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Implementation status report on minibuses

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General

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Work package links

	WP1 Alternative fuels & clean vehicles		WP7 Energy-efficient freight logistics
X	WP2 Collective transport & intermodal integration		WP8 Transport telematics
	WP3 Demand management		WP9 Project coordination
	WP4 Influencing travel behaviour		WP10 Project management
	WP5 Safety, security & health		WP11 Research and Technological Development
	WP6 Innovative mobility services		WP12 Impact and process evaluation
		X	WP13 Dissemination, citizens' engagement, training and knowledge transfer

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1. Summary (abstract)

The measure "Improving bus service for disabled" is realized by DPMB, a.s. (Brno Public Transport Company). From September 2009 to June 2010 five special minibuses were delivered and they are operated on special lines for disabled and also on common lines where it is not economical to operate standard buses in the evening and during the weekend, when the special lines are out of service.

2. Introduction to the project

2.1. City of Brno

Brno lies in the central part of Europe, in the Czech Republic and it represents the centre of the South Moravia region. It is situated at the crossroads of ancient trade routes which had connected the North and South European civilizations for centuries.

The city of Brno, with 370,000 inhabitants, is the second largest city in the Czech Republic and the largest in Moravia. It is the major urban centre of the Southern Moravian region, which has 1,132,563 inhabitants.

Brno is situated in a picturesque countryside, surrounded by wooded hills on three sides and opening to the Southern Moravian lowlands on the south of the city. In the north, the city is guarded by the foothills of the Drahany and Bohemian-Moravian ranges. The city itself lies in the basin of Svatka and Svitava rivers, somewhat to the north of their conflux at elevations ranging from 190 to 425 meters (620 to 1395 ft) above sea level and covers an area of 230 km² (143 square miles). From east to west it spans about 22 km (13 miles). The river Svatka cuts a 29 km (17 mile) path through the city and is the main supply for the Kninický Dam Lake, a popular recreation area in the city's northwest corner. The Svitava river flows through the city for about 13 km (8 miles).

2.2. Brno public transport company (DPMB)

Brno public transport company (DPMB) is the dominant public transport operator in the city of Brno and also in the Integrated Public Transport System of the South Moravian Region. It operates 750 vehicles in the city of Brno and surrounding area. From the total number of 750 vehicles 300 are trams, 300 buses and 150 trolley-buses.

DPMB also operates 6 boats at Brno reservoir during the summer season. These boats are very environment-friendly because they are all powered by the electric engines with accumulators.

DPMB together with the Brno City Municipality forms the local consortium in the city of Brno which is a part of CIVITAS-ELAN demonstration project.

2.3. Buses

DPMB operated more than 300 buses on 40 lines in the city of Brno and surrounding areas (Modřice, Šlapanice, Kuřim, Prace etc.). DPMB is operating various types of the buses. The oldest buses are more than 20 years old and they passed complete reconstruction.

3. Project of special bus for disabled

In the city of Brno there are about 50,000 disabled people. Public transport customized for disabled people has been among the neglected topics. Before the CIVITAS-ELAN project DPMB addressed this issue by:

- low-floor buses which are designed for only one or two wheelchair users (or two prams) but it is usual that disabled are travelling in bigger groups, e.g. married couples or small groups for trips. The wheelchair users also often live together in special houses and they often travel together.
- special buses with special lift for wheelchairs (not low-floor) which were very old and had to be put out of service.

Other problems which were addressed within the CIVITAS-ELAN project:

- It is rather expensive to operate standard buses in the off-peak hours on the lines where the demand for transport is low.
- It is not easy to operate standard buses in the city centre due to their manoeuvrability and operation costs.

For these cases, a new special minibus mainly for the disabled and wheelchair users and for operating in the city centre was to be introduced.

The basic requirement for the minibus was that it should be able to transport at least six wheelchairs at the same time.

During the off-peak hours (in the evenings, early morning and during the weekends), the minibus must be able to operate on low-demand lines where standard bus usage would not be effective. It was planned to introduce two lines for the disabled, which meet in one interchange point in the city centre.

On weekends, it was planned to use these minibuses also for trips of groups of the disabled (up to 5 buses, each for at least 6 wheelchair people) out of Brno.

