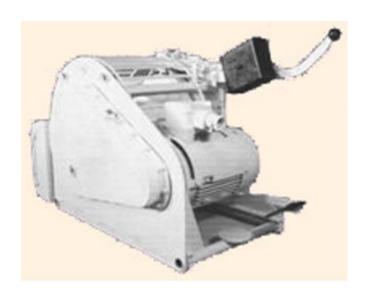
VTA 1000 MINING WINCH

DESCRIPTION:

The VTA 1000 mining winch is a device that is used for transport and moving of material, machinery and its parts in mines along horizontal and inclined transport routes.

The winch consists of these main parts:

- Winch frame
- Pneumatic gear motor (electric motor)
- Band brakes including brake control levers
- Drum with planetary gears and cover
- Limit rollers
- Drum cover



		pneumatic gear motor	Electric motor
Max. tension within rope	[kN]	12,8	10,8
Rope length of the 14mm diameter rope	[m]	310	
Operating pressure	[MPa]	0,4	-
Nominal motor output MPZ 15	[kW]	13	11
Medium rope speed	$[m.s^{-1}]$		1
Air consumption	$[m^3h^{-1}]$	900	-
Filtration	[µm]	50	-
Weight	[kg]	,	769
Inside diameter of the supply hose	[mm]	ø 50	-





MPZ 3.5 PNEUMATIC GEAR MOTOR

DESCRIPTION:

The MPZ 3.5 pneumatic gear motor is used to power machinery, manipulation devices etc., especially in the explosion danger environment (mines, chemical industry etc.)

The MPZ 3.5 pneumatic gear motor consists of two gear rotors placed in a steel body sealed using two steel flanges. The motor can be attached to equipment using a flange or a shoe. The change of motor revolutions is done by a pneumatic valve that is placed outside of the motor.

It is manufactured in the following versions: P1- flanged

P2- flanged and braked



Operating pressure	[MPa]	0,35-0,4
Nominal motor output MPZ 15	[kW]	3,5
RPMs	[min ⁻¹]	3000
Air consumption	$[m^3h^{-1}]$	350
Filtration	[µm]	50
Basic dimensions	[mm]	Ø 180 x 200
Weight	[kg]	20
Inside diameter of the supply hose	[mm]	Ø 25mm



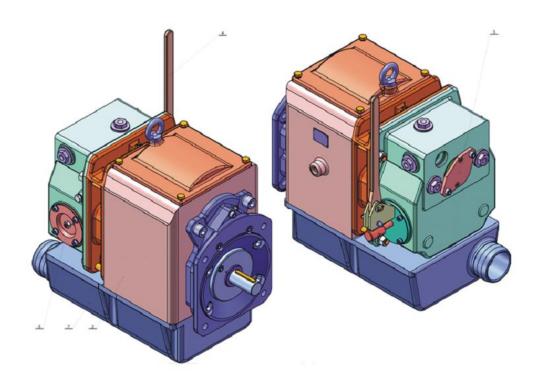


MPZ 15 PNEUMATIC GEAR MOTOR

DESCRIPTION:

The MPZ 15 pneumatic gear motor is used to power machinery, especially winches and drag-link conveyors, especially in the explosion danger environment (mines, chemical industry etc.)

The MPZ 15 pneumatic gear motor consists of two gear rotors placed in a cast-iron stator with flanges, distribution box with integrated lubrication, revolution regulator and air muffler. The motor can be attached to machines using a flange. The change of revolutions is performed manually using a lever on the distribution box.



Operating pressure	[MPa]	0,4
Nominal motor output MPZ 15	[kW]	15
RPMs	[min ⁻¹]	1450
Air consumption	$[m^3h^{-1}]$	950
Filtration	[µm]	50
Basic dimensions	[mm]	407 x 534 x 548
Weight	[kg]	228
Inside diameter of the supply hose	[mm]	ø 50mm



