

STANDARDIZED NODES

HEADSTOCK VWI – B

Headstock VWI - B may perform drilling, tapping and milling operations. The combination of the device for face turning and the face turning head makes up a standardized node for face turning and parting off operations.

Description of basic version

The housing body of the headstock consists of grey cast iron. The housing is fitted with openings for pressure air feed into the front and rear labyrinth, openings for pressure gauges controlling setting of overpressure of air in labyrinths and its balancing, openings for measuring of bearings temperature. Alternatively, the housing body of the headstock is designed as a cylindrical tube with a flange.

The spindle is cemented and quenched. The front end of the spindle is used to attach the tool adapter (or a centering mandrel, front turning head etc.) by screws and cylindrical grip. The rear cylinder end of the spindle may be fitted with a feather. The size 50 headstock always lacks the rear end feather. The spindle is sealed on both ends by labyrinths and treated pressurized air (pos. 1). The hollow in the spindle is designed for feeding cutting fluid into the adapter or there may be (at the size 120) a rod for the face turning device. Headstock bearings are lubricated by extended lifetime grease.

Fitting of spindle - versions

1. **VWI***.1* B:**
two pairs of ball bearings with oblique contact
2. **VWI***.2* B:**
two row roller bearings in the front along with two way bearing with oblique contact, a single row rolling bearing in the rear
3. **VWI***.3* B:**
a pair of conical bearings
4. **VWI***.4* B:**
two pairs of hybrid ball bearings (ceramic balls) with oblique contact

Inner flow of cutting fluid

If necessary, there is a nut mounted at the end of the spindle where the rotating medium feed is mounted from the rear. It is connected to the adapter with a pipe. At the headstocks of size 50, the rotating medium feed is screwed directly into the rear end of the spindle.

Working position of the headstock

The headstock may operate in any position, however, the appropriate labyrinths must be attached.

- *The detailed data is not binding with respect to ongoing development; the basic version can be adapted according to customer requirements.*

Technical parameters

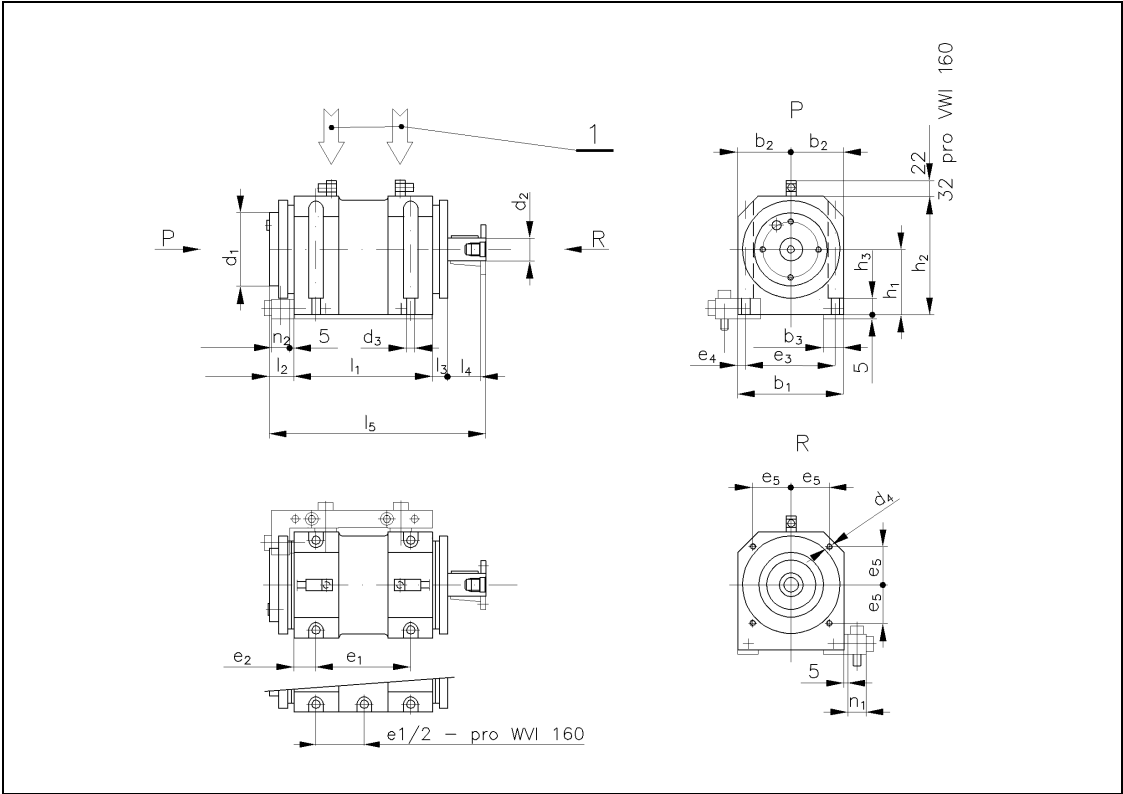
Rated size of headstock	Spindle diameter in front of bearing [mm]	Rated speed [min ⁻¹]	Maximum speed [min ⁻¹]	Maximum torque [Nm]	Weight [kg]	
					case	tube
VWI 50.1*B	50	7000	9000	100	21	20
VWI 50.4*B	50	10800	13500	65	21	20
VWI 70.1*B	70	5000	6600	250	45	42
VWI 70.3*B	70	1000	1200		45	42
VWI 70.4*B	70	8400	10500	160	45	42
VWI 90.1*B	90	3800	5100	500	78	69
VWI 120.1*B	120	2800	3800	1000	155	145
VWI 120.2*B	120	2200	2800	1000	155	145
VWI 160.1*B	160	2250	3000	2500		