Minibuses should have a special variable interior: space for wheelchairs and folding seats that can be easily changed to standard seats.

Minibuses must be equipped with a modern information system and loading ramp.

In comparison with standard buses, the minibuses should be environmentally friendlier.

4. Tendering

Just after the CIVITAS-ELAN contract was signed, tender requirements for the delivery of the minibuses were prepared by DPMB's technical and investment departments.

The potential provider had to fulfil several basic technical requirements which were prepared on the basis of the ideas mentioned above. The technical requirements were:

- 100% low floor minibus
- capacity at least for 6 wheelchairs (space according to the EU legislation)
- length max 8,5 m
- and other technical details

The tender was prepared according to the Czech law, commenced in November 2008 and was successfully finished on 23 January 2009. The contract was signed with the company Mave, s.r.o. on 12 February 2009. According to the signed contract the first minibus should be delivered until 31 July 2009.

The final price of minibus was close to DPMB's previous expectations.

4.1. Contract for operating of minibuses

In 2009, after a tender for operating public transport services in the city of Brno according to EU rules was prepared. In December 2009 DPMB signed 15-year contract for operating public transport in the City of Brno in the years 2010-2024. This contract includes the operation of special lines for disabled people.

5. Operation of minibus

5.1. Delivery of minibuses

According to ELAN's Description of Work, five special minibuses were delivered to DPMB. The first two minibuses were delivered slightly later than agreed in the signed contract and DPMB had to penalize the manufacturer. The penalty was a successful tool because the rest of the minibuses were delivered in time or even earlier than the date in signed contract.

The dates of the delivery of the minibuses to DPMB:

- Minibus n. 1 (7501) 11 September 2009
- Minibus n. 2 (7502) 9 December 2009
- Minibus n. 3 (7503) 10 February 2010
- Minibus n. 4 (7504) 29 March 2010
- Minibus n. 5 (7505) 16 June 2010

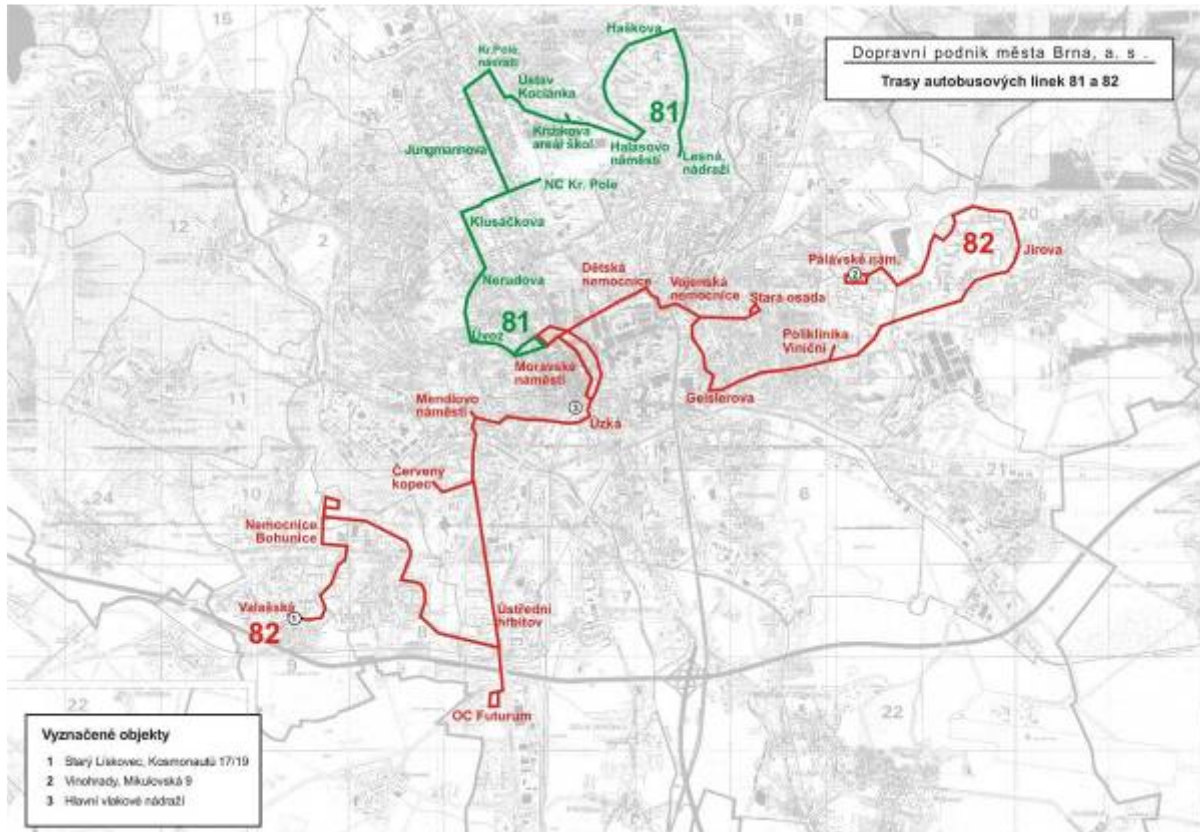
Picture 1, 2: Minibuses – special lines 81 and 82