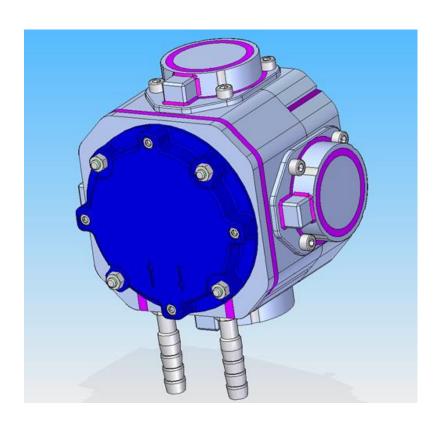


MPP 2 PNEUMATIC PISTON MOTOR

DESCRIPTION:

The MPP 2 pneumatic piston motor is used to power machinery, manipulation devices etc, especially in the explosion danger environment (mines, chemical industry etc.)

The MPP 2 pneumatic piston motor is designed as radial four cylinder engine with slide valve distribution and automatic multi-plate brake.



Operating pressure	[MPa]	0,45-0,6
Nominal motor output MPZ 15	[kW]	2
RPMs	[min ⁻¹]	600
Air consumption	$[m^3h^{-1}]$	37
Filtration	[µm]	50
Basic dimensions	[mm]	ø 250 x 200
Weight	[kg]	20
Inside diameter of the supply hose	[mm]	Ø 15mm



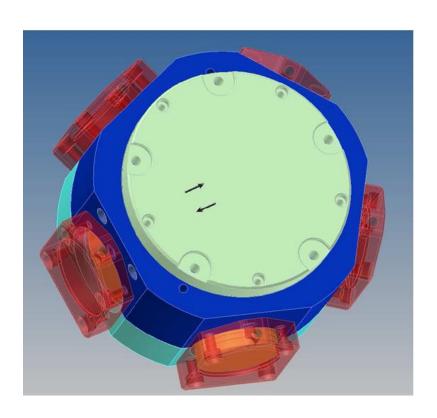


MPP 3 PNEUMATIC PISTON MOTOR

DESCRIPTION:

The MPP 3 pneumatic piston motor is used to power machinery, manipulation devices etc, especially in the explosion danger environment (mines, chemical industry etc.)

The MPP 3 pneumatic piston motor is designed as radial cylinder engine with slide valve distribution and automatic multi-plate brake.





Operating pressure	[MPa]	0,45-0,6
Nominal motor output MPZ 15	[kW]	3
RPMs	[min ⁻¹]	600
Air consumption	$[m^3h^{-1}]$	100
Filtration	[µm]	50
Basic dimensions	[mm]	ø 220 x 200
Weight	[kg]	35
Inside diameter of the supply hose	[mm]	Ø 20 mm



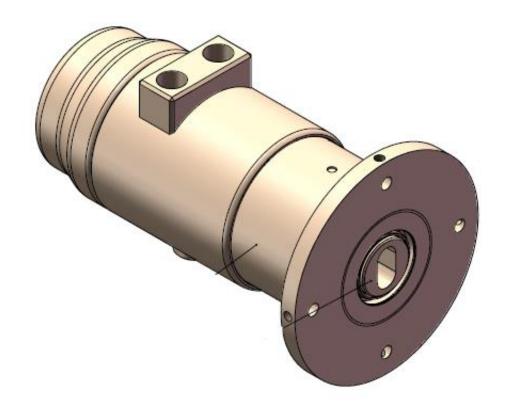


MPL 3 PNEUMATIC MULTI-PLATE MOTOR

DESCRIPTION:

The MPL 3 pneumatic multi-plate motor is used to power machinery, manipulation devices etc., especially in the explosion danger environment (mines, chemical industry, etc.)

The MPL 3 pneumatic multi-plate motor consists of a bidirectional multi-plate motor, two stage planetary transmission, and an automatic multi-plate brake.



