

Standard & Option

Details		35D/40D/45D 50Dn-9VB
OHG & Cabin	Overhead Guard - Standard (2,221)	●
	Overhead Guard - High (2,365)	○
	Overhead Guard - Standard & with Rain Cover	○
	Overhead Guard - High & with Rain Cover	○
	Cabin Options (One Door, Two Door)	○
	Partial Cabin (Front Glass with Wiper, Rear Glass & Top Rain Cover)	○
	A/C	○
	A/C & Heater, Heater only	○
	Non-susp., OPSS, Orange Belt, S/S, B/S, PVC, Interlock Option Available	●
	Grammer, OPSS, Orange Belt, S/S, PVC	○
Seat	Grammer, OPSS, Orange Belt, S/S, B/S, Arm Rest, PVC, Interlock Option Available	○
	Grammer, OPSS, Orange Belt, S/S, Arm Rest, PVC	○
	Grammer, OPSS, Orange Belt, S/S, B/S, Arm Rest(LH), PVC, Interlock Option Available	○
	Grammer, OPSS, Orange Belt, S/S, Arm Rest, PVC, Interlock Option Available	○
	Grammer, OPSS, Orange Belt, S/S, B/S, Arm Rest, Fabric, Interlock Option Available	○
	Grammer, OPSS, Orange Belt, S/S, B/S, Arm Rest(LH), Fabric, Interlock Option Available	○
	Lever	●
	Lever - General	●
	Other Options	○
	Rear Horn	○
MAST	Extinguisher	○
	2 Stage Mast - Standard (V)	●
	2 Stage Mast - Single Full Free (VF)	○
	3 Stage Mast - Single Full Free (TF)	○
	3 Stage Mast - Dual Full Free (TS)	○
	Length : 48"(1,220mm)	●
	Length : 42"(1,070mm), 54"(1,370mm), 60"(1,520mm), 66"(1,670mm), 72"(1,820mm), 77"(1,970mm), 83"(2,120mm),	○
	Type	●
	Hook	●
	Integral Shaft	○
Carriage	Narrow (For Single Tire)	●
	Special (For Single Tire)	○
	Wide (For Double Tire)	○
	Side Shift	○
Attachment	Side Shift with Fork Positioner (Synchronized or Independent)	○

● STD / ○ OPT

35D/40D/45D 50Dn-9VB

Internal Combustion Diesel Engine Forklift Truck



9VB series satisfies our customers' demands through adaptation of HDI & HDX power train (Diesel engine for industrial vehicles, enhanced durability of transmission and drive axle) and enhanced driving comfort.

**PRODUCT FEATURES
OVERVIEW**

UP
VALUE

As times change, the standard
for high performance should
also change

■ Applied new power train

13%
▲

50Dn-9VB, 13% Improved top
travel speed

■ Increased wheel base

8%
▲

50Dn-9VB, 400kg 8% Improved
tipping load & safety factor

Enhanced safety

- Human error prevention - auto-parking brake system
- HAC (Hill Start Assist Control)
- OPSS - travel, lift, and tilt lock
- Forced seat belt wearing - seat belt interlock **Option**
- Engine start limit - password function

Outstanding operability ergonomics

- New digital-type cluster with MCU function
- Ergonomic pedal
 - Hanging-type brake and inching pedal
- Improved steering quality
 - Reduced operating force & jamming reduced during reverse rotation
- New air conditioner with enhanced air flow **Option**
- New heater with defrost function **Option**

Eco-friendly engine

- Stage 3A regulation satisfaction, powerful performance
 - HDI DN03 engine

**Innovative cost-effectiveness
and reliable durability**

- HDX with improved capacity for heavy duty and durability
 - Increased clutch capacity by 36%, oil volume by 70%
- HDX D/A with increased strength of the bevel gear set and differential gear set
- Selection of engine working mode
 - 'STD / PWR'
- Increased wheel base
 - Improve travel & work efficiency

**ECO-FRIENDLY
ECONOMICAL**



Easy service

- Tool-less type Floor plate & Side cover
- Additional features of the cluster with MCU
 - Engine failure diagnosis and history check
 - Management of consumable replacement cycle
- Remote management system - Hi-MATE **Option**
- Muffler management without weight disintegration
- Waterproof and dustproof fuse & relay box
- Horizontal placed MCV with an embedded emergency lowering screw

35D/40D/45D 50Dn-9VB

Powerful & efficient HG Engine

HDI DN03 engine is the optimal engine that requires high torque in low rpm, and one that satisfies EU stage 3A emission regulation.