5.2. Special lines 81 and 82 for wheelchair users

According to the DoW minibuses are operated mainly on two special lines for the disabled.

The operation time of these lines is from Monday to Friday from 5:00 to 20:00 o'clock. These lines operate in the whole city area and connect special houses for handicapped and main public institutions and hospitals in the city of Brno (see picture 3). These lines are meeting at one interchange point in the city centre where three minibuses are waiting every two hours for transfer (two buses on line 82 and one bus on line 81)



Picture 3: route of lines 81 and 82

Despite the route of the lines no. 81 and no. 82 are modified according to the needs of the disabled, these lines can be used by all passengers.

5.3. Other regular lines

When the special lines 81 and 82 are not operating, the minibuses are operating on common lines no. 46, no. 53 and no. 64. On these lines the standard bus usage would not be effective because the demand for travel is low in these areas. It is at the working days early morning (from 04:00 to 05:00), evening (from 20:00 to 23:00) and during weekends.

A very good example of effective use of the minibuses is line no. 53 which is operating from the tram terminal at Židenice to the university college at Palackého vrch. This line is mainly used by students, because at weekends students are usually at home. On Saturdays (all the day) and on Sundays (from 05:00 to 14:00), when the demand for travel is very low, the minibus has enough capacity for operating this line. But on Sundays in the afternoon (from 14:00 to 23:00) the demand for travel is growing because students are coming back to college. Then DPMB has to operate articulated buses at the same line.

5.4. Special trips for the disabled

According to the DoW, DPMB also offers minibuses for special trips for disabled people. These trips mainly take place during the weekend.

There is already one regular trip for the disabled two times a month on Saturdays from houses for disabled to the shopping centre Olympia near Brno and back.

There were also some more trips out of the city of Brno.

These trips are offered during the CIVITAS-ELAN project for a special reduced rate per km.

6. Experiences

The feedback from wheelchair users and common passengers is positive.

Mainly compared to the standard bus equipped with lift, travelling in the minibuses is safer and more comfortable for the disabled.

The problems which occurred during the operation of the minibuses are only of technical nature. The problems are with clutch, brakes and gearbox.

Because DPMB is not able to fix these problems itself, the minibuses are repaired under guarantee by the manufacturer and authorized service personnel of Fiat. Unfortunately sometimes repair works take longer than expected. Due to this reason all five minibuses cannot be in operation at the same time. At least one minibus prepared as a reserve.

According to the comparison of the operation costs of minibuses and the standard buses the operational costs of the minibuses are much lower than for standard buses.

7. Results and observations

Generally speaking the project is successful. All five minibuses are in operation according to the DoW. During the project it was observed that the system fulfilled the expectations. No substantial problems or defaults were occurred during measure implementation.

8. Evaluation

8.1. Data collection

For the evaluation of the measure it was planned to collect data about the number of passengers on lines no. 81 and no. 82 before the start of the measure and during the implementation of the measure. Because the lines are not only used by disabled people, data on number of wheelchair users and passengers was collected.

Also, a comparison of the minibuses and standard buses is necessary. Therefore, technical data such as fuel consumption, emission and operational costs was collected, too.