Operating pressure	[MPa]	0,4-0,6
Nominal output	[kW]	3±10%
Nominal revs	[min ⁻¹]	600
Air consumption	$[m^3h^{-1}]$	144
Filtration	[µm]	50
Basic dimensions (w x l)	[mm]	ø 108 x 272
Weight	[kg]	13,4
Air supply	[mm]	Ø 20 mm





NPP 1 PNEUMATIC BELT WINDER

DESCRIPTION:

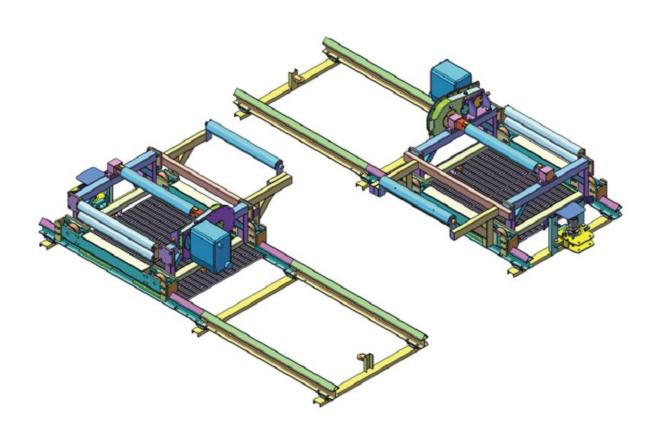
The NPP 1 pneumatic belt winder is a piece of machinery placed behind a belt conveyor. To drive the winding cylinders located in the frame NPP 1 uses a part of VP 40PD removal winch transmission and the pneumatic gear motor MPZ 15. This air motor allows to wind the belt to the winding cylinders by its driving force, and thus take and wind the belt that is left over after shortening of a belt conveyor. During shortening of a belt conveyor the belt is disconnected at the bottom branch above NPP 1. One end of the disconnected belt lining (from drive end) is secured on the main winding cylinder of NPP 1 using two M 16 bolts. The other end secured using shortening stops in front of stationary tensioning device (further called STANAP) that is a part of the conveyor belt. The operator starts NPP 1 and winds the extra belt lining on it. After winding of the extra length of belt onto the main winding cylinder the belt lining is cut and the remaining length is again connected by sewing to the existing one secured at STANAP. At NPP 1 the wound belt lining is rewound from the main winding cylinder to the back-up winding cylinder using the air motor with the gear from the VP 40PD removal winch. Winding to the main cylinder is done the same way during the second shortening of conveyor belt, but the belt from the back-up winding cylinder is connected by sewing to the existing belt in front of STANAP, however, it is not secured there. Both the necessary shortened length and the extra PVC from the back-up winding cylinder are wound to the main winding cylinder. After the shortened belt on the belt conveyor is connected, the extra belt is taken away. NPP 1, whose frame with the cylinders is placed on rails, can, by using MZPP 1.6t/3.2t handling device located on the NPP 1 construction, move this frame from under the belt conveyor to the passage under the hanging rail transport track. After the NPP 1 frame is moved under the transport track, the main winding cylinder that is secured (four M 16 bolts) in the frame is released and loaded on the hanging rail vehicles. A new main winding cylinder is then inserted to the empty frame of NPP 1, then it is secured, and the whole frame that is thus prepared is moved using MZPP 1.6t/3.2t under the conveyor belt construction behind the conveyor drive, and is ready for further use.

The basic NPP 1 parameters are the pulling force of 46.6 kN for belt winding, and 16 kN pulling force to transfer the NPP 1 frame. NPP 1 serves only for winding of belt lining and its transfer under the transport track. The maximum length of wound belt lining cannot exceed 100 m length, 1 400 mm width, and 4 000 kg weight.

NPP 1 is a device that can be operated in the underground parts of mines that are classified with methane explosion danger according to Section 232, Par. 1, Letter b) and coal dust according to Section 233, Par. 1, Letter b) of the CBU Notice No. 22/1989 Coll., as amended, including mines with the danger of rock falls and gas outbursts, and mines with dangerous mining tremors.







Belt winding pulling force	[N]	46 600
Frame transfer pulling force	[N]	16 000
Max. travel speed on level surface	[m.min. ⁻¹]	24
Belt winding installed power	[kW]	15
Frame transfer installed power	[kW]	3
Operational air pressure	[MPa]	0,4
Inside diameter of the supply hose	[mm]	50
Max. belt length	[m]	100
Max. width of belt	[mm]	1 400
Max. weight of belt	[kg]	4 000
Dimensions – h x w x l	[mm]	5681 x 2659 x 1308