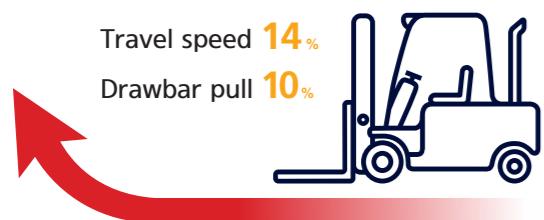
- * Use of BOSCH Fuel system: common rail & ECU, high pressure(1,800bar) injection
- * Use of timing chain : Superb durability
- * Easy maintenance : Apply fan belt auto-tensioner
- * **Rated power (ps/rpm) : 95.0 / 2,300**
- * **Max torque (kg-m/rpm) : 35.7 / 1,600**



Driving Performance

Maximum travel speed and drawbar pull are increased by 14% and 10%, respectively, by resetting rpm in the high-speed region of the engine and applying the gear of new transmission and drive axle of HDX.

Driving Performance(50Dn-9VB)



Increased wheel base - 4.5/5.0t

Wheel base of heavy-duty specifications (4.5/5.0 tons) is expanded by 100 mm to improve travel and work safety; the service life of the steering tire is extended, and the reliability of the steering system is improved. In addition, the capacity of the hydraulic oil tank is increased to reduce the effects of heat on the hydraulic system.



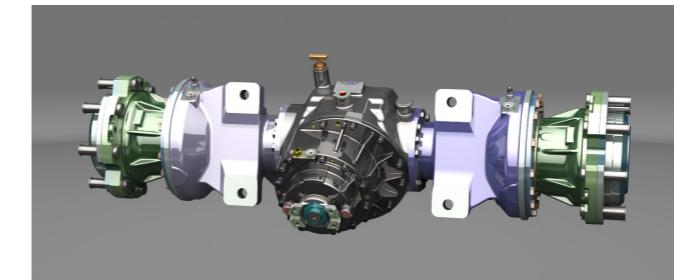
New HDX Transmission

Power transfer capability of clutch pack and transmission oil volume are increased by 25% and 4 liters, respectively, by taking into account the continuous work environments of 2 shifts/day or more; the reverse gear, which is not frequently used, is configured in a single step to enhance durability and practicality. As a transmission controller, DCSR prevents failure of internal gear train caused by impact when changing the traveling direction between forwarding and reversing without halting vehicle operation.



New HDX Drive axle

Planetary reducing gear, final reduction system optimal for applications of significant torque variation applied; oil sump capacity designed to be larger for the rapid absorption and emission of braking heat. Maintenance-free auto parking system is configured on the front of the differential assembly.



ENVIRONMENT FRIENDLY
GREAT PRODUCTIVITY, DURABILITY

UP
PERFORMANCE

Eco-friendly engine and powertrain with significantly increased performance and durability!

Experience newly changed performance.

Engine performance Up/Down

Drivers can select engine power according to their work environment conveniently with the STD/PWR button located on the dashboard. Moreover, they can save over 5.5% more in fuel cost when selecting STD mode than when selecting PWR mode.



35D/40D/45D 50Dn-9VB

Password setting – Startup restriction

A function of password input on the cluster applies for preventing safety accident or damage that may take place on the equipment when any unauthorized operator or administrator operates the equipment. (Up to ten passwords are allowed.)



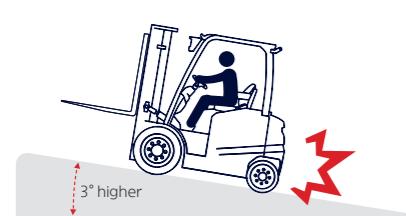
Auto-parking brake

When the engine stops or OPSS starts, the parking brake is automatically activated to prevent human errors. If the driver needs to use the parking brake while the engine is running, driver can apply/release the brake using a dedicated button.



Hill start assist control

When the forklift stops while climbing a sloped road, the automatic parking brake is temporarily applied to prevent the forklift from rolling back when moving again. This safety feature is very useful when transporting heavy cargo on a sloped road.



Seat belt interlock – forced belt wearing Option

The seat belt interlock system, which restricts forklift operation when the seat belt-wearing order is not observed or the operator releases the belt while driving, prevents operator injury from safety accidents that may occur when the seat belt is not fastened.



ENHANCED SAFETY

UP SAFETY

Safety at the logistics site is most important, safety is supported by complete reliability

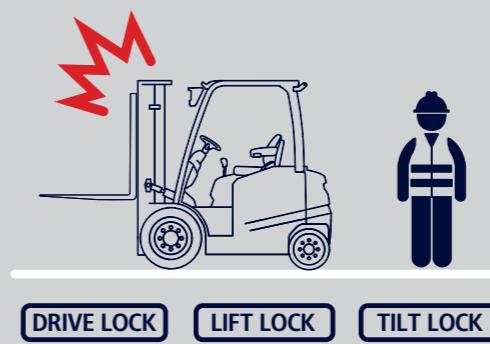
Speed limit

The maximum driving speed can be set to prevent accidents caused by exceeding the speed limit. Even though the maximum driving speed is set, hill-climbing ability and mast working performance are maintained at the highest level.



Operator presence sensing system

The OPSS restricts driving, lifting, and tilting in when the operator leaves the driver's seat in order to prevent safety accidents.