8.2. Results

DPMB compared the number of the wheelchair users on special lines no. 81 and no. 82 during the implementation of the measure (i.e. the number of wheelchairs in minibuses) with the number of the wheelchairs before the measure implementation (i.e. in modified standard buses), the number of disabled passengers stays nearly the same. But it is a success because the number of other low floor vehicles is increasing and thus disabled persons have more possibilities to travel and they do not depend only on special lines.

At the meetings with disabled people which took place in February 2011, disabled people said that they were very happy with the current status of the operation at lines no. 81 and no. 82 and suggested only small changes in timetable and position of stops. These changes according to the remarks from the meetings have already been implemented.

DPMB also compared the operational costs of the minibuses with the standard buses. It was evaluated that the operational cost of minibuses are much lower than for the standard buses. Mainly

fuel consumption (and fuel costs) is more than twice lower and so it's for DPMB beneficial to operate minibuses on some routes.

9. Dissemination

The project was presented in September 2009 and 2010 during the European Mobility Week at the CIVITAS-ELAN Information Point in the centre of Brno.

In September 2009, when the first minibus was delivered, there was an introduction to users:

- On 2 September 2009, shortly before the official delivery, the minibus was unofficially introduced to several wheelchair users at the business centre in Brno – Vaňkovka.
- On 16 September 2009 the minibus was introduced at Brno's two biggest residencies for wheelchair users.
- The minibus was first successfully used to transport wheelchair users during the visit of the pope to Brno on 27 September 2009.

During these first introductions comments from passengers were collected and used for the adjustment of the next minibuses which were manufactured later.

On 23 February 2010 there was a presentation about the measure and the project to the "Scientist-technical club" in Brno. This club is open to all people who are interested in technical issues in public transport.

In February 2010 there was also a meeting with the "Transport club" in their centre in Brno. Members of this club are children and young people who are interested in public transport.

The DPMB website (www.dpmb.cz) features actual information about the realisation of the measure.

Together with the Transport Faculty in Pardubice, DPMB and the Brno City Municipality prepared a lecture on CIVITAS-ELAN and its measures in Brno for students from the Faculty of Transport. This lecture took place in May 2010 in Pardubice.

In 2010 there were some exhibitions where the minibuses were presented, e.g. at a special fair trade for disabled in Prague in April 2010, at a fair trade in Brno in May 2010, at the Autotec exhibition of cars, buses and trucks in Brno in June 2010, at the Flora Fair trade in Olomouc in July 2010, at a fair trade on the safety in transport in Brno in September 2010, at the exhibition "Non-Handicap" in October 2010 and at the public transport company in Mladá Boleslav on 10 September 2010.

On 18 February 2011 two meetings took place between DPMB and disabled citizens in centres for disabled people. DPMB and representatives of the disabled discussed the experience with the new minibuses which have been introduced as part of the CIVITAS-ELAN project at the special lines for the handicapped, as well as other topics related to making travelling as easy and safe as possible for wheelchair-bound disabled people. The discussion was fruitful for both sides.

Information and opinions were exchanged and as a result DPMB will implement certain small-scale changes to the operation of special lines (mostly stops and route changes).



Picture 4, 5: Official introducing of the minibuses to disabled people on 16 September 2009



Picture 6: Meeting with disabled people on 18 February 2011



Picture 7: Meeting at Scientist-technical club



CIBUS ENA MAXI MV 54A

technické údaje

nízkopodlažní městský minibus umožňující přepravu zdravotně hendikepovaných	
délka vozu celková	8 625 mm
šířka skříně vozu	2 190 mm
výška skříně vozu	2 620 mm
výška podlahy vozu	340 mm
přední převis	948 mm
rozvor náprav	5 200 mm
počet náprav	2
zadní převis	2 477 mm
počet dveří	2
místa - sezení/stání/celkem	13/7/20 + řidič
počet přepravovaných vozíčků	6 a doprovod
hmotnost prázdného vozu	4 000 kg
hmotnost obsazeného vozu	5 400 kg
převodovka - typ	automatická ZF
počet stupňů	6 + 1
motor	IVECO F1CE0481D (EURO 4)
výkon/otáčky	115,5 kW/3500 ot/min
max. rychlost	90 km/h