Basic connection dimensions

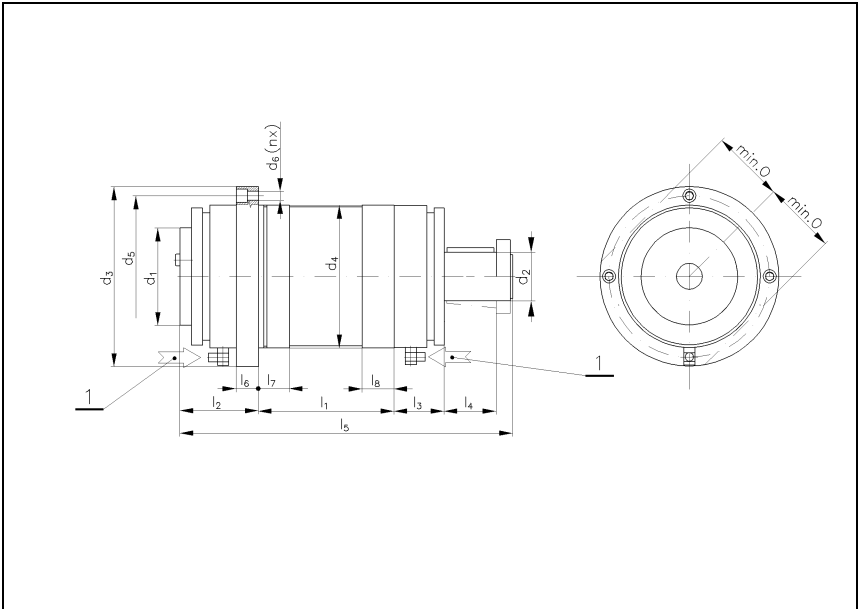
Dimensions [mm]	Version of headstock body									
	Tube					Case				
	VWI 50B	VWI 70B	VWI 90B	VWI 120B	VWI 160 B	VWI 50B	VWI 70B	VWI 90B	VWI 120B	VWI 160 B
b ₁	-	-	-	-	-	130	160	190	240	325
b ₂	-	-	-	-	-	65	80	95	120	162,5
b ₃	-	-	-	-	-	25	30	30	40	62,5
d ₁	90	115	130	170		90	115	130	170	220
d ₂	28	50	65	85		28	50	65	85	110
d ₃	165	210	240	290		10,5	13	13	17	21
d ₄	120	160	190	240		M 8	M 10	M 10	M 16	M 20
d ₅	141	185	215	265		-	-	-	-	-
d ₆	10,5	13	13	13		-	-	-	-	-
e ₁	-	-	-	-	-	116	138	190	240	396
e ₂	-	-	-	-	-	27	48	55	65	58
e ₃	-	-	-	-	-	110	140	170	214	289
e ₄	-	-	-	-	-	10	10	10	13	18
e ₅	-	-	-	-	-	47	60	70	90	120,2
h ₁	-	-	-	-	-	80	100	125	160	180
h ₂	-	-	-	-	-	145	180	220	280	340
h ₃	-	-	-	-	-	20	28	28	32	50
l ₁	85	128	180	250		170	234	290	370	496
l ₂	85	105	105	105		30	38	40	45	58
l ₃	49	60	69	90		19	21	24	30	41
l ₄	46	55	70	100		46	55	70	100	85
l ₅	265	365	445	570		265	365	445	570	708
l ₆	25	30	30	30		-	-	-	-	-
l ₇	20	40	40	40		-	-	-	-	-
l ₈	20	40	40	40		-	-	-	-	-
n	4	4	4	6		-	-	-	-	-
n ₁	-	-	-	-	-	22	28	28	32	46
n ₂	-	-	-	-	-	22	28	28	32	29
o	62	82	97	122		-	-	-	-	-

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Headstock body in the shape of a case



Headstock body in the shape of a tube



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