Overload operation warning – Load sensing system Option

Cargo weight measurement function configured with pressure sensor of lift line and cluster program provides real-time indication of weight of lifted cargo and prompts a warning on the cluster in case of overloading to remind the operator of safety.



35D/40D/45D 50Dn-9VB

Cabin Option

With wide field of vision and easy-to-open/shut cabin doors, D-9VB's cabin provides a pleasant driving environment. Furthermore, its modularized design reduces post management costs.



Air con / Heater Option

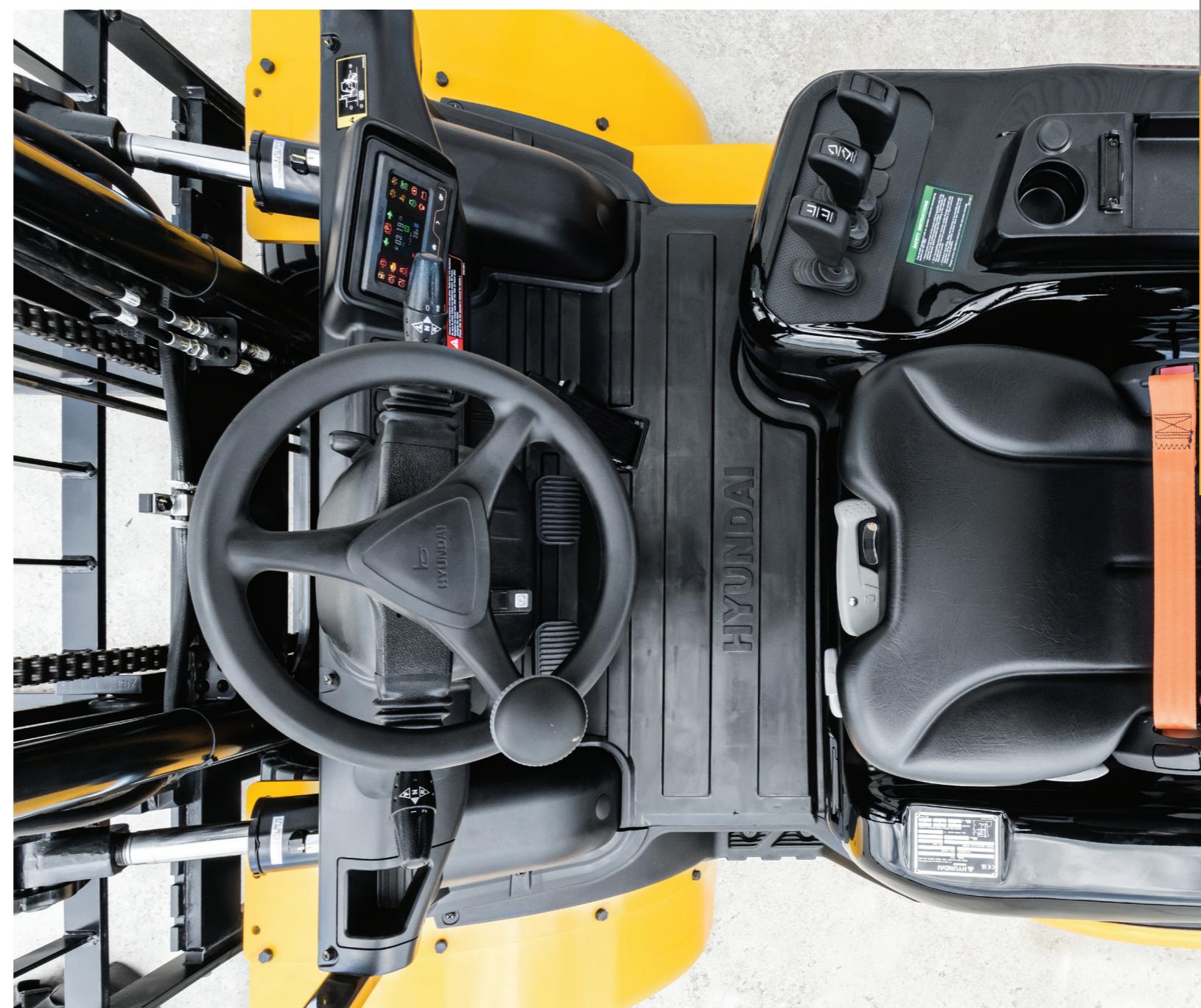
① The air conditioner has four air outlets that prevent the blow of cold air from being directed to a particular body. And it is easy to perform maintenance work because the outdoor and indoor unit are integrated.

② The heaters supplies warm air separately to the operator's upper and lower body. A discharge port for removing moisture and frost has been added.



Multi-functional digital color monitor

The size of the key information displayed on the color LCD window is increased. Various additional features are also available as the MCU (master control unit for the forklift) is integrated with the cluster. Considering the Optionion selection by the customer, Hi-MATE support function and seat belt interlock module are installed.