popis vozidla

Dvojnápravový nízkopodlažní minibus CIBUS MAXI MV 54A byl vyroben firmou MAVE, spol. s r. o. na konceptu doškových vozidel a minibusů od firmy FIAT typu řady DUCATO. Minibus je poháněn vertikálním napětím uloženým vnějším přeplňovaným řadovým čyřválcem IVECO s mazchladěčem stlačeného vzduchu a s vysokotlakým vstřikovacím systémem Common Rail. Motor, umístěný v přední části vozidla, splňuje emisní limity EURO 4. Minibus je vybaven automatickou převodovkou ZF. Převodovka s motorem tvoří jeden montážní celek. Poháněna je přední náprava s nezávisle zavěšenými koly systémem McPherson. Odpružení vozu je na přední nápravě pomocí vinutých per a dvojitých tlumičů. Zadní náprava je odpružená pneumatikami pomocí pneumatikých vaků doplněných teleskopickými tlumiči. Minibus je pro zjednodušení nástupu a výstupu vybaven systémem pro snížení výšky podlahy v jeho zadní části. Brzdění vozidla zabezpečuje provozní dvouokružová hydraulická brzda s podtlakovým posilovačem brzděného účinku a parkovací ruční pneumatiká sřadačová brzda působící na zadní nápravu. Vozidlo je vybaveno systémem ABS/ASR. Karosérie je samonosená konstrukce. Přední část karoserie je z minibusu FIAT DUCATO, k níž je přivázeno svařovaná konstrukce skeletu skříně pokrytá lepenými plechy. Okna jsou do konstrukce rovněž připevněna lepením. Nástupní výška podlahy je 340 mm. Dveře dvoukřídlé vně výklopné dveře mají elektrické ovládání z místa řidiče. K usnadnění výstupu a nástupu cestujících na invalidním vozíku nebo cestujících s kočárkem je vozidlo v prostoru obou dveří vybaveno ručně ovládanou sklápěcí plošinou. Protože vozidlo je určeno variabilně pro přepravu cestujících na invalidních vozících (maximální obsaditelnost je šest invalidních vozíků), tak i k přepravě cestujících na málo frekventovaných linkách, je minibus vybaven sklápnými sedadly. Stanoviště řidiče odlišuje od prostoru pro cestující částečně přepážka. Sedadlo řidiče je pneumatikami odpružená a seřizitelná výškově i podélně. Kabina řidiče je vybavena klimatizací poháněnou od motoru. Prostor pro cestující lze větrat posuvnými horními částmi bočních oken, dvěma střešními okny a také nasazeným ventilátorem na střeše vozidla. Pro vytápění se využívá odpadní teplo z motoru pomocí dvou topných teplovodutných agregátů u dveří a konektory pod sedadly na bočích vozidla. V případě, že motor není schopen dostatečně ohřát chladicí kapalinu, je minibus vybaven přídavným nezávislým naftovým toplovodním topením o výkonu 9 kW s možností přehřívání chladicí kapaliny před startováním motoru. Vůz je vybaven řídicím a informačním systémem RIS, jehož součástí jsou informační tabulka, palubní počítač firmy BUSE, akustická ústředna pro informace cestujícím EPIS, tónická radiostanice MOTOROLA, obrová radiostanice a označovače jízdníků MIKROELEKTRONIKA. Vzhledem ke skutečnosti, že palubní síť minibusu má napětí 12V DC, musí být ke zvýšení napětí na 24 V DC použít statický měnič k napájení informačního systému.



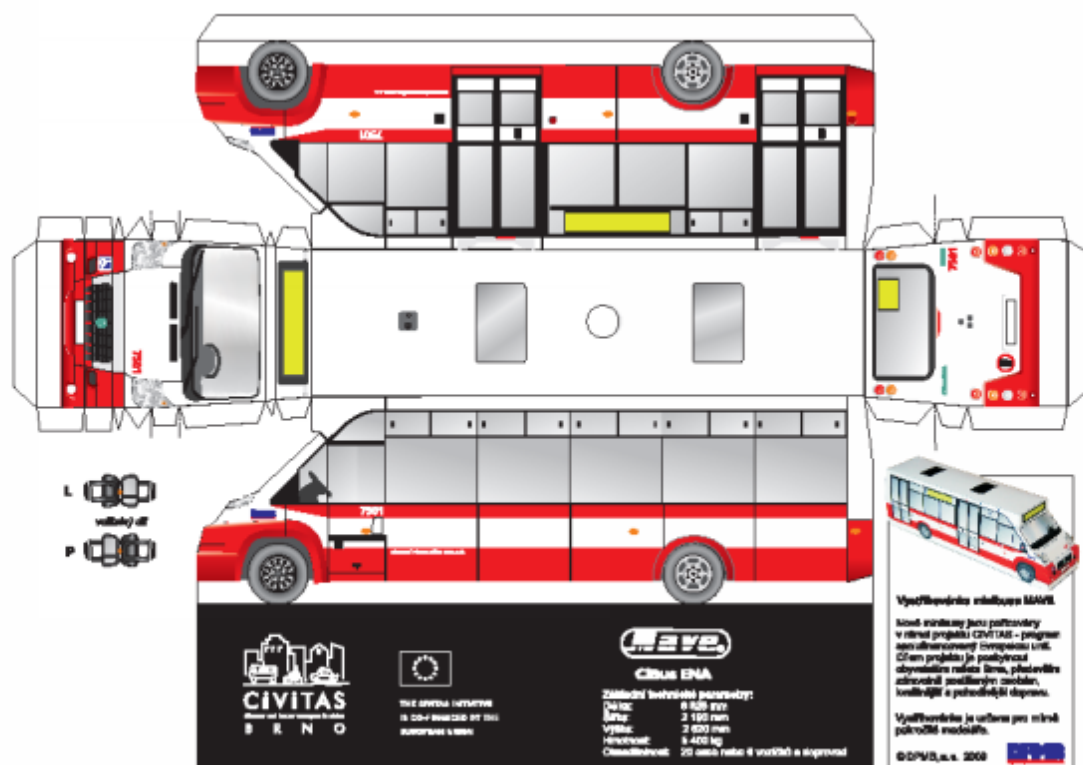
Picture 8: Description with technical data of the minibus



Picture 9: Meeting with the transport club



Picture 10: Meeting with the transport club





Picture 11: Cut-out of minibus (available also on the website: <http://www.dpmb.cz/dn.asp?id=536>)

10. Next steps

Because the measure is considered a success, DPMB will continue operating the minibuses on special lines no. 81 and no. 82 and also on other lines. The offer of special trips for disabled will also continue until the end of the CIVITAS-ELAN project.

The results of the measure will be presented at the next meeting of all Czech public transport companies which will take place in the second half of 2011.