Full-suspension seat – Grammer

The full suspension seat of Grammer of Germany has an adjustable cushion depending on the weight of the driver, and convenience specifications such as seat belt switch, arm rests, and heater are optional.



Ergonomic pedal – Hydraulic boosted brake pedal

The work pedal structure is changed to the hanging type and ergonomically rearranged in consideration of the driver's convenience. Moreover, braking force is improved compared to that of the existing systems by adding a hydraulic booster to the brake system.



OUTSTANDING OPERABILITY ERGONOMICS

UP CONVENIENCE

Increasing work efficiency to the next level with consistent convenience in any condition

Steering handle that is easy to operate

The diameter of the handle is reduced by 70mm to minimize the operator's fatigue and the Danfoss 4th generation Orbitrol is applied to reduce noise and improve the reverse rotation jam of the handle.



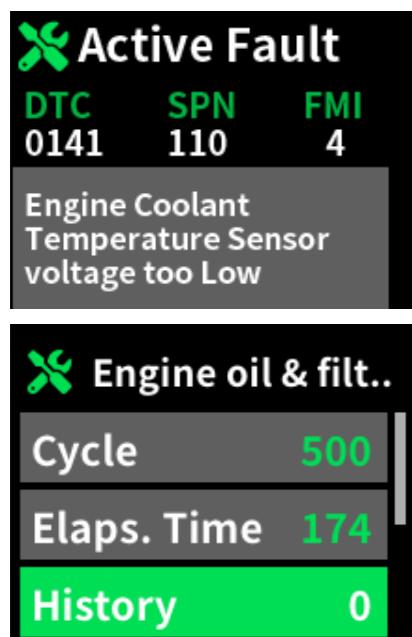
35D/40D/45D 50Dn-9VB

Larger maintenance space

A larger work space is provided for the follow-up management of consumables and major function parts when you open the engine hood (supported with two gas springs, tool less type side cover and floor plate).

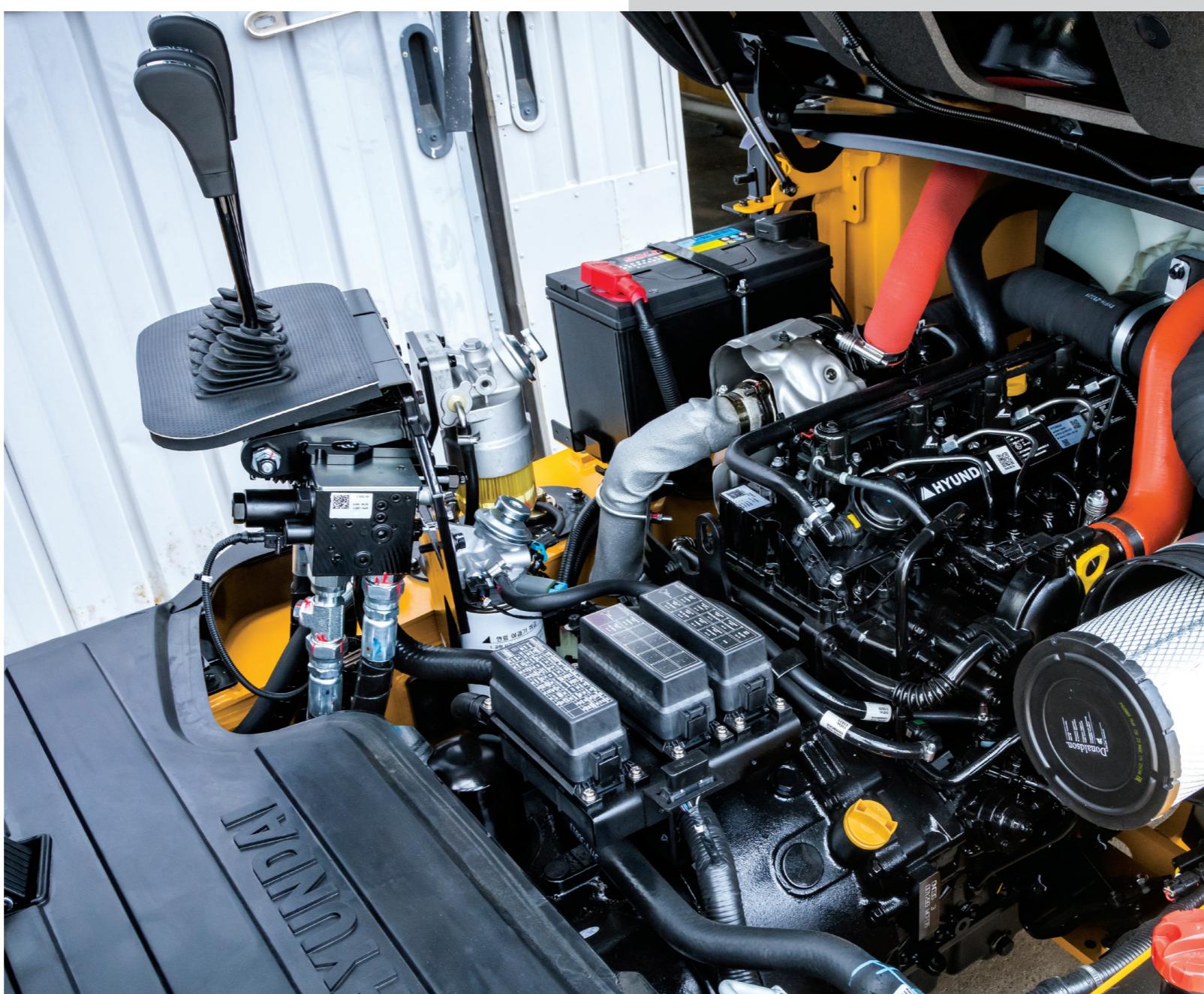
Engine diagnosis and consumable maintenance