11. Annex 1: Timetable of line Nr. 81

81		MORAVSKÉ NÁMĚSTÍ - LESNÁ, nádraží a zpět					
		<small>Dopravní podnik města Brna, s. r. o. Řádky 121, 056 a 058</small>					
<small>Tarifní zóna</small>							
PRACOVNÍ DNY (☆) - nejede 31.12.							
Moravské náměstí	100	7:00	9:00	11:00	13:00	15:00	17:00
Úvoz	100	7:03	9:03	11:03	13:03	15:03	17:03
Nenudova	100	7:07	9:07	11:07	13:07	15:07	17:07
Klusačkova	100	7:09	9:09	11:09	13:09	15:09	17:09
NC Královo Pole	100	7:15	9:15	11:15	13:15	15:15	17:15
Jungmannova	100	7:19	9:19	11:19	13:19	15:19	17:19
Semilsko	101	7:21	9:21	11:21	13:21	15:21	17:21
Královo Pole, nádraží	101	7:22	9:22	11:22	13:22	15:22	17:22
Ústev Kociánka	101	7:24	9:24	11:24	13:24	15:24	17:24
Křížkova - areál škol	101	7:26	9:26	11:26	13:26	15:26	17:26
Halesovo náměstí	101	7:28	9:28	11:28	13:28	15:28	17:28
Slavičkova	101	7:29	9:29	11:29	13:29	15:29	17:29
Filova	101	7:30	9:30	11:30	13:30	15:30	17:30
Haškova	101	7:32	9:32	11:32	13:32	15:32	17:32
Heleny Malířové	101	7:35	9:35	11:35	13:35	15:35	17:35
Lesná, nádraží	101	7:36	9:36	11:36	13:36	15:36	17:36
PRACOVNÍ DNY (☆) - nejede 31.12.							
Lesná, nádraží	101	6:19	8:19	10:19	12:19	14:19	16:19
Heleny Malířové	101	6:20	8:20	10:20	12:20	14:20	16:20
Haškova	101	6:23	8:23	10:23	12:23	14:23	16:23
Filova	101	6:25	8:25	10:25	12:25	14:25	16:25
Slavičkova	101	6:26	8:26	10:26	12:26	14:26	16:26
Halesovo náměstí	101	6:27	8:27	10:27	12:27	14:27	16:27
Křížkova - areál škol	101	6:29	8:29	10:29	12:29	14:29	16:29
Ústev Kociánka	101	6:31	8:31	10:31	12:31	14:31	16:31
Královo Pole, nádraží	101	6:33	8:33	10:33	12:33	14:33	16:33
Semilsko	101	6:34	8:34	10:34	12:34	14:34	16:34
Jungmannova	100	6:36	8:36	10:36	12:36	14:36	16:36
NC Královo Pole	100	6:40	8:40	10:40	12:40	14:40	16:40
Klusačkova	100	6:46	8:46	10:46	12:46	14:46	16:46
Nenudova	100	6:48	8:48	10:48	12:48	14:48	16:48
Úvoz	100	6:51	8:51	10:51	12:51	14:51	16:51
Moravské náměstí	100	6:55	8:55	10:55	12:55	14:55	16:55

Linky 81 a 82 jsou přístupné všem cestujícím, přednost však mají držitelé průkazů ZTP a ZTP-P. Invalidé mohou nastupovat a vystupovat i na zastávkách jiných linek IDS, které leží na trase linek 81 a 82, a to pouze na znamení.