Engine failure can be checked in clusters without the need for a separate engine diagnostic tool, and the parts to be replaced are displayed in the cluster during operation when the replacement timing of all consumables requiring periodic maintenance is set in the cluster.



Fuse & Relay box

The fuse and relay, which are vulnerable to contamination, are installed in water- and dust-tight box that is in turn installed in the engine compartment to reduce the downtime for maintenance.



Detachable radiator cover

The plastic tool-less radiator sub-hood on top of the counterweight separated from the main hood reduces the downtime for checking the cooling water level and makeup.



Counter weight cover

To eliminate the inconvenience of removing the counterweight to inspect the aftertreatment device inside the weight, the opening of the counterweight has been expanded to the maximum extent possible. The aftertreatment device is accessible by removing the protective screen on the back of the counterweight.



EASY SERVICE

UP MAINTENANCE

Easy maintenance and cost-effective after-sales service
Even though the work is finished, the satisfaction continues



Easy Service MCV

MCV, one of the major functional parts of the hydraulic system, is installed in a horizontal direction to allow the adjustment of hydraulic pressure and exchange of spool without opening the MCV assembly.

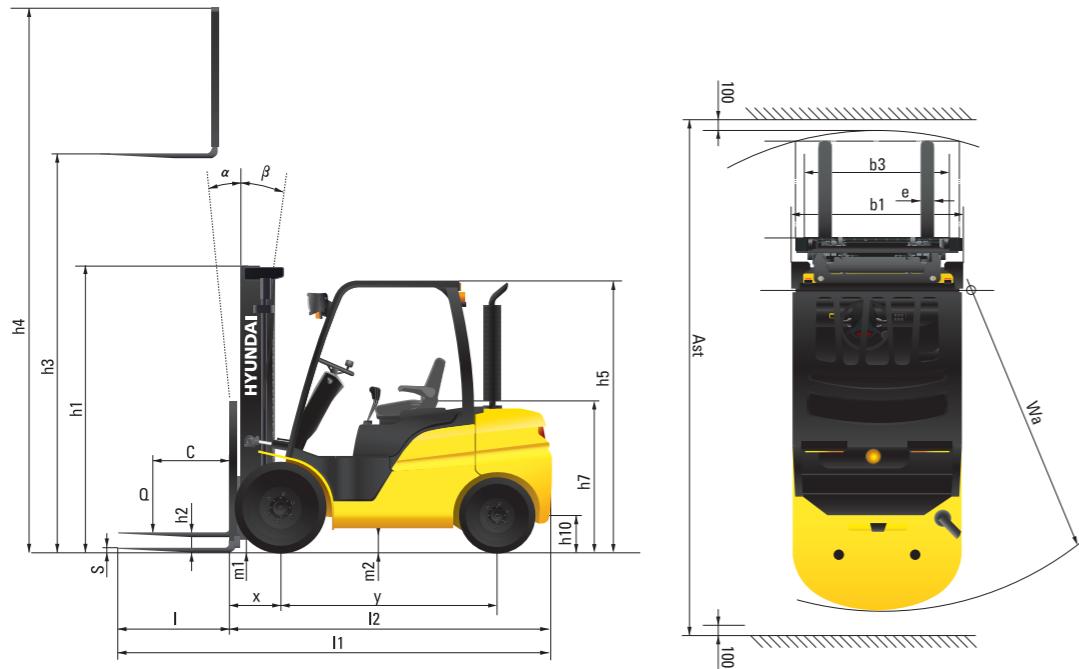
* Embedded flow regulator - Easy to regulate the lowering speed

* Embedded emergency screw - Allowing mast lowering in an emergency situation

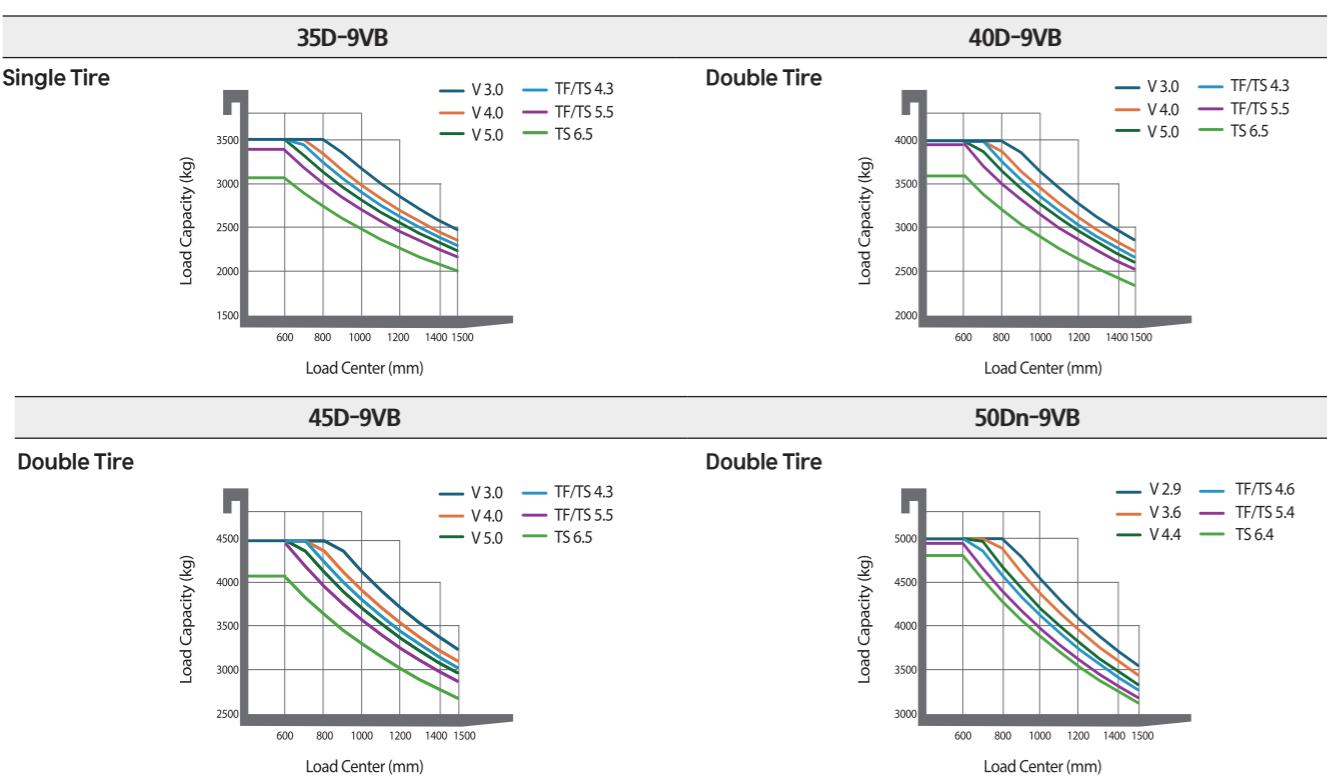
Hi-MATE, a solution for field control based on data

Data collected at the sensors and modules mounted on equipment during the operation of forklift truck at the operation control system of Hyundai Industrial Vehicle is provided to the mobile device or computer of the customer in real time through the server of Hyundai Construction Equipment. Such visual data can be used for establishing a control plan for safety control in fields, productivity improvement, and cost saving.

Dimension



Load Capacity



Specification

Identification

Manufacturer		Hyundai			
Manufacturer's Type Designation		35D-9VB	40D-9VB	45D-9VB	50DN-9VB
1.1 Drive: Electric (Battery or Mains), Diesel, Petrol, Fuel Gas, Manual		Diesel	Diesel	Diesel	Diesel
1.2 Type Of Operation : Hand, Pedestrian, Standing, Seated, Order-Picker		Seated	Seated	Seated	Seated
1.3 Load Capacity / Rated Load	kg	3,500	4,000	4,500	4,990
1.4 Load center distance	c (mm)	600	600	600	600
1.5 Load distance, center of front axle to fork	x (mm)	561	561	561	576
1.6 Wheelbase	y (mm)	2,030	2,030	2,100	2,100

Weights

2.1 Service Weight	kg	5,907	6,466	6,911	7,282
2.2 Axle Loading, Loaded Front/Rear	kg	8,240/1,167	9,146/1,321	9,947/1,464	10,745/1,537
2.3 Axle Loading, Unloaded Front/Rear	kg	2,739/3,168	2,858/3,608	2,959/3,952	2,945/4,337