Plati od: 12.12.2010

12. Annex 2: Timetable of line Nr. 82

82		MĚSTSKÁ AUTOBUSOVÁ DOPRAVA V BRNĚ - linka 738082 /Stary Liskovec, Valašská - Vínohrady, Ezenecská/ a zpět						
Dopravní podnik města Brna, a.s. Hřbitv 151,055 46 Brno								
Výhled z JŘ	Tarifní zóna	PRACOVNÍ DNY (x) - nejede 31.12.						
Valašská	101	6:14	8:09	10:09	12:09	14:09	16:09	18:09
Nemocnice Bohunice	101	6:18	8:13	10:13	12:13	14:13	16:13	18:13
Univerzitní kampus - sever	101	6:20	8:15	10:15	12:15	14:15	16:15	18:15
Kejbly	101	6:22	8:17	10:17	12:17	14:17	16:17	18:17
Ukrájská	101	6:23	8:18	10:18	12:18	14:18	16:18	18:18
Gruzínská	101	6:24	8:19	10:19	12:19	14:19	16:19	18:19
Třetřova	101	6:26	8:21	10:21	12:21	14:21	16:21	18:21
OC Futurum	101	/	8:24	10:24	12:24	14:24	16:24	18:24
Ustřední hřbitov	101	6:29	8:29	10:29	12:29	14:29	16:29	18:29
Hluboka	100	6:31	8:31	10:31	12:31	14:31	16:31	18:31
Celní	100	6:32	8:32	10:32	12:32	14:32	16:32	18:32
Cenový kopec	100	6:35	8:35	10:35	12:35	14:35	16:35	18:35
Nemocnice Mikosrdných bratří	100	6:38	8:38	10:38	12:38	14:38	16:38	18:38
Mendlovo náměstí	100	6:43	8:43	10:43	12:43	14:43	16:43	18:43
Hřibesova	100	6:46	8:46	10:46	12:46	14:46	16:46	18:46
Uzka	100	6:48	8:48	10:48	12:48	14:48	16:48	18:48
Hlavní nádraží	100	6:52	8:52	10:52	12:52	14:52	16:52	18:52
Komenského náměstí	100	6:55	8:55	10:55	12:55	14:55	16:55	18:55
Diátská nemocnice	100	7:00	9:00	11:00	13:00	15:00	17:00	19:00
Vojenská nemocnice	100	7:05	9:05	11:05	13:05	15:05	17:05	19:05
Stará osada	100	7:09	9:09	11:09	13:09	15:09	17:09	19:09
Gešlerova	100	7:11	9:11	11:11	13:11	15:11	17:11	19:11
Poliklinika Zidenice	100	7:16	9:16	11:16	13:16	15:16	17:16	19:16
Malá Kladovka	101	7:20	9:20	11:20	13:20	15:20	17:20	19:20
Novolíšeňská	101	7:22	9:22	11:22	13:22	15:22	17:22	19:22
Novolíšeňská	101	7:24	9:24	11:24	13:24	15:24	17:24	19:24
Rotreškova	101	7:27	9:27	11:27	13:27	15:27	17:27	19:27
Jirava	101	7:28	9:28	11:28	13:28	15:28	17:28	19:28
Velká Kladovka	101	7:31	9:31	11:31	13:31	15:31	17:31	19:31
Horníkova	101	7:32	9:32	11:32	13:32	15:32	17:32	19:32
Ezenecská	101	7:36	9:36	11:36	13:36	15:36	17:36	19:36
PRACOVNÍ DNY (x) - nejede 31.12.								
Ezenecská	101	6:23	8:19	10:19	12:19	14:19	16:19	18:19
Horníkova	101	6:27	8:23	10:23	12:23	14:23	16:23	18:23
Velká Kladovka	101	6:29	8:25	10:25	12:25	14:25	16:25	18:25
Jirava	101	6:31	8:27	10:27	12:27	14:27	16:27	18:27
Rotreškova	101	6:32	8:28	10:28	12:28	14:28	16:28	18:28
Novolíšeňská	101	6:34	8:30	10:30	12:30	14:30	16:30	18:30
Malá Kladovka	101	6:36	8:32	10:32	12:32	14:32	16:32	18:32
Poliklinika Zidenice	100	/	8:34	10:34	12:34	14:34	16:34	18:34
Gešlerova	100	6:41	8:38	10:38	12:38	14:38	16:38	18:38
Stará osada	100	/	8:43	10:43	12:43	14:43	16:43	18:43
Vojenská nemocnice	100	6:45	8:45	10:45	12:45	14:45	16:45	18:45
Diátská nemocnice	100	6:50	8:50	10:50	12:50	14:50	16:50	18:50
Komenského náměstí	100	6:55	8:55	10:55	12:55	14:55	16:55	18:55
Hlavní nádraží	100	7:00	9:00	11:00	13:00	15:00	17:00	19:00
Uzka	100	7:05	9:05	11:05	13:05	15:05	17:05	19:05
Hřibesova	100	5:36	7:07	9:07	11:07	13:07	15:07	17:07
Mendlovo náměstí	100	5:39	7:10	9:10	11:10	13:10	15:10	17:10
Nemocnice Mikosrdných bratří	100	5:44	7:15	9:15	11:15	13:15	15:15	17:15
Cenový kopec	100	5:47	7:18	9:18	11:18	13:18	15:18	17:18
Celní	100	5:50	7:21	9:21	11:21	13:21	15:21	17:21
Hluboka	100	5:53	7:24	9:24	11:24	13:24	15:24	17:24
Ustřední hřbitov	101	5:54	7:25	9:25	11:25	13:25	15:25	17:25
OC Futurum	101	5:56	7:27	9:27	11:27	13:27	15:27	17:27
Třetřova	101	/	9:30	11:30	13:30	15:30	17:30	19:30
Gruzínská	101	5:57	7:28	9:34	11:34	13:34	15:34	17:34
Ukrájská	101	5:59	7:30	9:36	11:36	13:36	15:36	17:36
Kejbly	101	6:00	7:31	9:37	11:37	13:37	15:37	17:37
Univerzitní kampus - sever	101	6:02	7:33	9:39	11:39	13:39	15:39	17:39
Nemocnice Bohunice	101	/	7:35	9:41	11:41	13:41	15:41	17:41
Valašská	101	6:04	7:37	9:43	11:43	13:43	15:43	17:43
Valašská	101	6:09	7:42	9:48	11:48	13:48	15:48	17:48

Plati od 1.5.2010