Wheels, Chassis

3.1 Tires : Solid Rubber(V), Superelastic(SE), Pneumatic(P), Polyurethane(PE)	P	P	P	P
3.2 Tires Size, Front	8.25-15-14PR	750-16-12PR	750-16-12PR	750-16-12PR
3.3 Tires Size, Rear	7.00-12-14PR	7.00-12-14PR	7.00-12-14PR	7.00-12-14PR
3.5 Wheels, Number Front Rear(x=Driven Wheels)	2x2	4x2	4x2	4x2
3.6 Track Width, Front	b10 (mm)	1,132	1,282	1,282
3.7 Track Width, Rear	b11 (mm)	1,140	1,140	1,140

Basic Dimensions

4.1 Mast/Fork Carriage Tilt Forward/Backward	degrees	8/10	8/10	8/10	8/10
4.2 Lowered Mast Height	h1 (mm)	2,235	2,220	2,220	2,220
4.3 Free Lift	h2 (mm)	120	120	120	120
4.4 Lift Height	h3 (mm)	3,020	3,020	3,020	2,930
4.5 Extended Mast Height	h4 (mm)	4,234	4,234	4,234	4,147
4.7 Overhead Load Guard(Cab) Height	h5 (mm)	2,223(2,246)	2,221(2,234)	2,221(2,234)	2,221(2,234)
4.8 Seat Height/Standing Height(SIP)	h7 (mm)	1,316	1,304	1,304	1,304
4.12 Coupling Height	h10 (mm)	372	372	360	360
4.19 Overall Length	l1 (mm)	4,219	4,284	4,504	4,547
4.20 Length to Face of Forks	l2 (mm)	3,149	3,204	3,284	3,347
4.21 Overall Width	b1 (mm)	1,370	1,746	1,746	1,746
4.22 Fork Dimensions(H x W x L)	l x e x s (mm)	50x122x1070	50x150x1,070	50x150x1,220	60x150x1,200
4.23 Fork Carriage ISO 2328, Class/Type A,B		III/A	III/A	III/A	III/A
4.24 Fork-Carriage Width(with backrest)	b3 (mm)	1,300	1,600	1,600	1,676
4.31 Ground Clearance, Under Mast	m1 (mm)	170	155	155	155
4.32 Ground Clearance, Centre of Wheelbase	m2 (mm)	202	202	190	190
4.34.1 Aisle Width for Pallets 1000x1200 Crossways	ast (mm)	4,656	4,705	4,799	4,857
4.34.2 Aisle Width for Pallets 800x1200 Lengthways	ast (mm)	4,856	4,905	4,999	5,057
4.35 Turning Radius	Wa (mm)	2,895	2,944	3,038	3,081

Performance

5.1 Travel Speed, Loaded/Unloaded	km/h	28/30.3	27.7/29.2	27.7/29.5	27.4/29.5
5.2 Lift Speed, Loaded/Unloaded	mm/s	520/540	510/540	510/540	475/475
5.3 Lowering Speed, Loaded/Unloaded	mm/s	550/550	550/550	550/550	500/550
5.6 Max. Drawbar Pull, Loaded/Unloaded	N	41,432/39,409	43,492/42,845	41,405/40,346	41,460/40,256
5.8 Max. Gradeability, Loaded/Unloaded	%	46.5/20.5	41.9/16.9	37.6/18.1	34.6/19.1
5.10 Service Brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic

Engine

7.1 Engine Manufacturer/Type		HDI DN03	HDI DN03	HDI DN03	HDI DN03
7.2 Engine Power Acc. to ISO 1585	kW/rpm	70/2,300	70/2,300	70/2,300	70/2,300
7.3 Maximum Torque	kgf.m/rpm	35.7/1,600	35.7/1,600	35.7/1,600	35.7/1,600
7.4 No. of Cylinders/Displacement	EA/cc	4/3,409	4/3,409	4/3,409	4/3,409
7.5 Fuel Consumption Acc. to VDI Cycle	l/h	4	4	4.2	4.8

Addition Data

8.1 Type of drive control		Power Shift	Power Shift	Power Shift	Power Shift
8.2 Operating pressure, system/attachments	bar	210/140	210/140	210/140	210/140
8.3 Oil volume for attachments	LPM	60	60	60	60

35D-9VB														
Mast Type		Maximum fork height	Overall height (Lowered)			Free lift height	Tilt angle		Load capacity without Side shift		Load capacity with intergral Side shift		Truck weight (Unloaded)	
			Single	Double	Fwd		Single	Bwd	Single	Double	Single	Double	Single	Double
		mm	mm	mm	mm		deg	deg	kg	kg	kg	kg	kg	kg
STANDARD	V300	3,020	2,235	2,220	120	8	10	3,500	3,500	3,500	3,500	5,924	6,081	
	V330	3,320	2,385	2,370	120	8	10	3,500	3,500	3,500	3,500	5,962	6,118	
	V400	4,020	2,845	2,830	120	8	10	3,500	3,500	3,470	3,500	6,047	6,204	
	V430	4,320	2,995	2,980	120	8	10	3,500	3,500	3,400	3,450	6,077	6,234	
	V500	5,020	3,345	3,330	120	8	6	3,500	3,500	3,220	3,280	6,211	6,368	
2-STAGE FULL FREE LIFT	VF300	3,005	2,235	2,220	1,358	8	8	3,500	3,500	3,500	3,500	5,961	6,115	
3-STAGE FULL FREE LIFT	TF400	4,030	2,135	2,120	1,249	8	8	3,500	3,500	3,420	3,470	6,181	6,337	
	TS420	4,210	2,175	2,160	1,289	8	8	3,500	3,500	3,390	3,440	6,196	6,353	
	TF/TS430	4,330	2,235	2,220	1,349	8	8	3,500	3,500	3,350	3,400	6,212	6,369	
	TF/TS470	4,720	2,385	2,370	1,499	8	8	3,500	3,500	3,250	3,310	6,267	6,424	
	TF500	5,020	2,485	2,470	1,599	8	6	3,500	3,500	3,180	3,240	6,290	6,447	
	TF/TS550	5,520	2,665	2,650	1,779	8	6	3,380	3,470	3,070	3,130	6,351	6,508	
	TF600	6,030	2,845	2,830	1,959	8	6	3,180	3,270	2,800	2,850	6,420	6,576	
	TS650	6,540	2,845	2,830	2,139	8	6	3,060	3,120	2,690	2,710	6,461	6,618	

40D-9VB														
Mast Type		Maximum fork height	Overall height (Lowered)			Free lift height	Tilt angle		Load capacity without Side shift		Load capacity with intergral Side shift		Truck weight (Unloaded)	
			Single	Double	Fwd		Single	Bwd	Single	Double	Single	Double	Single	Double
		mm	mm	mm	mm		deg	deg	kg	kg	kg	kg	kg	kg
STANDARD	V300	3,020	2,235	2,220	120	8	10	3,500	3,500	3,500	3,500	5,924	6,081	
	V330	3,320	2,385	2,370	120	8	10	3,500	3,500	3,500	3,500	5,962	6,118	
	V400	4,020	2,845	2,830	120	8	10	3,500	3,500	3,470	3,500	6,047	6,204	
	V430	4,320	2,995	2,980	120	8	10	3,500	3,500	3,400	3,450	6,077	6,234	
	V500	5,020	3,345	3,330	120	8	6	3,500	3,500	3,220	3,280	6,211	6,368	
2-STAGE FULL FREE LIFT	VF300	3,005	2,235	2,220	1,358	8	8	3,500	3,500	3,500	3,500	5,961	6,115	
3-STAGE FULL FREE LIFT	TF400	4,030	2,135	2,120	1,249	8	8	3,500	3,500	3,420	3,470	6,181	6,337	
	TS420	4,210	2,175	2,160	1,289	8	8	3,500	3,500	3,390	3,440	6,196	6,353	
	TF/TS430	4,330	2,235	2,220	1,349	8	8	3,500	3,500	3,350	3,400	6,212	6,369	
	TF/TS470	4,720	2,385	2,370	1,499	8	8	3,500	3,500	3,250	3,310	6,267	6,424	
	TF500	5,020	2,485	2,470	1,599	8	6	3,500	3,500	3,180	3,240	6,290	6,447	
	TF/TS550	5,520	2,665	2,650	1,779	8	6	3,380	3,470	3,070	3,130	6,351	6,508	
	TF600	6,030	2,845	2,830	1,959	8	6	3,180	3,270	2,800	2,850	6,420	6,576	
	TS650	6,540	2,845	2,830	2,139	8	6	3,060	3,120	2,690	2,710	6,461	6,618	

45D-9VB														
Mast Type		Maximum fork height	Overall height (Lowered)			Free lift height	Tilt angle		Load capacity without Side shift		Load capacity with intergral Side shift		Truck weight (Unloaded)	
			Single	Double	Fwd		Single	Bwd	Single	Double	Single	Double	Single	Double
		mm	mm	mm	mm		deg	deg	kg	kg	kg	kg	kg	kg
STANDARD	V300	3,020	2,235	2,220	120	8	10	4,500	4,500	4,500	4,500	6,810	6,937	
	V330	3,320	2,385	2,370	120	8	10	4,500	4,500	4,500	4,500	6,848	6,975	
	V400	4,020	2,845	2,830	120	8	10	4,500	4,500	4,500	4,500	6,933	7,060	
	V430	4,320	2,995	2,980	120	8	10	4,500	4,500	4,460	4,460	6,963	7,090	
	V500	5,020	3,345	3,330	120	8	6	4,500	4,500	4,260	4,260	7,097	7,224	
2-STAGE FULL FREE LIFT	VF300	3,005	2,235	2,220	1,358	8	8	4,500	4,500	4,500	4,500	6,842	6,969	
3-STAGE FULL FREE LIFT	TF400	4,030	2,135	2,120	1,249	8	8	4,500	4,500	4,500	4,500	7,067	7,196	
	TS420	4,210	2,235	2,220	1,289	8	8	4,500	4,500	4,460	4,460			